TEACHERS PERCEPTIONS ABOUT LESSON PLANNING TO INCLUDE A DISASTER RISK REDUCTION FOCUS

By

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Submitted in partial fulfilment of the requirements for the degree

Master's in Disaster Management

In the

Disaster Management Training and Education Centre for Africa

At the

UNIVERSITY OF THE FREE STATE

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2011

DECLARATION

I hereby declare that this dissertation has not been submitted, either in the same or different form, to this or any other university for any degree

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APPROVAL FORM

The undersigned certify that they have read and recommend to the University of the Free State for acceptance; a dissertation entitled **"Teachers' perceptions about lesson planning to include a disaster risk reduction focus",** submitted by Mosidi Jennifer Lekalakala in partial fulfilment of the requirements of the Master's degree in Disaster Risk Management.

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DEDICATION

This thesis is dedicated to my late mother, Minah Mmadikgomo Kolokoto, who after I lost my biological mother Esie Dikeledi Kolokoto at the very early age of 18 months, she sacrificed all the goodies women of her age were enjoying, and adopted me and my three siblings. This woman went all out to ensure that the four of us, together with her three children, seven in all, received a good foundation that made us realize that education is a weapon to fight ignorance and poverty and a key to open doors for success. Her legacy will forever be with the rest of the family.

May their souls rest in peace.

ACKNOWLEDGEMENTS

ABSTRACT

This study presented the three schools from Atteridgeville Township that were used as case studies to demonstrate how primary school teachers within the City of Tshwane Metropolitan Municipality implement their curriculum planning processes to address and manage their local disaster issues.

The study also highlighted concerns that societies should be aware of regarding disaster problems, and the need for reasonable measures to be taken worldwide and particularly in South Africa to deal with these disaster problems. The disaster management legislation and the policies within the National Department of Education were cited as examples of the measures put in place by the government of the Republic of South Africa to address the vulnerabilities of the communities. and to prevent and mitigate the adverse impacts of disasters for the attainment of sustainable development.

The study acknowledged that teachers still lacked proper knowledge and understanding of their policies. Proper guidance from the curriculum developers will enable them to address their own local issues. The situation at schools was found to have been entrenched and influenced by the realities that infiltrated into the curriculum approaches, and prevented opportunities for integration of a disaster risk reduction focus into lesson planning by teachers. Poor or lack of proper resources, support, and security and safety measures at schools played a major role in hindering the successful integration and implementation of the disaster risk reduction policies of the education system.

While the study acknowledged that the integration of a disaster risk reduction focus cannot be a one size fits all products, but a process, it provided some recommendations. The National Department of Education should address disaster risk reduction issues at schools and develop national guidelines that can assist teachers to implement them, acquire skills and augmented knowledge for the implementation of a disaster risk reduction focus through lesson planning. This study also recommended that teachers' skills be harnessed for effective and progressive teaching and be enabled to develop their contextual local safety and disaster risk reduction policies that were in line with their environments.

The implementation of the recommendations of this thesis will bring about systematic change in attitude and behaviour, with simultaneous social change in values and direct management from national and local bodies.

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ACRONYMS

CoT	City of Tshwane
CRED	Centre of Research on the Epidemiology of Disasters
DiMTEC	Disaster Management Training and education Centre for Africa
DFID	Department for International Development
DMISA	Disaster Management Institute of Southern Africa
GDE	Gauteng Department of Education
GET	General Education and Training
GNU	Government of National Unity
IDNDR	International Decade for Natural Disaster Reduction
IDP	Integrated Development Plan
ISDR	International Strategy for Disaster Reduction
KPAs	Key Focus Areas
MGDs	Millennium development Goals
NCS	National Curriculum Statements
NDMC	National Disaster Management Centre
NDMF	National Disaster Management Framework
NEPAD	New Partnership for International Development
NETaRNRA	National Education, Training and Research Needs and Resources Analysis
NGOs	Non-Governmental Organisations
NQF	National Qualification Framework
OBET	Outcomes Based Education and training
RCC	Regional Consultative Committee on Disaster Management
RNCS	Revised National Curriculum Statements
SADC	Southern African Development Cooperation

SANDF	South African National Defence Force
SAPS	South African Police Services
SAQA	South African Qualification Authority
UN	United Nations

CHAPTER 1

BACKGROUND

1.1. Introduction and overview

Disaster risk is considered by many authors as a practice that has seen a dramatic transformation of meaning over time. It has been regarded by many cultures around the world as the acts of God or some false attraction of the evil spirits (Drabek, 1991 in Van Niekerk, 2008:13). These trends indicate that disasters were perceived as "inevitable events which impact on humanity due to our inability to please gods" (Dombrowsky, 1998 in Van Niekerk, 2008: 13). Through scientific development, perceptions on disasters were questioned while at the same time the truths about the origin and cause of disasters were investigated.

Wisner *et al.* (2004:4) advise about the importance of analysing disasters without segregating them from people's everyday living, and that the risks involved in disasters must be seen to having a connection with the vulnerability created for many people in their normal existence. The authors further see disaster risk as a combination of factors that determine the potential for people to be exposed to particular types of natural hazards and that this potential also depends on how these people are affected by the social, political, economic and biophysical aspects of the environment. According to these authors, it will be important for any Disaster Management practitioner who may be tasked to develop disaster risk reduction policies and improve living standards of communities or any specific society, not to only learn and know about the possible disaster hazards that might strike them (communities), but to also learn and know about these communities' levels of vulnerability which may be attributed to their socio-economic and political systems of a national, provincial and local origin.

The ISDR (2004 in Van Niekerk, 2008: 9) also supports the fact that socio-economic and political systems attribute to the existence of disaster risks and that due to differing circumstances; people will not share the same perceptions of risks and their underlying causes. Hence it will be vital and the task of the Disaster Management practitioner, if he/she is to achieve an objective of reducing the risk of a given society, to start off by uncovering the deeply rooted characteristics of vulnerabilities by paying more attention to the social context in which risks occur. It is for this reason that this study will seek to understand perceptions of teachers in a selection of schools in

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and around Gauteng Province, as well as curriculum developers within the National Department of Education of the Republic of South Africa about the inclusion of a disaster risk reduction focus in their lesson planning or the way in which disaster risk reduction should be integrated into the school curriculum.

The ISDR (2004 in Van Niekerk, 2008: 7) defines disaster risk reduction as *"the systematic development and application of policies, strategies and practices to minimise vulnerabilities and disaster risks throughout a society, to avoid (prevent) or to limit (mitigate and prepare) adverse impacts of hazards, within a broader context of sustainable development".*

Van Niekerk (2008: 35) emphasises how important it is to first consider the factors contributing to the creation of the risk, before disaster risk itself can be determined, which include the following:

- hazards
- risk
- vulnerability
- manageability and capacity
- disaster

Literature stresses the objectives of awareness and knowledge of, attitudes towards, as well as skills and participation in disaster risk reduction matters. Governments should be seen to be encouraging thinking about ideal programmes, and also what to be included in those programmes if serious disaster mitigation measures are to be put in place.

Wisner *et al.* (2004: 323-328) refer the readers to a selection of the United Nations (UN) conferences where remarkable developments and policies towards addressing the social aspects of vulnerability and disaster risk reduction issues in general were recorded.

- The 1994 Yokohama conference where the message "those usually most affected by natural and other disasters are the poor and socially disadvantaged groups in developing countries as they are least equipped to cope with them" was recorded. Adding to this affirmation was another one, with encouragement on community involvement by authorities with a purpose of gaining insight into their (communities) perceptions of developments and risks, as well as understanding the social dynamics of hazard-prone communities, and a need for "a clear understanding of cultural and organisational

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characteristics of each society as well as of its behaviour and interactions with the physical and natural environment. This knowledge is of the utmost importance to determine those things which favour and hinder prevention of the environment for the development of future generations and in order to find effective means to reduce the impact of disasters".

- The 1999 IDNDR Programme Forum in Geneva where more emphasis and concern was on the four goals for International Strategy for Disaster Reduction (ISDR) with focus on the human dimensions of risk reduction, as well as concern for livelihood protection. They include increasing public awareness of risks posed to modern societies, obtaining commitments by public authorities to reduce risk to people, their livelihoods, social and economic infrastructure and environmental resources, engaging public participation at all levels of implementation to create disaster-resistant communities through increased partnership. It is important to establish internationally and professionally agreed standards/methodologies for the analysis and expression of the socio-economic impacts of disasters on societies.

- The 2000 Millennium Declaration within Agenda 21 which introduced the eight Millennium Development Goals (MDG), aiming at improving the quality of life and eradicates poverty by addressing the areas of health, education and housing. This declaration also implied that "future disaster risk-reduction structures, plans and policies can no longer be isolated as distinct entities and in future will need to be synchronised with structures, plans and policies concerned with poverty reduction".

- The Millennium Declaration of 1999. The detail of this conference was on the review of the scale of complexity of vulnerability, which led to the reproduction of the quotation that demonstrated the need for development of the model of vulnerability that is consistent with the emerging international consensus: "[Vulnerability]…describes the degree to which a socio-economic system or physical assets are either susceptible or resilient to the impact of natural hazards. It is determined by a combination of several factors, including awareness of hazards, the condition of human settlements and infrastructure, public policy and administration, the wealth of a given society and organised abilities in all fields of disaster and risk management. The specific dimensions of social, economic

and political vulnerability are also related to inequalities, to gender relations, economic patterns, and ethnic or radical divisions".

- The World Summit on sustainable development which made a remarkable mark by signing and committing to a pledge that placed focus on, and gave "priority action to the fight against the worldwide conditions that pose severe threats to the sustainable development of our people".

All conferences held indicated the growing consciousness and serious concern about the need to have a joint responsibility of governments, communities, NGOs, alike to apply concerted efforts towards disaster risk reduction, through mobilised will and allocation of resources to reduce the poverty line of vulnerable communities. Recognition for a shift from "relief and response vulnerability analysis" to "risk management" through exploitation of linkages between poverty and vulnerability is needed (Yodmani, sa: 1).

On another token a number of movements and agencies engaged in some efforts to develop strategies; models; approaches; methods; plans; actions and practices with clear objectives that addressed the risk and vulnerability aspects of communities exposed to unsafe conditions. These movements suggest actions at local, national and even international levels to work against all the factors contributing to the progression of vulnerability of marginalised communities.

To address the risk and vulnerability aspects of communities exposed to unsafe conditions, this study argues for the development of a world population that is aware of, and concerned about disasters and their associated problems, and which has the knowledge, skills, attitudes, motivations and commitment to work individually and collectively toward solutions of current disaster problems and prevention of new ones. It argues that schools are better placed institutions to address these concerns through the development of education that can maintain and improve the quality of life and prevent future disaster problems. This is the type of education which should strive towards sustaining future generations.

Fien (1993:1) argues that "the well-being of all future generations depends…on the knowledge base and values of those currently in our schools and colleges". It implies that the education processes fostering the implementation of programmes to better the lives of communities can best be applied in formal schooling, meaning that there will be a need for a more focused policy

approach and an interactive process of mutual learning driven through formal education at school levels. This initiative should be motivated by a political will for education reform, with a consideration of building a culture of safety and resilience, as well as making a behavioural change at household level. It is for this reasoning that this study will investigate if teachers and curriculum developers have the same understanding about the roles they should be playing with regards to disaster risk reduction initiatives as suggested by the aforementioned authors.

The current situation in the South African context indicates that extensive focus on the formal school curriculum was done through the establishment of the Qualifications Act (South Africa,1995), the White Paper on Education and Training (South Africa, 1995), with the introduction of Curriculum 2005, the National Education Policy Act, (South Africa,1996), the National Qualifications Framework (NQF), Revised National Curriculum Statement Grades R-9 (2002), and the newly developed report of the task team for the review of the Implementation of the National Curriculum Statement of 2009. These policies, especially the White Paper on Education and Training of 1995 that has a bearing on the rest of the policies listed, have implications for the restructuring of the Education and Training system in South Africa.

Through the introduction of Curriculum 2005, focus became more on "a shift from the traditional aims-and objectives approach to outcomes-based education", an approach that promotes "A prosperous, truly united, democratic and internationally competitive country with literate, creative and critical citizens leading productive, self-fulfilled lives in a country free of violence, discrimination and prejudice" (Department of Education. South Africa, 2002: 4). This approach follows a more learner-centred than teacher-centred approach. Schools have to work within these frameworks to ensure that learning programmes of all the eight Learning Areas at schools are organised by themes, also used to be known as phase organisers.

 Again, the policies mentioned in this paper, created very good opportunities for inclusion of any focus that might be intended to improving the living standards of communities. These opportunities are at least granting social groups and individuals an opportunity to be actively involved at all levels in working towards the resolution of any localised problems. Le Grange (1999:35) also posits that through education, literate and active citizens are created, and this can ensure that all South Africans, present and future, enjoy a decent quality of life through the sustainable use of resources.

It is through the above-mentioned education policies that the eight learning areas had to replace the forty-two subjects offered in the South African schools. The previous curricula, which were based on separate subjects, have now been replaced by a curriculum paradigm where knowledge fields and foci are integrated into Learning Areas. This promotes a holistic approach, with the use of Learning Area outcomes in a cross-curriculum framework to provide opportunities to address local area concerns, and to accommodate ways to resolve these concerns by following a critical orientation and meaningful objectives. It is in line with this motivation that in its nature, this study also argues that disaster risk reduction initiatives can also follow an interdisciplinary, integrated and active approach to learning and can as a result be vital elements of all levels and programmes of the education training system.

Furthermore, the government of the Republic of South Africa had in 1999, launched the White Paper on Disaster Management. This policy highlights the importance of disaster management to avoid the human, economic and property losses as well as environmental degradation. Giving effect to the White Paper on Disaster Management, as well as showing an effort and commitment to disaster risk reduction in the country, the Disaster Management Act, (South Africa, 2002) was promulgated. The 2005 National Disaster Management Framework (NDMF) with four key performance areas and three enablers was another legislative tool put in a place as a guiding policy for a coherent, transparent and inclusive way towards disaster management in the country. The national disaster management framework places explicit emphasis on the disaster risk reduction concepts of disaster prevention and mitigation as the core principles to guide disaster risk management in South Africa.

The Disaster Management Act, (South Africa, 2002) requires that the National Disaster Management Centre be developed. Section 15(1) (h) of this Act requires the Centre to promote disaster management capacity building, training and education throughout the Republic, including in schools. Section 6.3.3 of the NDMF requires that disaster risk reduction education be integrated in primary and secondary school curricula. This again, considers schools to be the focal points for raising awareness about disaster risk reduction and disaster risk management as a whole.

1.2. Background of the study area

Ideally, this study is supposed to be involving a wider range of South African schools, but due to time, financial resources and a prescribed volume for a mini-dissertation, it will be a multiple case study limited to the three primary schools in the Central Region of the City of Tshwane Metropolitan Municipality. The main purpose of the study will be to understand the perceptions of teachers in the identified schools about their understanding of lesson planning to integrate disaster risk reduction focus.

There are both urban and semi-urban schools within this area. The research will, however, concentrate on the three primary schools in the Atteridgeville Township area, with an understanding that a streamline of education policy reform was followed in South Africa, such as the introduction of Curriculum 2005, the introduction of the National Curriculum Statements Grades R-9 (NCS), the Revised National Curriculum Statement Grades R-9 (RNCS), and finally the 2009 Report on the Task Team for the review of the Implementation of the National Curriculum Statements. This educational policy reform provided an initiative for schools to use the curriculum to address their specific local environmental issues. It is believed that teachers in the City of Tshwane Metropolitan Municipality would also be found to be in the position to be effectively guided by these policies in the planning of their lessons to include a disaster risk reduction focus.

1.3. Statement of the problem

Internationally, a similar kind of study was conducted in Australia by the Curriculum Development Centre during the years 1978 and 1979 with focus more on an environmental education project. In that study it was recorded that the submissions of the teachers with which the project was conducted, did not meet "the expectations nor priorities of the project". The study revealed that much of what was taught in Australia was put forward mainly as nature study and field studies: "Very few submissions had either action or overt 'for the environment' (affective) components, nor involved more than one or two discipline" (Greenall in Gough, 1997:22). De Singer's study (in Gough, 1997:23) revealed that in the United States of America (USA) what was generally done was teaching through infusion of discrete topics associated with the Science curriculum. Their emphasis was on teaching content related to the environment rather than being education 'for' the environment.

In South Africa, recently, a study was conducted by the University of Johannesburg on "Teachers' perceptions about lesson planning to include an Environmental Education focus" in line with the education policies alluded to. The study was a multiple case study of the Grade 7-9 teachers in the North West Province and its findings revealed that despite the Department of Education's enabling policy regulations as mentioned, the situation was still "entrenched and influenced by the past socio-historical, socio-political, the cultural and traditional realities that have infiltrated into curriculum approaches and hindered the existence of opportunities for best Environmental Education practices" (Lekalakala, 2007: iv).

The National Disaster Management Centre (NDMC) of the Department of Cooperative Governance and Traditional Affairs on the other side conducted a survey with focus on the "National Education and Research Needs and Resources for Disaster Risk Management in South Africa". The purpose of this survey was to arrive at the findings that would provide recommendations and guide the NDMC in the development of the National Disaster Management Training and Education Framework and Strategic Research Agenda. The study involved all the organs of state involved in disaster management in all spheres of government, including officials in the Department of Education.

Work Stream 3 of the study focused on education needs, with the aim of determining the extent to which disaster risk reduction is integrated in the school curriculum and into course materials at places of higher education. This aim was in line with the requirements of the South African National Disaster Management Framework of 2005 (NDMF), as well as the resolutions of the Disaster Management Institute of Southern Africa's (DMISA) conference on Disaster Risk Reduction held in 2007 at Jeffrey's Bay in the Eastern Cape. All these were about the integration of disaster risk reduction education in primary and secondary school curricula. The theme of the 2006 International Day on Disaster Reduction, which was "Disaster risk Reduction Begins at school" strengthened the need for the survey. To be specific, the resolutions of the DMISA conference emphasised that:

- All places of learning and especially places of higher education should integrate disaster management into course materials across all subject matter and ensure that they have educators with relevant training presenting the disaster management subject.

- The SA National Minister of Education should strengthen disaster risk reduction in the school curriculum to develop future adults who are able to identify hazardous situations within their own community and ways of reducing disaster risk through proper application of sustainable development practices (National Disaster Management (DMISA), South Africa, 2010: 11).

The findings of the study revealed that irrespective of an enabling environment created by the National Curriculum Statement to allow for alignment of the school curricula with disaster management concepts and principles as outlined in the NDMF, especially in Learning Areas like Social Sciences, children will never have an understanding and knowledge of disaster risk management concepts and principles unless "these curriculum directives are implemented in a skilful and creative manner in the classroom" (ibid, 12).

Considering the culture that prevailed for a longer period in schools within the Republic of South Africa as a result of the discrete traditional curriculum, and again, as mentioned by Guha-Sapir, Hargitt and Hoyois (2004: 13) that public sector agencies, have not seriously committed to disaster preparedness and prevention planning or community preparedness through funding and policy priority. The question that may be asked now is whether the same situation as was experienced in Australia can be experienced in the country as well, where curriculum developers may overlook the fact that teachers may through curriculum, be guided to include disaster risk reduction focus as a flavour in the planning of their localised curricula, while teachers on the ground, also realise the need to include these concepts when they plan and implement their teaching programmes.

The fact that the current education policies allow for curricula options that provide opportunities for any focus that may be intended for improving the living standards of communities, also create opportunities for elements of disaster risk reduction and disaster risk management to be integrated into the National Curriculum Statements of both the primary and secondary schools. This will require just a generic focus on cognitive understanding of disasters and not require a specific knowledge and skill on the part of the teacher; however, a scientific study will be conducted to find out what the current situation on the ground is.

The suggestion here is that disaster risk reduction should be taught across the curriculum and not become a new independent subject. The proposals of the policies mentioned in this study

are theoretically appealing. However, the practical implementation by those involved in schools might be problematic. The unfortunate reality is that, despite all the developments mentioned here, teachers might still be faced with uncertainties regarding decisions about what to teach for effective disaster risk reduction and how to teach it. The focus of this study will thus be about finding out exactly curriculum developers' thinking about practices they put in place to be followed by teachers, as well as about what teachers themselves think they should follow as they plan and implement their learning programmes.

1.4. Research question

The main question directing this research is: What are the possible thoughts or perceptions to be shared by teachers within the primary schools in the Central Region of the City of Tshwane Metropolitan Municipality about the inclusion of a disaster risk reduction focus in their lesson planning?

The following various sub-questions will also be addressed in order to present a more complete and comprehensive view on possible answers to the above-mentioned research question.

- What are the factors within the school communities hindering the successful integration of disaster risk reduction concepts and principles into the schools' curricula to address the local community's disaster issues?

- What are the factors in the current schools' policies and practices hindering the infusion of disaster risk reduction into the teachers' lesson planning?

- How can the schools and teachers in particular overcome these challenges?

1.5. Aim of the research

The main aim of this study is to investigate the perceptions of the teachers within the primary schools in the Central Region of the City of Tshwane Municipality about the inclusion of disaster risk reduction focus within their lesson planning.

1.5.1 Objectives of the study

- To evaluate in a reflective way, policies, methods and strategies for ensuring infusion of disaster risk reduction focus within the context of the South African national policy directives.

- To evaluate the opportunities for the implementation of disaster risk reduction transformation initiatives within the City of Tshwane Metropolitan Municipality.

- To evaluate the opportunities for the implementation of disaster risk reduction transformation initiatives within the schools in the Central Region of the City of Tshwane Metropolitan Municipality.

1.6. Study Design

Owing to its nature, this topic is best suited in a qualitative research approach, which most researchers prefer for its purpose of being able to accumulate sufficient knowledge to lead to understanding. This is an emergent research design whereby data collection and data analysis are done simultaneously. This type of research design also helps to discover ongoing activities that allow for important understandings. Researchers working in the qualitative research tradition argue that people's subjective experiences are real and should be taken seriously by interacting with them. Hence, a qualitative approach focuses on a phenomenon that occurs in a natural setting or in the "real world". Furthermore, qualitative research involves studying those phenomena in their complexity. Qualitative research holds that the meaning of the social action or statement depends, in an important way, on the context in which it appears. When a researcher removes an event, social action, answers a question ignorant of the social context in which it appears, meaning and significance become distorted (Newman, 1997:240).

The research design of this study will best be characterised as a multiple case study design. Macmillan and Schumacher (1993) argue that qualitative research uses a case study design in which the data analysis focuses on one phenomenon, which the researcher selects to understand in depth, regardless of the number of sites or the participants in the study. A multiple case study design enables comparison and contrast between situations and thus elicits more robust findings. It also enables understanding of similarities and differences across context and

how these relate to the phenomenon being investigated (Leedy, 1985; Macmillan & Shumacher, 2001; Newman, 1994).

Given the time constraints, financial resources and the limitations of a mini-dissertation, this research will be limited to the three case studies to allow for a comparison of the findings in line with the study focus.

1.7. Data Collection tools

An interview as a research tool will be used in the early stage of data collection in order to obtain preliminary information about what will be on participants' minds, their emotions, attitudes and feelings about the inclusion of a disaster risk reduction focus in teachers' lesson planning.

An interview is an act of communication, providing rich and substantive data for the researcher. The main aim of interviews in research is to make the researcher aware of interviewees' thinking, feeling, and what they do and have to say. Interviewees are made to give their subjective reality in a "formatted discussion, which is guided and managed by an interviewer and later, be integrated into a research report" (Henning, 2004:52). Henning further recommends interviews in qualitative research because they can give an indication of the type of "power lodged in the mind of everyday person on the street".

1.8. Data analysis tools

The analytic tools of this study aim at giving an overall picture of how a wider range of South African teachers establish their sense in terms of the practical implementation of the schools' curriculum with a focus on disaster risk reduction. As a result, more than one method of data analysis will be used. As suggested by Henning (2004:102), this study will also use qualitative content analysis, complemented by grounded theory analysis to avoid reaching superficial and naively realistic findings if a single method is used.

The coding and categorising in content analysis will be the initial procedures, which is why the grounded theory analysis will also be used. This analytic tool is self-explanatory, as it is a form of content analysis, which builds theory grounded in the data. Unlike content analysis, grounded

theory analysis is flexible and provides the researcher with an opportunity not only to study realities, but to also conceptually understand the categories of these realities (Charmaz in Henning, 2004:115).

1.9. Definitions of terms

Capacity is defined as **"**the combination of all the strengths, attributes and resources available within a community, society or organization that can be used to achieve agreed goals" (ISDR, 2009: 2).

Climate change is defined as: "a change in the state of the climate that can be identified (e.g., by using statistical tests) by changes in the mean and/or the variability of its properties, and that persists for an extended period, typically decades or longer. Climate change may be due to natural internal processes or external forcings or to persistent anthropogenic changes in the composition of the atmosphere or in land use" (Inter-governmental Panel on Climate Change (IPCC) in ISDR, 2009: 3).

Curriculum involves all planned opportunities and experiences that occur between learners and teachers in schools, in order to achieve broad outcomes and related specific outcomes (Neluvhalani, 2000:7). It is also, according to Le Roux (2001:110) referred to as the sum of all learning experiences, including all aspects, which directly or indirectly influence the learning process.

Disaster is defined as "a serious disruption of the functioning of a community or a society involving widespread human, material, economic or environmental losses and impacts, which exceeds the ability of the affected community or society to cope using its own resources", .(ISDR, 2009: 4).

Disaster risk management is defined as **"**the systematic process of using administrative directives, organizations, and operational skills and capacities to implement strategies, policies and improved coping capacities in order to lessen or mitigate the adverse impacts of hazards and the possibility of disaster", (ISDR, 2009: 4).

Disaster risk reduction is defined as "the concept and practice of reducing disaster risks through systematic efforts to analyse and manage the causal factors of disasters, including through reduced exposure to hazards, lessened vulnerability of people and property, wise management of land and the environment, and improved preparedness for adverse events", (ISDR, 2009: 4).

Environmental degradation is defined as "the reduction of the capacity of the environment to meet social and ecological objectives and needs", (ISDR, 2009: 6).

Hazard is defined as "a dangerous phenomenon, substance, human activity or condition that may cause loss of life, injury or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage", (ISDR, 2009: 7).

Learning Programme is a plan of work which guides activities, assessment and achievement of critical and learning outcomes of teaching and learning within an outcomes-based framework (Le Roux, 2001: 125).

Mitigation is defined as the "lessening or limitation of the adverse impacts of hazards and related disasters", (ISDR, 2009: 8).

Outcomes-Based Education and Training (OBE) approach is an education system enabling formal education to produce skilled people for developing markets and economic growth, through the use of learning programmes and processes based on integrated outcomes (Le Roux, 2001:119).

Policy refers to an agreed expression of principle and values to guide action. It is a framework for stating intentions and principles and managing action plans (Le Roux, 2001: 82).

Preparedness is defined as "the knowledge and capacities developed by governments, professional response and recovery organizations, communities and individuals to effectively anticipate, respond to, and recover from, the impacts of likely, imminent or current hazard events or conditions", (ISDR, 2009: 9).

Recovery is defined as "the restoration, and improvement where appropriate, of facilities, livelihoods and living conditions of disaster-affected communities, including efforts to reduce disaster risk factors", (ISDR, 2009: 10).

Response is defined as "the provision of emergency services and public assistance during or immediately after a disaster in order to save lives, reduce health impacts, ensure public safety and meet the basic subsistence needs of the people affected", (ISDR, 2009: 10).

Revised National Curriculum Statements (RNCS) is the type of curriculum which builds its Learning Outcomes for the General Education and Training Band for grades R-9 (for schools) on the critical and developmental outcomes that were inspired by the Constitution and developed in a democratic process, with the aim of developing the full potential of each learner as a citizen of a democratic South Africa (Department of Education, 2002: 1).

Risk is defined as "the combination of the probability of an event and its negative consequences"(ISDR, 2009: 11).

The National Qualification Framework (NQF) is vehicle for a new, non-discriminatory human resource development strategy that would contribute to national economic, social and cultural developments, with the rationale that it would open up learning and career pathways for all South Africans, whatever the previous formal education, training or work experience. (Department of Education & Department of Labour, 2003: 1).

Vulnerability is defined as "the characteristics and circumstances of a community, system or asset that make it susceptible to the damaging effects of a hazard" (ISDR, 2009: 12).

1.10. Delimitations and limitations of the study

Ideally, this study was supposed to involve a wider range of schools within the City of Tshwane Metropolitan Municipality, but due to time, financial resources and a prescribed volume for a mini-dissertation, it was confined to the three primary schools in Atteridgeville Township within the Central Region of the City of Tshwane Metropolitan Municipality.

The research was concentrated in the primary schools that have the majority of their learners coming from the informal settlements that have more of their elements exposed to the risks of shack fires, floods and xenophobia. This report does not overrule the possibility that different results may have been found if the research had been conducted in other primary schools within the municipality, but with different environmental characteristics.

1.11. General Outline of chapters

Chapter 1 gave the background to the purpose of the study by highlighting concerns that societies needed to be aware of regarding disaster problems, as well as highlighting the need for reasonable measures to be taken worldwide and particularly in South Africa, to deal with these disaster problems.

Chapter 2 provided a brief summary of the statistics of the most prevalent disasters, their extent in the world, the Southern African Development Cooperation (SADC) Region and South Africa respectively, and the disaster risk reduction measures that could be deployed to prevent and mitigate the adverse effects of the impact of these disaster problems. More focus was on the efforts of the government of the Republic of South Africa regarding disaster risk management and the education reform through the promulgation of disaster management legislation and its related policies. The idea was transformation of the education system with the purpose of creating conducive conditions to transform societies through education and training. Not only did it reflect on the efforts of the City of Tshwane Metropolitan Municipality, but also on the various ways in which disaster risk reduction was enabled in the school curricula to achieve sustainable development of all the citizens across the Republic.

Chapter three explains how and why qualitative research, as opposed to quantitative approach, was chosen as the research design for this study. Semi-structured interviews and observations were selected as the tools to collect data, which were subsequently analysed through qualitative content analysis methods. Measures taken to ensure validity and reliability were also outlined in this chapter.

Chapter four presented the content data analysis report of the interviews conducted at the three primary schools in the Atteridgeville Township within the Central Region of the City of Tshwane Metropolitan Municipality on the integration of disaster risk reduction focus into the school curricula.

Chapter five provides a summary of the findings on the subject about the perceptions of teachers in the primary schools within the City of Tshwane Metropolitan Municipality regarding the inclusion of disaster risk reduction focus in their lesson planning to address their local communities' disaster problems. This chapter also provides some recommendations on the solutions to deal with or address challenges teachers are facing in their attempt to use the curriculum to include a disaster risk reduction focus.

1.12. Conclusion

This study will attempt to facilitate insight into the nature of disaster risk-related problems as well as try to give meaning to the complexities and dynamics around disaster issues brought about by the interaction of socio-economic and political factors to which peoples' vulnerabilities are attributed. It will also indicate key opportunities and options provided by both education and disaster management policies respectively, with particular emphasis on the inclusion of a disaster risk reduction focus and disaster risk management into teachers' lesson planning through opportunities created by the school curriculum throughout the Republic of South Africa.

CHAPTER 2

EDUCATION ADDRESSING DISASTER PROBLEMS

2.1. Disaster risks and concern

2.1.1. Introduction

The world is facing disasters on an unprecedented scale, requiring the attention of governments, emergency service agencies, the public, Non-Government Organisations (NGOs), and many interested parties including the civil society. This chapter is trying to provide a theoretical background and literature review on the extent of disasters globally, narrowed down to the Southern African Region and the South African context. Given efforts made by governments globally to address disaster risk challenges, this chapter also touches on disaster risk reduction initiatives most governments adopted. More emphasis was placed on the political will and strategic agenda of the government of the Republic of South Africa through the adoption of the disaster management legislation, together with policies guiding education reform in South Africa. These are all regulatory frameworks enabling schools in the planning of their curriculum programmes, as well as in the management of disasters and disaster risks throughout the Republic. The frameworks will thus be used as the guiding tools in the investigation of the topic of this study, and will assist in revealing the possible thoughts or perceptions of teachers within the primary schools in the Central Region of the City of Tshwane Metropolitan Municipality about the inclusion of disaster risk reduction focus in teachers' lesson planning.

2.1.2. The nature and extent of disaster problems

While extraordinary human effort is taken for people to live harmoniously in the natural world, the global toll from extreme events of nature is also increasing. Similarly, the loss in property from natural hazards is rising in most regions of the earth, and loss of life is continuing or increasing among many of the poor nations in the world. The notion about disaster losses as alluded to, is supported by the Hyogo Framework for Action (2005-2015: 1) as it views these losses to be "on the rise with grave consequences for the survival, dignity and livelihood of individuals, particularly the poor, and hard-worn development gains".

Early trends of meaning indicate that disasters were seen by many cultures around the world as the acts of God or some false attraction of evil spirits (Drabek, 1991 in Van Niekerk, 2008:13). These trends indicate that disasters were perceived as inevitable events, which impact on humanity "due to our inability to please gods", (Dombrowsky, 1998 in Van Niekerk, 2008: 13). Through scientific development, perceptions on disasters were questioned while at the same time the truths about the origin and cause of disasters were investigated. Some of these researchers' findings reveal that apart from the fact that disasters are viewed as the acts of gods without causal relationship to human activities, there has been a growing evidence over the past five decades that human behaviour and activities may be the consequence and the effect on the global natural environment as well as on the occurrence of certain types of natural disasters (Guha-Sapir, Hargitt & Hoyois, 2004: 14).

Despite the inequalities of organizations to provide and cover accurate estimates of losses suffered from extreme natural events, the reports recorded on the database (EM-DAT) of the Centre for Research on the Epidemiology of Disasters, tell that more than 225 million people are affected by natural disasters globally each year, recording 68 to 618 million people between 1994 and 2003, with economic costs increasing exponentially, giving a scale of estimated annual average damage of US$67 billion, with a maximum of US$230 billion and a minimum of US$28 billion respectively. Also, given the escalating crisis brought about by global climate change, scientific predictions and evidence indicate that the number of extreme disaster events will increase. Natural disasters, excluding epidemics, over the past five decades were recorded to be 6 367 (Guha-Sapir, Hargitt & Hoyois, 2004: 13-14).

Following the Centre of Research on the Epidemiology of Disasters' (CRED) methodology of classifying disasters into categories of large, medium and small, using the number of deaths, people affected, and economic damages as well as the type of disaster, the region and the evolution of disaster occurrence, CRED, recorded on its database that between 1974 and 2003, an estimated two million individuals were killed, 5.1 billion people cumulatively affected, 182 million persons left homeless and about US$1.38 trillion estimated damages. Bearing these figures in mind, CRED considered the human impact of natural disasters to be small "when the number of deaths was lower than or equal to five, the number of people affected was lower than or equal to 1.500, or the amount of reported economic damages was lower than or equal to US$8 million adjusted to 2003 dollars". It further considered the human impact of natural disasters to be large "when the number of deaths was greater than or equal to 50, the number of

people affected was greater than or equal to 150.000, or the amount of reported economic damages was greater than or equal to US$200 million, adjusted to 2003 dollars", (Guha-Sapir et al 2004: 21-22).

As pointed out above, the frequency of disasters points floods, earthquakes, droughts, windstorms, volcanoes and tropical cyclones to be making up about 90% of all disasters causing more deaths. The frequency of occurrence of these disaster events tells that "The property and social organization vulnerable to the impacts of extreme events expanded in complex ways". According to the Hyogo Framework of Action (2005-2015: 1), the situation, as

> *Compounded by increasing vulnerabilities related to changing demographic, technological and socio-economic conditions, unplanned urbanization, development within high-risk zones, under-development, environmental degradation, climate variability, climate change, geological hazards, competition for scarce resources, and the impact of epidemics such as HIV/AIDS, points to a future where disasters could increasingly threaten the world's economy, and its population and the sustainable development of developing countries.*

In support of what Van Niekerk and the Hyogo Framework of Action 2005-2015 cite, it becomes obvious that the social, economic, political and environmental systems of communities are determinants of the distribution of poverty and wealth, health conditions, physical infrastructure and environmental assets as well as the level at which communities can be exposed to disaster risks. As reiterated by the same authors as cited in this study, the characteristics of communities' coping capacities and their resilience must be brought up into the equation when vulnerability issues are tackled. These characteristics may provide information on communities' resource status to cope with or limit the losses arising from a disaster.

Information documented by the Department for International Development (DFID) (2006: 6) reveals that poor and developing countries and poor people are always victims of disasters that would increase their vulnerabilities, deepen their poverty margins and prevent them from taking advantage of economic opportunities. These poor countries and people respectively would most likely experience higher levels of mortality because of their areas of high population density, located in disaster-prone areas such as river basins and others alike.

Mohammed and Rahman (1998: 103) indicate that Africans are always the most severely affected and victims of disasters, with the impact on the economic and social conditions being evident. Their statistics reveal that between 1964 and 1991, "some 139 million Africans were affected by natural disasters (drought accounted for 86 per cent of the affected) and 99 million

were affected by man-made disasters, 72 per cent of whom were affected by civil strife". These figures are further being simplified, giving a view that as a result of three general categories of disasters as identified:

- Hazards such as drought, civil strife and epidemics may cause a great loss of life and affect a large segment of the population.
- Destructive hazards such as floods and cyclones may cause a small number of deaths, but may affect a large number of people and also result in a significant damage of the economy.
- Events that seldom cause loss of life such as earthquakes, displaced persons and food shortages may affect a large segment of the population.

Between 1964 and 1991, natural and man-made disasters in African countries "have claimed more than 2.3 million lives and adversely affected 239 million people" (Mohammed & Rahman 1998: 106).

The current trend about the manner in which disasters should be viewed is that the paradox in which greater loss of property, lives, wealth, social gain, etcetera is experienced should not be a concern, instead the concern should be around the ways in which humankind deploys its resources and technology in attempts to cope with extreme events of nature that induce more damage and place more people at risk and make them more vulnerable. In this regard, this study aligns itself with Van Niekerk's argument that there is a very close relationship between hazards that may cause disaster events and the vulnerability of societies in the sense that hazards alone cannot cause disasters. The extent to which elements at risk, including people, buildings, infrastructure and assets are vulnerable to hazards also play a significant role. Furthermore, lack of national and international action to cope with enlarged risks coupled with an increase in the world population remains far short of what is required. As a result, it becomes difficult to avoid severe and lasting impairment of environmental quality and capacity for sustainable development (Van Niekerk, 2008:17).

Many authors in the field of disaster management, inter alia, Van Niekerk (2008), Guha-Sapir, *et al.* (2004), Wisner *et al.* (2004), Hyogo Framework of Action 2005-2015 and more attribute the effects of the impact of disasters on poor African countries to very little investment in the prevention, mitigation and/or preparedness measures. More attention and priority are focused on political stability, independence, national security, development and etcetera. Holloway

(2003: 30) avers that there has been an over-reliance on international humanitarian assistance, particularly with regards to provision of food aid. According to Holloway, this does not solve the problems of escalated community vulnerabilities, especially with the high level of poverty escalated by the underlying causes of the HIV/Aids pandemic. Instead, these efforts have discouraged *"local initiative for the ownership of and responsibility for disaster risk".* Furthermore, she sees the effort to be more of a reactive measure intensifying conditions of political, socio-economic and environmental vulnerabilities that drive the disaster risk upwards, and undermines the resilience of households regionally to natural or other shocks.

Holloway (2003: 32) reveals that still after recent discovery of the growth of a body of international *"best practice" that* brought along with it some awareness of the need for the link between development vulnerabilities and disaster risk in the Southern African region. This practical reality was received with resistance because of the highly funded external relief measures that ran parallel to ongoing governmental programmes. "Southern African countries have been conditioned to wait until there is irrefutable evidence of crisis, and then seek international aid, rather than building anticipatory capabilities that reduce disaster risk proactively". This practice has accordingly, disabled the Southern African countries from taking ownership of disaster risk as well as earning an ample time to generate and disseminate their local knowledge that can inform these countries of their degree of vulnerability to disaster risks.

Literature has proven that everywhere across the planet, it is a government's responsibility to protect its citizens from all types of hardships. Any responsible government would then ensure that it is better prepared to anticipate the "impending threats and to respond timeously, first with relief and then with recovery assistance". This would be an obligation laid mostly on civil protection or disaster management legislation (ibid). In this way, governments are able to prioritise developmental programmes building the resilience of its communities to expect threats so that any hazard event no longer manifest into a disaster.

 In order to give the poor a better way of life, as well as to come to a rapid and self-sustaining growth which is desirable for development, a realization of the need to integrate disaster risk reduction policies into development policies is starting to emerge. Southern African countries have started embarking on "maximizing their output of goods and services, and on accelerating the rate of growth of national income" which then requires the employment of high quality technology, investment within the industrial sector, import substitutions and the accumulation

and allocation of local capital to supplement foreign capital flow (Mohammed & Rahman 1998: 111).

There is an emergence of an effort to demystify a lot of jargon and complex terminology clustered within the disaster discourse. In this way, it becomes better understood that the disaster discourse is about the flow of activities that are better defined as a cycle of action clusters including "prevention, mitigation, preparedness, response and recovery/rehabilitation". These concepts are viewed as the best operational terms in disaster management. However, the current international best practice emphasises that more focus should be on disaster risk reduction that roots itself first in risk identification and analysis before implementing prevention or mitigation actions.

2.2 Disaster risk reduction as response to disaster problems

The ISDR (2009: 4) defines disaster risk reduction as "the concept and practice of reducing disaster risks through systematic efforts to analyse and manage the causal factors of disasters, including through reduced exposure to hazards, lessened vulnerability of people and property, wise management of land and the environment, and improved preparedness for adverse events" In Holloway (2003: 34) disaster risk is defined as "the systematic development and application of policies, strategies and practices to minimize vulnerabilities and disaster risks throughout society, to avoid (prevent) or limit (mitigate and be prepared for) the adverse impact of hazards, within the broad context of sustainable development".

In line with the definitions provided, disaster risk reduction encompasses the concepts of prevention, mitigation and preparedness, which should be viewed as developmental activities minimizing the likelihood of disastrous occurrences by reducing the vulnerability of those at risk. These concepts should be recognized as important elements for the achievement of development goals as well as efforts to build the necessary capacities of communities to manage and reduce the risks. Hence, it will always be important that disaster risk reduction be promoted at all levels, internationally, regionally and locally. The only way to achieve this is by ensuring that there is systematic integration of disaster risk reduction concepts into government policies, plans and programmes for sustainable development and poverty reduction. As suggested by the Hyogo Framework for Action 2005-2015 (2005:2) disaster risk reduction

activities should be "underpinned by a more pro-active approach to informing, motivating and involving people in all" spheres.

Van Niekerk's interpretation of the above statement is that the focus of disaster risk reduction should be on a wide and array of issues that are on strategic level. He sees it to be aiming at implementing certain strategic initiatives such as policies, strategies and practices that can ultimately reduce or eliminate conditions of hazard and vulnerability at the local level., Reducing risk "requires that all stakeholders change their perception and behaviour to place a high priority on safety in planning and development" measures such as "land use planning, structural design, construction practices and standards and disaster warning systems" (World Bank, 2004 in Van Niekerk, 2008: 7-8).

Holloway (2003: 32) emphasises that disaster risk reduction should be seen as the responsibility of a government who should take ownership of disaster risk by discouraging an automatic dependency on outside help, and show commitment to international best practice by putting in place measures that can integrate disaster risk reduction with development. She further reiterates that "ultimately, it remains a government's 'duty of care' to protect its citizens from unnecessary hardship and loss" and as such, governments should work towards building "local resilience to expected threats, so that a 'hazard event' no longer equals a disaster".

While it should remain the government's 'duty of care' responsibility to protect its citizens, the ISDR in their Living with Risk publication (2002: 22) and Twig **(**2004: 5) emphasise that disaster risk reduction strategies should include vulnerability and risk assessment, as well as institutional capacities and operational abilities and most importantly that its (disaster risk reduction) thinking should see disasters as complex problems demanding a collective response from different disciplinary and institutional groups. Disaster Risk Reduction is a concept requiring forged partnerships and institutional development to build and enhance characteristics of disaster-resilient communities, which the author further classifies as:

- Capacity to absorb stress or destructive forces through resistance or adaptation.
- Capacity to manage or maintain certain basic functions and structures during disastrous events.
- Capacity to recover or 'bounce back' after an event.

There is cognizance of the fact that disaster risk reduction is everyone's business, including political authorities, professionals from many walks of life, educational institutions and public

organizations. DFID in their 2006 policy paper (2006:12) believes that a proper institutional arrangement for integration of disaster risk reduction strategies into governments' development programmes would be through decentralization of the function to local governments, which are then empowered to facilitate the planning process when communities are empowered through knowledge transfer. According to Yodmani (s.a. 3), emphasis should be on good governance, accountability and greater focus on bottom-up approaches whereby planning approaches should be people-centred, multi-sectoral, and must also show an improved access to resources, with an overall contribution to development process.

Internationally, as spelled out in Wisner *et al.* (2004: 330) the United Nations (UN) has held conferences where remarkable developments and policies towards addressing the social aspects of vulnerability and disaster risk reduction issues in general were recorded as follows:

1. The 1994 Yokohama conference where the message as adapted from the International Decade for Natural Disaster Reduction (IDNDR) 1990-1999: "those usually most affected by natural and other disasters are the poor and socially disadvantaged groups in developing countries as they are least equipped to cope with them" was recorded.Adding to the IDNDR message was another affirmation, with encouragement on community involvement by authorities with a purpose of gaining insight into their (communities) perceptions of developments and risks, as well as understanding the social dynamics of hazard-prone communities, and a need for:

   > A clear understanding of cultural and organisational characteristics of each society as well as of its behaviour and interactions with the physical and natural environment. This knowledge is of the utmost importance to determine those things which favour and hinder prevention of the environment for the development of future generations and in order to find effective means to reduce the impact of disasters.

2. The 1999 IDNDR Programme Forum in Geneva more emphasis and concern was on the four goals for International Strategy for Disaster Reduction (ISDR) with focus on the human dimensions of risk reduction, as well as concern for livelihood protection. The following four goals became the centre of the conference:

- Goal 1: Increase public awareness of risks…posed to modern societies.
- Gaol 2: Obtain commitments by public authorities to reduce risk to people, their livelihoods, social and economic infrastructure and environmental resources.
- Goal 3: Engage public participation at all levels of implementation to create disaster-resistant communities through increased partnership.
- Goal 4: Establish internationally and professionally agreed standards/methodologies for the analysis and expression of the socio-economic impacts of disasters on societies.

3. The 2000 Millennium Declaration within Agenda 21, introduced the eight Millennium Development Goals (MDG), aiming at improving the quality of life and eradicate poverty by addressing the areas of health, education and housing. This declaration also implied that "future disaster risk-reduction structures, plans and policies can no longer be isolated as distinct entities and in future will need to be synchronised with structures, plans and policies concerned with poverty reduction". The following are the eight MDGs:

- Goal 1: Eradicate extreme poverty and hunger
- Goal 2: Achieve universal primary education
- Goal 3: Promote gender equality and empower women
- Goal 4: Reduce child mortality
- Goal 5: Improve maternal health
- Goal 6: Combat HIV/AIDS, malaria, and other diseases
- Gaol 7: Ensure environmental sustainability
- Goal 8: Develop a global partnership for development.

4. The 2002 World Summit on Sustainable Development in Johannesburg followed the Millennium Declaration of 1999. The detail of this conference was on the review of the scale of complexity of vulnerability, which led to the reproduction of the following quotation that demonstrated the need for development of the model of vulnerability that is consistent with the emerging international consensus:

[Vulnerability]…describes the degree to which a socio-economic system or physical assets are either susceptible or resilient to the impact of natural hazards. It is determined

by a combination of several factors, including awareness of hazards, the condition of human settlements and infrastructure, public policy and administration, the wealth of a given society and organised abilities in all fields of disaster and risk management. The specific dimensions of social, economic and political vulnerability are also related to inequalities, to gender relations, economic patterns, and ethnic or radical divisions".

The World Summit on Sustainable development made a remarkable mark by signing and committing to a pledge that placed focus on, and gave "priority action to the fight against the worldwide conditions that pose severe threats to the sustainable development of our people", such as hunger; malnutrition; foreign occupation; armed conflicts; illicit arms trafficking, HIV/AIDS; malaria; etcetera. This pledge affirmed the fact that there has been a paradigm shift from a perspective of seeing disasters as events created by natural forces, to the one viewing disasters as manifestations of unresolved development problems attributed to poverty that is led by unmanaged risks (Yodmani, s.a. 1).

The above movements came with a perspective of viewing poverty as not something evolving just from people's income, but to a more holistic view of people's wellbeing, through which improved access to public health facilities, improved life expectancy and gender equality are also seen as essential indicators of the success of poverty reduction programmes (Yodmani, sa: 1).

As already reiterated in this discussion and many literature studies, there is a need for development efforts towards integrating poverty reduction programmes with other sectoral issues such as environmental management, gender development and public health. That is if the goal of assisting the poor to deal with many challenges they face in their daily life, such as unemployment, poor health care, transport, education, and more is to be achieved.

The New Partnership for Africa's Development (NEPAD) has also, through Africa Regional Strategy for Disaster Risk Reduction (2004: 1-13) called for a more strategic approach to enhancing the effectiveness and efficiency of disaster risk reduction policies and institutional mechanisms for integration of disaster risk reduction into development. This strategy makes a direct linkage between MDGs and reduction of vulnerability. This was also in line with the implementation plan of the World Summit on Sustainable Development, all suggesting that to reduce vulnerability requires that MDGs be achieved, and vice versa, as well as the need for mainstreaming of disaster management in development. Similarly, the ISDR (2002: 23) further provides a graphic representation of a framework for disaster risk reduction as follows:

Figure 1.1

A framework for disaster risk reduction

Living with Risk: A Global View of Disaster Reduction Initiatives (Geneva: UN International Strategy for Disaster Reduction, 2002), p. 23.
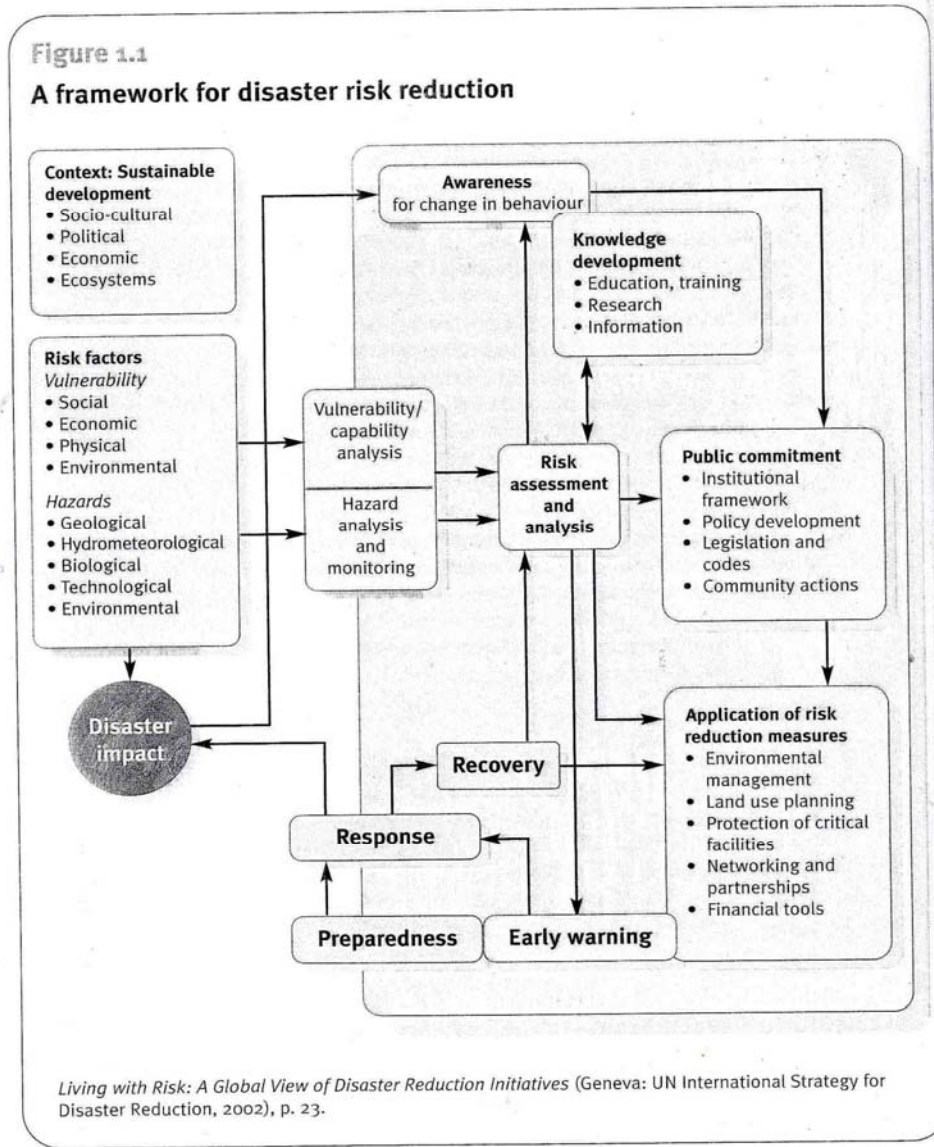
Figure 1: Disaster risk reduction mitigation and preparedness (adapted from Twig 2004: 4)

All the conferences held indicated the growing consciousness and serious concern about the need to have a joint responsibility of governments, communities, Non-Governmental Organisations (NGO)s alike, to pay concerted efforts towards disaster risk reduction, through mobilised will and allocation of resources to reduce the poverty line of vulnerable communities. A

need for recognition for a shift from "relief and response vulnerability analysis" to "risk management" through exploitation of linkages between poverty and vulnerability is needed (Yodmani s.a. 1).

It is indicated in this study that poverty is the main risk factor escalating the vulnerability of most African communities, and that there is a link between disasters, poverty and development, which is also brought about by the level of economic growth, income distribution, agrarian economies, demographic and social factors such as high population growth, rapid urbanization and rural-urban migration. Van Niekerk (2008: 79), however, emphasises that the challenges alluded to bring with them the risks of economic losses and environmental degradation, which may hinder sustainable development process of poor communities. Disaster risk reduction can therefore play a role in community development through the implementation of poverty reduction programmes that can integrate Millennium Development Goals into measures to achieve sustainable development as well as to enhance the resilience of the poor.

With reference to the Republic of South Africa specifically, van Niekerk (sa: 1) alludes to the more prevalent disaster events in this country as just localized incidents of veldt fires, informal settlements fires, seasonal flooding, droughts and man-made disasters such as oils spills and mining accidents. More focus has always been on the effect of HIV/Aids on the poor, the country's economy and the manner in which the rapid population growth and urbanisation is hindering a fair distribution and allocation of resources to people, leaving those who are poor to be more vulnerable to the risks of disaster. This study therefore emphasizes that disaster risk reduction is the responsibility of line functions within government departments. As expected to happen everywhere in the world, it should also be the case in the Republic of South Africa. All government departments in the country should through policy reform, take responsibility and accept accountability to address social, economic and environmental issues escalating the vulnerabilities of poor communities. This study will focus more attention on an aspect of education, as element of knowledge development within the entire context of the disaster risk reduction framework.

2.3. Legislative imperatives for Disaster Risk Reduction in South Africa

The government of the Republic of South Africa, together with a wide range of stakeholders, has, through its sustained and concerted efforts showed commitment to disaster risk

management reform by promulgating the 1999 policy or White Paper on Disaster Management followed by the Disaster Management Act (South Africa, 2002), while the White Paper on Disaster Management underscores the importance of preventing human, economic and property losses as well as avoiding environmental degradation. The purpose of this piece of legislation is to "promote an integrated and coordinated system of disaster management, with special emphasis on prevention and mitigation, by organs of state in different spheres, statutory functionaries, and other role players involved in disaster management and communities".

Administered by the Department of Cooperative Governance and Traditional Affairs, the Disaster Management Act (South Africa, 2002) established a National Disaster Management Centre that "must operate within the national disaster management framework, guide disaster management plans and strategies" and "manage the coordination and management of national disasters". The National Disaster Management Centre is replicated at provincial and local government levels by centres whose purposes and functions are similar to those of the National Centre, and are consistent with the national disaster management framework which became law in 2005.

The Act makes provision for the national disaster management framework which is "the legal instrument specified by the Act to address such needs for consistency across multiple interest groups, by providing "a coherent, transparent and inclusive policy on disaster management appropriate for the Republic as a whole". It also sets out overall measures to reduce the vulnerability of disaster-prone areas, communities and households. It informs the subsequent development of provincial and municipal disaster management frameworks, and plans by setting out four key performance areas (KPAs) and three supportive enablers as well as key performance indicators to guide and monitor progress required to achieve the objectives set out in the KPAs as follows:

- *KPA 1* focuses on establishing the necessary institutional arrangements for implementing disaster risk management within national, provincial and municipal spheres of government. It emphasizes the involvement of stakeholders through co-operative government.
- *KPA 2* focuses on addressing the need for disaster risk assessment and monitoring to set priorities, guide risk reduction action and monitor the effectiveness of participants' efforts.
- *KPA 3* focuses on planning for disaster risk reduction and risk management.

- *KPA 4* focuses on response and recovery measures. It addresses the requirements in the Act for an integrated and coordinated policy that focuses on rapid and effective response to disasters and post-disaster recovery.

The following three supportive enablers are also identified:

- *Enabler 1* focuses on the establishment of an integrated and comprehensive information management and communication system for disaster risk management.

- *Enabler 2* focuses on addressing disaster risk management priorities in education, training, public awareness and research.

- *Enabler 3* sets out mechanisms for funding of disaster risk management in South Africa (National Disaster Management Framework, 2005; South Africa, 2002)..

Key to this study is the KPA 3, together with Enabler 2 which are both about addressing disaster risk management priorities through education, with particular reference to the schools. These provisions call for the disaster risk management education programmes which must be designed as part of the formal education system, the national education and training framework, the South African Qualification Authority (SAQA) and the National Qualification Framework (NQF) requirements. While they further call for the development and implementation of specific education programmes that enhance professional career paths in disaster risk management by tertiary institutions, they also call for the integration of disaster risk reduction education programmes focusing on development and the environment in primary and secondary curricula (South Africa, 2005: 162-163).

2.3.1. Disaster risk reduction initiatives: Tshwane Metropolitan Municipality

Ideally, this study is supposed to be involving a wider range of schools within the City of Tshwane Metropolitan Municipality, but due to time, financial resources and a prescribed volume for a mini-dissertation, it will be a multiple case study limited to the three primary schools in the Central Region of the City of Tshwane Metropolitan Municipality.

In terms of the Integrated Development Plan of the City of Tshwane (2010: 33-34), the City of Tshwane Metropolitan Municipality plays a significant role in the economy of the Gauteng Province. However, the Metropolitan is also characterized by a high density of disadvantaged areas, which include a number of informal settlements with high levels of poverty and poor access to opportunities. These areas need to be priority points in areas of quality education, access to work and economic opportunities and social infrastructure.

There are urban, semi-urban and rural areas of which some are located on environmentally sensitive locations, and will therefore need attention and a strategic development approach in areas of rural development, food security and land reform as well as in areas of environmental development and spatial planning.

The City of Tshwane Central Region includes areas of the inner city and areas of Atteridgeville Township, Sunnyside, Elandspoort, Fort West and Danville. These are areas characterized by the massive flow of immigrants who mostly live in informal dwellings without formal supply of basic services such as road infrastructure, transport, water and electricity. Like the other four Regions within the City of Tshwane Metropolitan Municipality, the Central Region is also expected to discharge its roles and responsibilities in terms of "Optimize service delivery to all communities in the Region and strive to capacitate the communities to its full extent as allowed by the resources of the CoT" (City of Tshwane, 2010: 40). However, there is no official and formalized strategy for the development of Atteridgeville, where the focus of this study will be. Pending the outcome of the geotechnical study currently going on, a decision has still to be taken on where to relocate the informal settlements.

In terms of disaster management and fire services, the City of Tshwane has its Disaster Management Division focusing on "creating safer and resilient CoT communities through coordination of all-hazard prevention, preparedness and mitigation, response and recovery activities within the framework of sustainable development" (City of Tshwane, 2010: 138). There is the Fire Brigade Division providing Fire and Rescue Services to the city. This Division also deals with issues of incidents involving hazardous substances. The Central region specifically, has four Fire Stations providing the region with most of the medical emergency services.
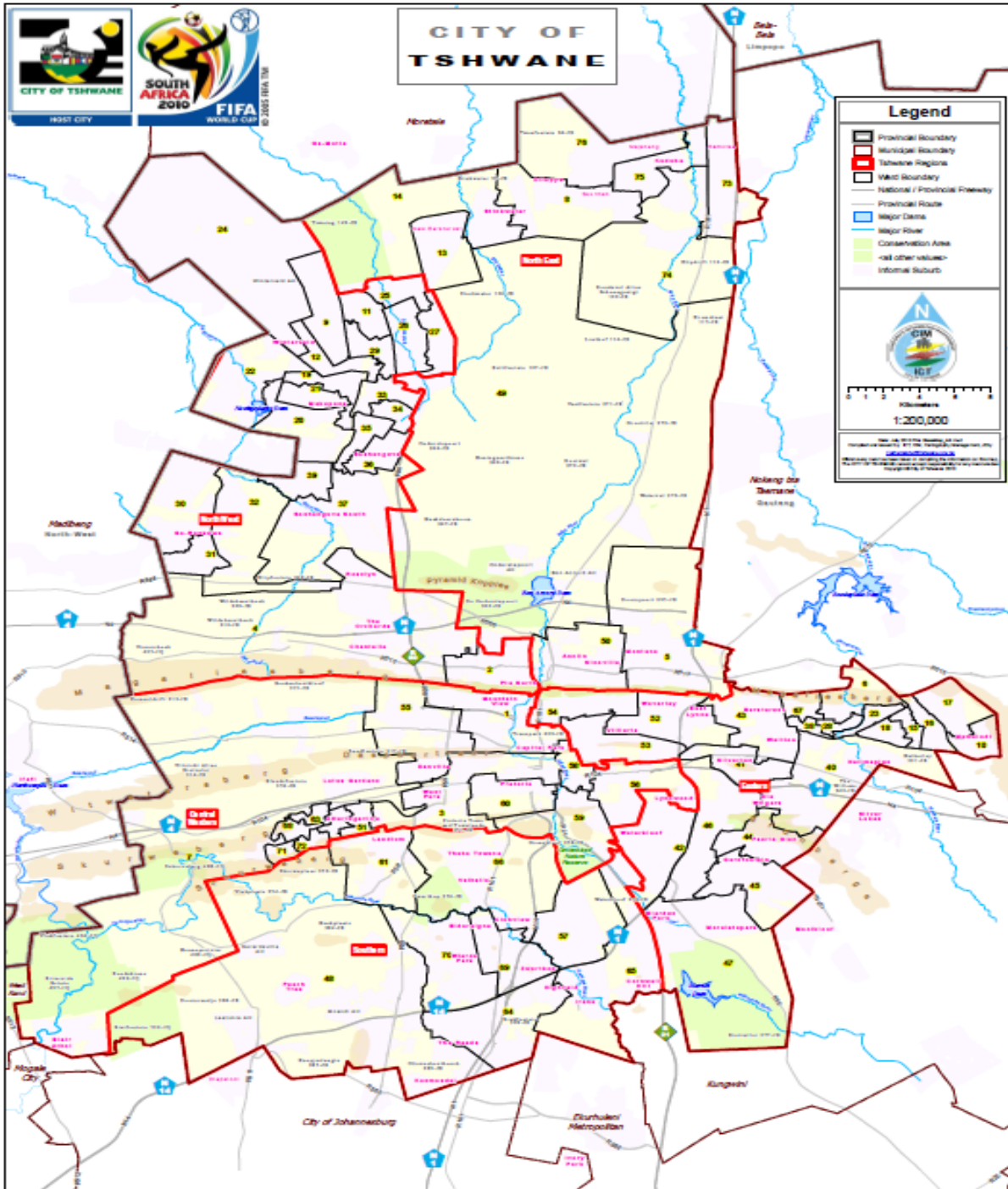
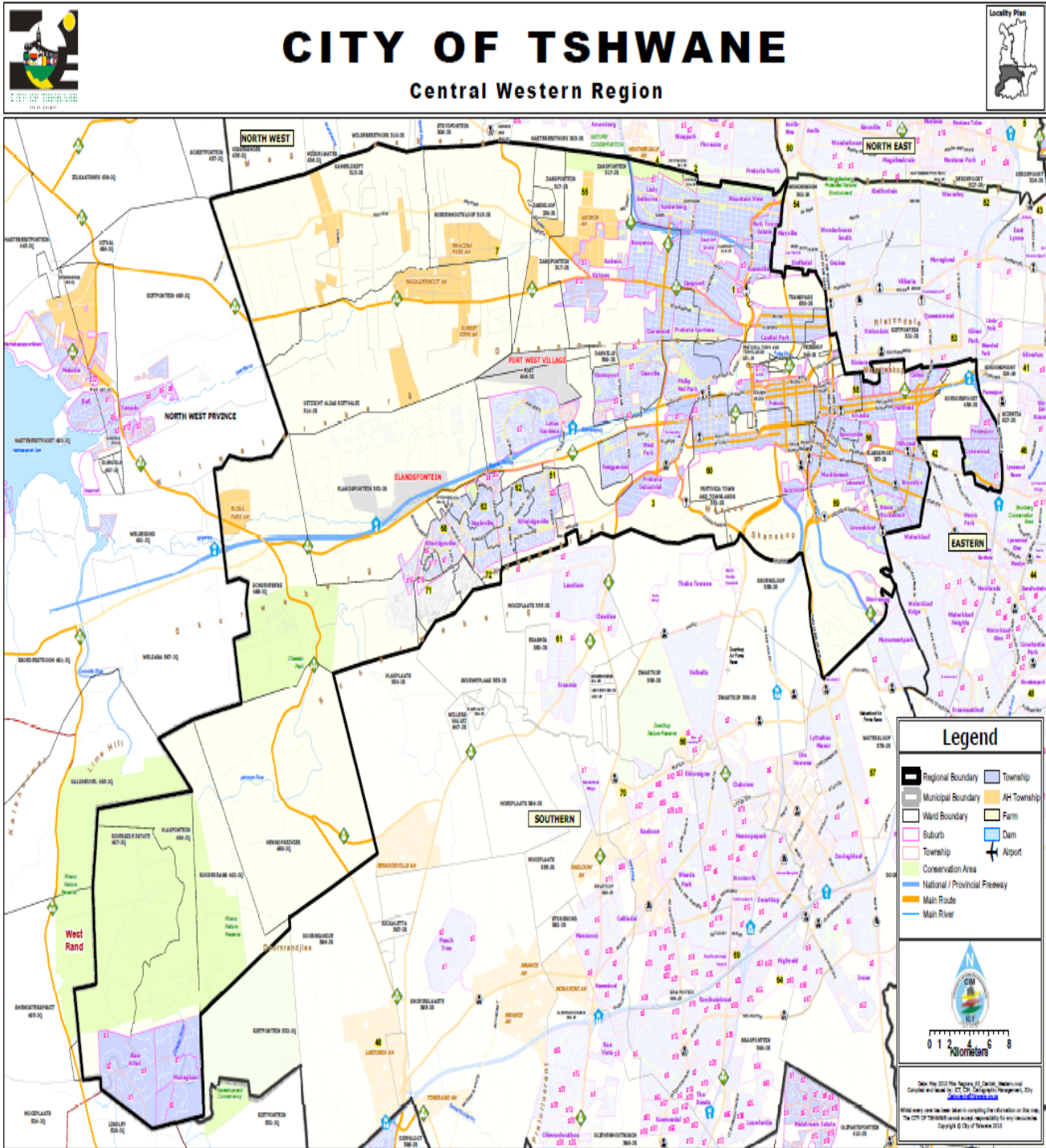Figure 2: map of the City of Tshwane (Adapted from www.citymm.co.za)

Figure 3: Map of the Central Region of the City of Tshwane (Adapted from www.citymm.co.za)

2.4. Education: a process or product?

Briceno (2002:1) supports the International Strategy of Disaster Reduction's (ISDR) mission which is about "to develop a culture of prevention and build resilient societies and communities by promoting increased awareness of the importance of disaster reduction as an integral component of sustainable development". This study seeks to also emphasise the need for involvement of all institutions and experts in various sectors, including the Education sector, in the subject of disaster risk reduction. ISDR (2002: 178) posits that in this regard, the highest priority should be about presenting the various dimensions of disaster risk reduction within communities through structured educational programmes and professional training. Accordingly, the Education sector should have a vital role to play as "they are the main source for development of knowledge in society". These institutions should realise the importance of including disaster risk reduction in their priorities, with more focus on the school curricula and extracurricular activities to be taking a lead in ensuring that societies' and communities' values and attitudes towards risk reduction are developed.

Fien, as cited in Le Roux (2001: 56), and the Department of Provincial and Local Government (2008: 4) both concur with the above ISDR view when they respectively argue that education is "the world's greatest resource in bringing about preparedness for changes in social systems toward sustainable living", that "education encompasses both teaching and learning of knowledge, proper conduct, and technical competency", that it focuses on "the cultivation of skills, trades or professions, as well as mental, moral and aesthetic development" and that "it consists of systematic instruction, teaching and training by professional teachers at schools, colleges and universities" through the application of pedagogy and the development of curricula. In line with this motivation, the National Disaster Management Framework (South Africa, 2005: 163) sees schools to be the focal points for raising awareness about disaster risk management and disaster risk reduction.

Van Rooyen (2006) an Environmental Education Specialist, has argued in Lekalakala (2007:19) that the most successful Environmental Education is doomed to fail unless it has an out-of-school social support system, which includes amongst others policy and/or laws and regulations for sustainable use of resources. Similarly, Twigg (2004: 165) avers that due to lack of high level expertise in disaster risk management field, disaster managers often fail to make disaster risk reduction activities, and most importantly information and educational activities, integral parts of development planning, but make them just a part of these projects.

This study aligns itself with Twigg (2004: 168) that more practical disaster risk reduction policies are needed if countries are to develop and establish populations that are "committed to living their daily lives in accordance with the principles of sustainability". These are public education policies enabling disaster specialists, including teachers, to develop programmes that are in line with the needs, priorities, indigenous knowledge and the capacity of the communities they serve. In this way, "a 'culture of safety', where awareness of risk and adoption of risk-reducing measures are part of daily life", is built through a long-term process, and not a "one-off intervention". It is in line with this motivation that the implementation of disaster risk reduction activities cannot be viewed in a narrow perspective of just being a product, but with a perspective of being a process. It will need quite a longer time and a range of programmes of activities before community behavioural change can be witnessed. This notion is also emphasized by the American researchers studying public education programmes on earthquakes, as quoted in Twigg (ibid) saying:

> Public educators have learned through trial and error that people are generally not motivated by sermons nor discourses on ethical or legal imperatives produce the desired behaviour change in the average citizen or organization. People are more apt to follow our agenda if they work out a solution themselves, with helpful information from specialists. Not surprisingly, most people are motivated to change their behavior when they think it's their own idea.

In the past decade, South Africa has seen the most radical social, political, economical and educational changes in its history. Among other things, the institution of a non-racial Government of National Unity (GNU) in 1994 has necessitated the total reconstruction of the traditional education system with the purpose of laying the foundations for a single national core syllabus. In terms of the new education reform, "teachers will be responsible for the development of Learning Programmes. The Department of Education will provide policy guidelines for the development of Learning Programmes in order to support this process. Provinces will develop further guidelines where necessary in order to accommodate diversity" (South Africa, 2002: 16).

In line with the indicators of disaster risk reduction institutionalization as outlined by Twigg (2004: 24-26), the interpretation of the above statement should be in line with an understanding that at National level, the Department of Education should in their policy statements, be able to refer to the importance of disasters, the vulnerabilities and the levels of the risks and should through their strategic planning, be able to commit to addressing these issues. At Provincial and school

levels, the operationalisation of the policy statements and strategic planning commitments should be done by teachers in consultation with their communities, through the implementation of the Learning Programmes developed for respective Learning Areas.

As Lekalakala (2007: 20) posits, the South African Qualifications Act, (South Africa, 1995), the White Paper on Education and Training, (South Africa, 1995) and the National Education Policy Act, (South Africa, 1996) facilitated the introduction of the new South African school curriculum. A streamline of education policy reform was considered. There was the introduction of curriculum 2005, followed by the National Curriculum Statement Grades R-9 (NCS), the Revised National Curriculum Statement Grades R-9 (RNCS), and finally the 2009 Report of the Task Team for the review of the implementation of the National Curriculum Statements. This reform was a complex far-reaching initiative to fundamentally transform the South African education system with the purpose of creating conducive conditions to the transformation of society through education and training.

In the same light as Fien (1993:1) who argues that "the well-being of all future generations depends…on the knowledge base and values of those currently in our schools and colleges", the Department of Education in its RNCS document (2002: 8), states that the kind of learner envisaged is one who will be imbued with values and act in the interests of a society based on respect for democracy, equality, human dignity, life and social justice. These fundamental curriculum principles represent the critical elements of the ISDR mission and those of the South African disaster management legislation as stated in this study above, emphasizing the importance of integrating disaster risk reduction focus into the school curricula in order to effectively succeed in dealing with typical disaster problems in line with the principles of sustainable development.

2.4.1. Disaster risk reduction through schools

This study emphasizes the need for the realization that education processes fostering the implementation of programmes to better the lives of communities can best be applied in formal schooling through a more focused policy approach and an interactive process of mutual learning at school levels. In an attempt to build the culture of safety and resilience as well as making a behavioural change at a household level as required by the principles of disaster risk reduction, this study sees the government of the Republic of South Africa to have shown its commitment

and political will for both disaster management and risk reduction and educational policy reform. It is through these policy reform processes, that holistic, strategic and integrative curriculum development and implementation opportunities and initiatives were put in place. It is through these initiatives that South African schools must be able to develop the full potential of each learner as a citizen of a democratic country, must be able to make them acquire a high level of skills and knowledge through an integration and linkage of learning areas, as well as ensuring that educators are able to fulfil the various roles such as becoming mediators of learning, interpreters and designers of Learning Programmes and materials. In this regard, there is a room for creativity and innovation wherein teachers on their own, can determine what and how to teach (South Africa, 2002: 8-9 & 12).

With specific reference to the inclusion of disaster risk reduction focus into the school curricula, Twigg (2004: 181) advises that while Non-Governmental Organisations (NGOs) may visit schools and talk to them and their children about their preparedness initiatives, teachers may choose to introduce in their lessons, particular aspects that are relevant to their communities. In this way, the message is able to reach out to large numbers of people who are learning together especially that "children are believed to be more receptive to new ideas than adults, and it is also believed that they influence their peers and their parents" (ibid).

Literature has revealed that due to lack of resources, skills and capacities, there might be some limitations for the developing countries to incorporate disaster risk reduction activities into formal education. It is reiterated that due to the limited flexibility within the curricula, most school educational programmes are unable to adapt to accommodate the incorporation and integration of all the aspects of disaster risk reduction, but may focus only on single issues such hazards, limiting children from dealing with the entire aspect of disaster preparedness across a number of Learning Areas such as "mathematics, science, history, geography and citizenship". In this way, it "may be easier to teach about hazards only (which fit with standard science or geography teaching) than socio-economic vulnerability or disaster management", which also caters for risk education leading to an accurate perception and a better understanding of protective measures (Twigg 2004: 182).

In support of the view alluded to above, the Department of Cooperative Governance and Traditional Affairs in its National Education, Training and Research Needs and Resources

Analysis (NETaRNRA) Consolidated report (2009: 12-13) has indicated that in South Africa, the directives within the National Curriculum Statement show a convincing alignment between schools' curriculum and the requirements as stipulated in the National Disaster Management Framework (about the integration of disaster risk reduction into schools' curriculum planning), especially in the Social Sciences and the Life Orientation Learning Areas for both primary and secondary schools. However, there is the scepticism still in this report that because of Learning Areas choices and high secondary school dropout rates, the likelihood of disaster risk management education not reaching out to all senior secondary school children becomes very high.

However, looking at the positive developments of policy reform recorded by South Africa in the fields of disaster management and education respectively, this study therefore takes it further to investigate the possible impacts of these initiatives on formal education at primary school level. While NGOs are supposedly to be stepping in to assist schools that cannot see the holistic picture of disaster risk reduction planning, this study argues that due to an enabling regulatory environment created by the government of South Africa, it is expected that the primary school teachers will be in a position to adapt their localized curricula to incorporate different perspectives on disasters.

The Regional Consultative Committee on Disaster Management (RCC) (2007: 1) has indicated that many RCC members' countries such as Bangladesh, Cambodia, India, Indonesia, Iran, etcetera, have managed, depending on their policy decisions, to integrate disaster risk reduction into their school curricula. This was done either through having it (disaster risk reduction) as an independent subject or by having its (disaster risk reduction) concepts being taught by combining with portions and specific chapters of other subjects such as environmental studies, geography and science. An interview will be administered with the teachers from the three primary schools within the Central Region of the City of Tshwane Metropolitan Municipality, to find out exactly what their perceptions and practices are regarding the integration of a disaster risk reduction focus in their actual situation and local settings.

The Integrated Development Plan of the City of Tshwane Metropolitan Municipality (2010-2011) does not elaborate much on the nature and the extent of the integrative approach to disaster risk reduction of the City within the formal school curriculum. The government of the Republic of South Africa has through its obligations and regulatory measures, ensured some guarantee towards building the resilience of its communities through protection of their rights and those of

its individuals, institutions and communities to safe environments. It is hoped that through an investigation to be conducted through this study, the Central Region of the City of Tshwane Metropolitan Municipality will also be found to be complying with the policy requirements that ensure that the learners in this city are also empowered to exercise responsibility for their own lives and for life on earth.

2.5. Conclusion

This chapter provided a theoretical background and literature review on the extent of disasters globally, narrowed down to the Southern African Region and then the South African context. It also touched on disaster risk reduction initiatives most governments adopted, with more emphasis on the political will and strategic agenda of the government of the Republic of South Africa through the adoption of the disaster management legislative framework, together with policies guiding education reform in South Africa. The legislative frameworks in the field of disaster management and education respectively, as alluded to in this chapter, provided a basis on which this study will be focused.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Introduction

This section is about the research design as well as the procedures followed in conducting the study. It discusses issues of trustworthiness, and details the adherence to ethical considerations such as reliability, validity, objectivity, credibility and transferability required in the field of research. The study uses qualitative research methods for data collection in which teachers from primary schools within the Central Region of the City of Tshwane Metropolitan Municipality serve as the sources of information in the investigation of the subject under study.

Chapter 2, in which literature review was conducted, presented and provided the background and a frame of reference for the research from an international and local perspective. It also identified some policy and legislative guidelines on how elements of disaster risk reduction can be integrated into the formal education settings. In that regard, this study seeks to assess the factors that might allow or hinder the possibilities of the primary school teachers to include disaster risk reduction themes in their lesson planning within the schools in their teaching practice.

3.2 Research design

Research design is defined by authors, such as Henning (2004), Leedy (1985), Macmillan & Shumacher (2001), as the logic that links the data to be collected and the conclusions to be drawn to the initial questions of the study. The topic this study explores is best suited to the social science field and uses a qualitative research approach, which most researchers prefer for its purpose of being able to accumulate sufficient knowledge leading to understanding. This is due to the ontological nature of the question this study is seeking to answer, rooted in the human perceptions, as well as the epistemological nature of the close relationship the researcher has with the object being studied. The study is about people's perceptions of which the reality cannot be mathematically measured, but constructed in the minds of people who are interviewed.

Qualitative research approach is an emergent research design whereby knowledge is created by following a route that moves away from the thinking that "knowledge is based on science; and that there is a hierarchy of science with mathematics at the top and sociology at the bottom," implying that reality can be measured. It is actually a research tradition bringing the researcher closer to the object or phenomenon being researched with an understanding that the research object is "the outcome of human minds; therefore, separating the researcher from the object of the research" is not possible and that, "a subject-subject relationship" between the researcher and the phenomenon exists. The study will not focus on the experimental methods and quantitative measures that test hypothetical generalizations.

Literature review sees qualitative research approach as the most convenient one in social research because of its nature in studying people's perceptions. It is viewed as an approach that is naturalistic; holistic; environmental; contextual; inductive or dialectical and pluralistic with the involvement of the object of research (Bradley 1993; Borg & Gall 1989:31; Fidel 1993; Gay 1987:209; Grover and Glazer in Olson s.a.: 185, Hamlet 2004:105; Mellon 1990;, Patton 1987:13). Sutton 1993).

Qualitative research design is best suited to the interpretive, critical theoretical framework, as well as constructivist reality. By its nature, this study is informed by the constructivist reality which caters for the idealist school of thought, believing that reality is constructed and agreed in a social context, and cannot be constructed independently from people (Hamlet 2004: 105). There is a very close relationship between the researcher in this study and the object being researched, which is "the perceptions of teachers about the inclusion of disaster risk reduction focus into the schools' curriculum." The truth and knowledge about the subject under study will only emerge if these relations are strengthened.

This is the relationship happening in the social world from which detailed descriptions of the actors' cognitive and symbolic actions can be understood through observable behaviour. The social setting for this study is the schools, where teachers are on a day-to-day basis, in a process of making meaning through their teaching practice. The study is interested in finding out exactly how these social settings are constraints or channelled by various forms of social, cultural and political domain, including the policies governing these teachers' behaviours. Hamlet (2004: 106) and Olson (s.a.) further reiterate that in qualitative research design, the

researcher's values play a significant role in influencing the way the world is viewed. These are the values guiding the choice of instruments to be used by the researcher in eliciting the facts about reality, as well as assisting the researcher to understand the social settings shaping the behaviour of people in those settings.

The behaviour and the thoughts of teachers are then studied in their actual settings in line with their interpretations of the policies framing these behaviours and thoughts. The researcher seeks to know the situation on the ground regarding the teaching practice through the eyes of the primary schools teachers who are the respondents for this study. It is for this reason that the researcher uses the data collection tools that will assist in eliciting information from the minds of people in organisations providing the understanding of and knowledge about the phenomenon under study. This is about their culture, their resources, their purpose as well as their views. The author advises that it is quite vital "to experience is the way to gain knowledge" and that "the best way to understand an organisation is to become part of the phenomenon being studied, knowledge is validated experientially" (Hamlet, 2004: 107; Olson, s.a.).

Researchers working in the qualitative research tradition argue that people's subjective experiences are real and should be taken seriously by interacting with them, hence the need to focus on the real world. Newman (1997:240) posits that qualitative research involves studying those phenomena in their complexity and that the meaning of the social action or statement depends, in an important way, on the context in which it appears. When a researcher removes an event, social action, and answers a question ignorant of the social context in which it appears, meaning and significance become distorted.

With qualitative research approach, it is always not easy to eliminate the bias view that may distort the findings of the study as it may happen with the use of quantitative research approach, hence researchers using this naturalistic approach always "systematically acknowledge and document their biases rather than striving to rise above them", and develop their relationship with the respondent. This is another way of ensuring trustworthiness of the study through credibility, transferability, dependability and conformability, as well as believing and accepting that different theories develop from the findings of the study and that they (theories) may be valid according to the researcher's, and presumably the respondents' interpretations (Bradely 1993; Mellon 1990 in Olson s.a.).

3.3 Techniques for data collection

Given the time constraints, financial resources and the limitations of a mini-dissertation, this study is a multiple case study limited to three primary schools within the Central Region of the City of Tshwane Metropolitan Municipality in the Gauteng Province. It thus uses a variety of methods of data collection accommodated by the qualitative research strategy to achieve a better understanding of the participants, and to increase the credibility of the findings. The use of multiple forms of data in qualitative research approach is referred to by Henning (2004:104) as 'triangulation'. This author also argues in Lekalakala (2007: 45) that triangulation entails collecting materials in as many different ways and forms from as many diverse sources as possible.

Because of its nature of being a multiple case study, this study will use semi-structured interviews backed up by observation that will be captured through field-notes to source from the area of study, as much information as possible. As Myers (1997: 2) postulates, "all human life is experienced and indeed constructed from a subjective point of view and that it should seek to elicit the meaning of events and phenomena from the point of view of participants." These tools will assist the researcher to understand how different people make sense of their lives.

3.3.1 Why a Multiple case study?

The research design can best be characterised as a multiple case study design. A multiple case study design enables comparison and contrast between situations that are studied within a bounded system to elicit and replicate more robust and systematic findings. It also enables understanding of similarities and differences across context, and how these relate to the phenomenon being investigated (Henning, 2004; De Vos, Fouche & Delport, 2005 in Lekalakala 2007: 40). These authors further posit that in other instances, researchers study two or more cases, often cases that are different in particular ways so as to enable comparison, build theory or propose generalization. As they answer questions "how" and "why", for the purpose of this study, multiple case studies will be used to answer the "how question" on "the ways in which teachers integrate disaster risk reduction themes into their lesson planning, as well as the "why that route question" addressing their perception about that integration, that is, why they think

they should follow that particular approach to integrate disaster risk reduction themes into their Learning Programmes.

The inductive or interpretive theoretical and not statistical framework informs the process of this study using case studies leading to generalisation of findings. Stewart (2010: 2) posits that it is through this approach that "a number of instances of a particular problem (or phenomenon) are brought together, in order to extract (or identify) key factors that seem to have some bearing on an outcome of interest". In this instance, perceptions of teachers at three different primary schools about the inclusion of disaster risk reduction focus into their Learning Programmes will be studied with the purpose of identifying key factors underlying the success or failure of the South African policy reform processes in the fields of disaster management and education respectively.

These are strategic government initiatives guiding actions in different schools, as well as how implementation problems are resolved. The methods used by teachers in the three different primary schools used as cases in this study will be compared to see if there are any similarities, differences or contradictions in the way they engage with their lesson planning process to include other fields like disaster risk reduction, as well as to find out about the factors influencing or motivating those similarities, differences or contradictions. It is in line with this motivation that data on these different cases that are representatives of a number of schools can be taken as a particular whole are first collected and analysed before any conclusions can be drawn regarding the dependency of any variables. Interviews will be the main data collection tool and will be supported by observation that the researcher will do simultaneously with and when interviewing.

3.3.2 Interview as a technique for data collection

The use of qualitative research as opposed to quantitative research is motivated by the perceptions that "the ability to talk" is the only thing that can distinguish humans from the natural world. The researcher through interviews becomes engaged through talking in an abstract thinking that opens the mind to new theories emerging during the "personal experiences of the qualitative research process" (Burns & Grove 1993:2; Myers 1997:2).

In line with Lekalakala's (2007:45) view that interviews are the most rewarding component of a well established communication tool that can provide rich and substantive data for the

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researcher, Henning (2004: 52) emphasises the importance of using this tool because of its main aim in qualitative research, which is "to bring to our attention, what individuals think, feel, do and what they have to say about it in an interview, giving us their subjective reality in a "formatted" discussion, which is guided and managed by an interviewer and later integrated into a research report". The authors further recommend the use of interviews as they are seen to be "talk-in-interaction" focusing on the analysis of conversation in everyday settings, with the aim to check "the underlying structures of such talk".

Moore (2001:122) in Lekalakala (2007: 45) is cited agreeing with Lekalakala and Henning about interviews that they can create "time for the respondents to reflect on the questions they were being asked, with opportunities of encouraging them to elaborate and explain in more detail the subtleties and complexities of their feelings". Seidman (1998) in De Vos, Fouche' and Delport (2005: 287) states that "you interview because you are interested in other people's stories" because in interviews, the respondents are allowed, in a relaxed mood, to state their own views, opinions, thoughts and ideas without manipulation or interference, and without imposing the researcher's structures and assumptions.

Because of its nature, this study conducts semi-structured interviews at three primary schools within the Central Region of the City of Tshwane Metropolitan Municipality selected as cases for which comparisons among them can be made, as well as being able to extend and validate theories emerging out of these cases. De Vos *et al.* (2005: 296) and Hoepfl (1997:6) prefer these types of interviews for the mere reason that they give both the researcher and the respondent more flexibility.

The researcher has purposefully selected the primary schools in the said region of the Metropolitan Municipality as places with experienced teachers that would offer more understanding of the phenomenon under study. The study will have four participants per school interviewed with the purpose of checking the approach they use to integrate disaster risk reduction focus into their lesson planning.

The researcher will enter the interview environment with the interview schedule that outlines briefly to the respondents an overview of the research purpose, as well as a broader research objective. The purpose of this schedule is to only guide the interview and not to dictate the process. The development of the schedule is guided by the literature review done in the preceding chapter, indicating the creation of an environment by the South African school

curriculum to allow for the integration of disaster risk reduction focus in subjects like Life Orientation, Social Sciences, Physical Sciences and Geography.

A one-on-one interview with each respondent at each of the three selected schools will be conducted. All of the respondents will be asked the same type of questions that are nearly open-ended to allow the researcher the freedom to probe and explore their minds in a free talking environment. The respondents will be allowed to tell their stories about the phenomenon under study (the inclusion of disaster risk reduction focus into their lesson planning) in a relaxed environment.

The researcher will ensure that the interview environment is properly controlled as well as ensuring that sensitive and controversial questions are avoided so that participants do not feel uneasy and adopt avoidance tactics. To ease the tension a little bit, the questions will start with the most general and then be narrowed down to the most complex and specific ones. Leading questions will be avoided at all costs.

Apart from eliciting content information provided by the respondents during the interview, the researcher will also study the process of the interview, which involves reading between the lines of what the respondents say during the interview. The purpose of this is to see if there is any confirmation or contradictions of what the content information is telling.

As Lekalakala (2007: 47) posits, to facilitate record keeping, to provide for an authentic verbal account and to improve accuracy and objectivity of the data collected, all the interviews will be tape-recorded and transcribed for close analysis. Immediately after the interview, the researcher will sit and jot some impressions developed during the interview. These will include the emotions, perceptions, expectations and prejudices that the researcher can use to develop in a final report. With regard to the content information elicited through the same type of questions that each individual teacher will be asked, the responses thereof will be coded and tabulated in a descriptive and statistical order to check if there are any relationships coming out of the data.

3.3.3 Observations

To deal with the shortcomings that the interview tool may possess, such as instances wherein respondents may not provide enough and accurate information, field-notes on everything that is observed are also used to complement and close that gap. Janesik (2004) in Lekalakala (2007:

47) posits that observations are a tool enabling the researcher to learn about things the participants may be unaware of, even if they may be unwilling to discuss them in an interview. This study will use observation not as a standalone participatory tool, but in a way that allows the researcher to become the instrument of the observation during the interview process to see firsthand how the respondents act in their social settings. This observation will take place while the interview process is under way, and will enable the researcher to get closer to the action to see if there are signs that confirm or contradict what the respondents are saying. The actual behaviour, the physical setting and the social environment such as artefacts, language usage together with what people say will be recorded.

The researcher's version of what is there, including the evidence of what the teachers do, how they do it, what they use and against which background, will be recorded as observations and captured in the form of field notes to be used later as the building block of the final research report.

3.4 Data analytic strategies

While Bogdan and Biklen (2003:145), Henning (2004:101) and Morse in Thorne (2000:5) see qualitative data analysis as the process of working with data, organizing, breaking it into manageable units, synthesizing it, searching for patterns, discovering what is important and what is to be learned, and deciding what to tell the readers of the research report, De Vos *et al.* (2005: 333) simplify this logic by saying that qualitative data analysis is the process of transforming data into findings in a manner that can reduce the volume of collected raw information to bring structure and meaning to this mass of collected data. Most importantly is to ensure that the findings are consistent, coherent and reached by using a relevant research methodological design.

In line with Henning (2004: 41) about case studies covering a bounded system, this study uses a case study design in which the data analysis focuses on one phenomenon, of which the information is collected from three different sites. The authors alluded to in this study, De Vos *et al.* (2005), Henning (2004), Rowley (s.a.), and Shakespeare (1564-1616), see coding and categorising data into themes to be the easiest way to working with qualitative data. This they say is the best way to assess whether the evidence collected supports the initial propositions of the study.

Because qualitative methods are used to collect data, there are no predetermined categories as these emerge during the research process when more knowledge of the situation is gathered and generated into theories. In order to succeed in comparing the chosen cases, the data is worked out in two ways; first through the intra-case analysis and then the cross-case analysis. As Stewart (2010: 5) and Rowley (s.a: 24) advise, the researcher started off by transcribing all interviews, read them through and then broke them down into segments to identify critical and similar quotes that form groups of like data that translated into an interconnectedness of nodes or themes for each case. The cross-case analysis was used to generate themes across cases. The themes were named and linkages between corresponding categories were sought to guide the researcher in the process of writing the final research report.

3.5 Measures of validity and reliability

The trustworthiness of the research and the research design make the study rigorous. This is an aspect that promotes quality as well as making data real and valid. Validity of the study is regarded by many writers such as Hoepfl (1997) and Henning (2004) in Lekalakala (2007:51), as a means of determining whether the research truly measures that which it was intended to measure or how truthful the research results are. In other words, the research instrument used must allow the researcher to achieve the research objective. These authors further describe reliability as the extent to which results are consistent over time as an accurate representation of the cases selected for the study, meaning that if the research results can be reproduced under a similar methodology, then the research instrument is considered to be reliable.

In this study, the researcher also ensures that the reality within the context from which the study is done is not distorted. To make the findings more truthful, applicable, consistent, and neutral, the researcher engages the verbal accounts of the participants in a more reflective process during the analysis process to avoid being biased and come up with research report that maintains a required neutral position.

This is done to ensure that the findings have correspondence with the practical reality and can be replicated and applied in other similar settings without making any alterations. The consequences of this study are replicated into action that can benefit the education fraternity in a way that will bring change or effect in the teachers' everyday lives. The report will have coherence and pragmatic utility (logic, consistency and positive consequences of the study) by

sticking to the concord of the methodology as well as ensuring quality throughout the entire process.

3.6 Ethical considerations

As many other professional studies conducted worldwide, this study also has an obligation to adhere to strict ethical standards. The study is in line with the ethical principles employed in any qualitative study. It has respect for autonomy, justice, fair selection of the study population, informed consent, social value, validity and independent ethical view.

The responsibility towards the respondents of the interview conducted is considered. The rights of participants to have a voluntary and free participating choice as well as their confidentiality are respected. A request to conduct interviews at the schools and with the teachers, as well as seeking permission to use tape-recorder during the interview proceedings, is made through letters that are approved by the study institution where the researcher is registered as the student.

Before the interviews are conducted, appointments are made with the respondents at the time suitable to them. Prior to the commencement of the interviews, each participant signs an informed consent contained in an information sheet that clearly outlines the purpose and the procedures of the study, as well as explaining the detail of the study and the likely duration of the interview. Participants are also given the space to discontinue with the interview at any point in the study should they wish to do so or should any emotional distress during the interview be noticed.

While data are stored in a secured manner in order to reduce identity risks, as well as removing the names of the participating schools, the research findings will be communicated to the respondents and the funding body of this project with the purpose of replicating the project for human resource development and capacity building purposes.

3.7 Conclusion

The focus of this chapter has been on the research design, research approach and methods employed in the study. Consideration is also given to the trustworthiness and ethical consideration, to give credibility to this study. Qualitative research design has been selected for this study and it is embedded within the multiple case study design focusing on one

phenomenon. Interviews and observations were explained as the preferred tools for data collection, from three primary schools within the Central Region of the City of Tshwane Metropolitan Municipality, selected as cases providing information regarding the phenomenon under study.

The researcher is confident that the methods employed in this study manage to capture some of the life experiences of the teachers in the parts of the country in relation to what the government policies prescribe for their interactions with the concept of disaster risk reduction.

CHAPTER 4

PRESENTATION OF DATA AND DATA ANALYSIS

4.1. Introduction

This chapter focuses on data presentation, data analysis, interpretation and building of the empirical evidence for this study. Semi-structured interviews backed up by observation and field-notes to source from the areas of study were used as the key data collection instrument in the three primary schools in Atteridgeville Township, within the Central Region of the City of Tswane Metropolitan Municipality. Thirty interview questions were administered to eight individual teachers from these three respective schools. The questions were designed with room for descriptive categories, follow-up, experience, example or simple clarification. The initial plan was to interview twelve educators, four from each school, but considering the volume of the interview transcripts as a result of this big number, only eight were interviewed, two from one school, three from the second and three from the third and last school. To provide for an authentic verbal account and to improve accuracy and objectivity of the data collected; all the interviews were recorded by a digital voice recording device and then transcribed verbatim into electronic text documents provided as appendixes. The transcribed interviews became the documents used for data analysis.

Added to the data collected through the interviews conducted at the three case study schools, was the data collected through observation made at another fourth school, a private school that the researcher heard about while doing interviews at the third school. The observation was done out of interest and an anticipation that the information collected there would just add to the value of the research in its attempt to compare the situations at these different schools. The initial plan was to try to secure an appointment with the principal so that maybe the fourth school could be added to the three. However, due to the principal's attitude, not even wanting to talk to the researcher, a brief and informal interview was done with the principal's secretary to source as much information as was possible. The information was used to add more facts regarding the comparison of the cases studied. The principal's secretary was, however, not aware that the information she was revealing was to be used in this research.

In line with the research problem outlined in Chapter 1 and the research methodology as presented in the preceding chapter, this data was presented, analysed and interpreted qualitatively to arrive at a logical conclusion about the status quo regarding teachers' perceptions about the inclusion of disaster risk reduction focus in their lesson planning. The presentation of data also led to a discussion of the common hazards and the risks revealed during the investigation, to which the schools and the communities in the informal settlements around Atteridgeville are exposed. This chapter also discusses the level of disaster awareness, safety and the effectiveness of curriculum planning as risk reduction measures within the schools in the Central Region of the City of Tshwane. While the researcher's own opinion about how the discourse is conceptualized is also highlighted in this report, this chapter will conclude with a generalisation of the results based on the issues that emerged in the process of the investigation.

4.2. Results of interviews with teachers

In order to maintain the greatest level of situational detail, as well as the identification of factors in each case, the researcher read through each text several times to arrive at the codes that assisted in comparing the cases as well as arriving at the conclusion about the situation at these individual cases collectively. Each case was looked at individually using their unique number and then later merged into the final cross-case codes or themes that were analyzed for report presentation. The dominating comments in the themes were also considered as they contributed greatly to the cross-case analysis building towards the final report.

The following final themes were identified in the cross-case analysis step involving the generation of a case-ordered descriptive matrix that established a basis for comparing the cases on a number of factors towards assembling a bigger picture of the research report:

Table 1: Case-ordered matrix of themes

CATEGORIES OF INTERVIEW QUESTIONS	CODES EMMANATING FROM DATA
• Do you know what the word "disaster" means? [Yes or No] • Can you explain the concept? • Do you know what leads to the occurrence of disasters? [Yes or No] • Can you please tell me what leads to the occurrence of disasters	1. Teachers' general understanding of the term "disaster"

CATEGORIES OF INTERVIEW QUESTIONS	CODES EMMANATING FROM DATA
• Have you ever had disasters in your school community? [Yes or No] • In the past three years, which disasters have affected your school community • Has your school been affected by the occurrence of the disasters you mentioned? [Yes or No] • How was it affected? • How did the school deal with those effects? • Do you think that your school community can in future be hit by the same type of disasters? [Yes or No] • Why do you think it can happen again?	2. Teachers' perceptions about the types of disasters occurring within the school and the schools' communities and the effects of those disasters on the schools.
• Should a disaster strike this community, do you think the school will know what to do? [Yes or No] • What do you think the school should do in case a disaster strikes? • Do you think the community has a role to play in assisting the school to deal with disasters should they strike? [Yes or No] • What do you think should be the role played by the community? • Does the school have a policy on how to deal with safety and disaster issues? [Yes or No] • What guided the school in the development of that policy?	3. The schools' safety and preparedness measures to deal with disasters within the school and the school community.
• Do you think the curriculum provides for opportunities to include disaster issues in the Learning Areas? [Yes or No] • Which Learning Areas in your school allow for the inclusion of disaster topics? • Which disaster topics do these Learning Areas address? • In which activities do you plan to address these disaster topics? • Which disaster examples do you normally use in the activities addressing the disaster topics in the Learning Areas? • Do you have any specific reasons why you choose those specific examples? [Yes or No] • Can you please tell me what those reasons are? • Does your school have resources to support the inclusion of disaster topics in your lesson planning? [Yes or No] • Can you please list three examples of the resource toolkit you use to support your lesson planning?	4. Teachers' understanding of the opportunities created by the curriculum to address disasters and the risks to their local environments.

CATEGORIES OF INTERVIEW QUESTIONS	CODES EMMANATING FROM DATA
• Does your school know of disaster events happening in the country? [Yes or No] • Which of these disaster events has your school participated in? • What do you think should be done to increase schools' awareness of the need to include disaster risk reduction focus in lesson planning? • 30. Thank you very much for giving me an opportunity to interview you. Is there anything you would like to say?	5. General information *(This is where participants are expected to relax and say anything that can have value in the research results/report)*

The discussion that follows will focus on the participants' responses in each code, through the lens that was developed in the literature review (Chapter 2).

4.2.1. Teachers' general understanding of the term "disaster"

The purpose of the first theme was to check if participants could define the word "disaster" as well as having an understanding of what actually lead to the occurrence of these disasters. The theme was to determine if teachers would mention that human behaviour and activities might be the consequence. It wanted to find out if they would mention the effect on the global natural environment as well as on the occurrence of certain types of natural disasters, and that this human behaviour may have an effect on the socio-economic and environmental characteristics of communities' coping capacities and their resilience or exposure to disasters.

Almost all the teachers in all the three schools indicated that they knew what the word disaster meant, as well as trying to give their own meaningful definitions of the word, which were found to be in line with the definition provided by ISDR (2004) as follows:

Disaster is defined as "the occurrence of an abnormal or infrequent hazard that affects vulnerable communities or geographic areas, causing substantial damage, disruption, and perhaps casualties and leaving the affected communities unable to function normally"(ISDR, 2004).

Except for one teacher who was honest to say she did not know what led to the occurrence of disasters, all the seven teachers at the three different schools gave an indication that they knew what led to the occurrence of disasters, with two even going further to saying that there were

disasters that were natural while some were caused by human errors or negligence. It was, however, a bit of a problem when they were asked to elaborate on their answers. None of them could link the occurrence of disasters to the socio-economic and environmental factors affecting the coping capacities of the communities and societies. Instead they gave examples of disasters such as fire, floods, earthquakes, xenophobia as things leading to the occurrence of disasters, as follows:

> There are disasters that are natural. Like for an example, there can be a storm, you know but some disasters are caused by our negligence. Say for instance we become negligent with the chemicals or tools that we use. For an example, we have got some gas bottles in the school kitchen that we use to save electricity when we cook the learners' food since we have the feeding scheme here at school. You know, if the people using those gas bottles can be negligent, they can explode and cause a disaster". (See Appendix 1.5.3: School 3, teacher 1).

The other teacher at the second school when asked to elaborate on his statement after he mentioned that in all types of disasters, there are natural disasters and those that are human errors, he said: "You know I don't know how to put it" (See Appendix 1.5.2: School 2, teacher 1).

4.2.2. Teachers' perceptions about disasters at school and the effects

The purpose of this theme was to check if educators were able to notice the occurrence of some of the disaster-related issues within their school environment. Literature review in Chapter 2 revealed that disasters were on the rise with grave consequences for the survival, dignity and livelihood of individuals, particularly the poor. The focus was on revealing whether this was the same within the communities of Atteridgeville, and if so, what the challenges were, faced by the schools as a result of that, as well as how they dealt with those challenges.

There were mixed reactions and feelings around this theme. In one school, their main issues were shack fires and floods which they thought would remain a life-long problem as long as the situation in the informal settlements was not changing. What they had to say when answering the questions that related to what led to the occurrence of disasters, which disasters had affected their school in the past three years, whether they thought the school community could be hit by the same type of disasters, was:

Floods and fire, the main one being fire because most of the shacks burn because when it's cold, they use coal, firewood, paraffin to heat themselves and maybe they sleep and forget and get burned down ... Hence I say I stay there at the informal settlements there, things are happening there. Fire is one of them. Like this week on Monday, a father and child were killed by a nuclear explosive in that informal settlement…That informal settlement is established on a dangerous place that was previously used as training and shooting camp/ base for the military. Most probably some of the explosive weapons are still buried underground and with time they are exposed and explode to cause danger.

When asked the other teacher replied:

Fire, because most of our learners do not have proper energy sources in their shacks and resort to any source of heating that can pose a disaster to them. These disasters affect the school because if learners do not have any books, stationery, proper clothing, this affects the learners. They cause mental damage especially if somebody from the family dies in such disasters… Like I am saying, 70% of our learners come from these informal settlements and for as long as these people they don't have electricity, they will keep on using fuel sources posing problems to them, they are always be vulnerable to experience these things" (Appendix 1.5.1: School 1, teachers 1 & 2).

For some of the teachers at the two other schools, the questions addressing this theme seemed to be a bit confusing. The researcher's impression of the responses given by the teachers was that they (teachers) did not see the school to be part of the entire community because when asked of the disasters that had affected the school community in the past three years, about three of them from the same school said they never had disasters in their school community, one from a different school gave the same answer, saying she did not know of any, and two from the same school gave two different answers which were not clear. When the question was rephrased they were led to tell about the situations in the informal settlements:

During our informal conversation, you mentioned that your school feeds most children from the informal settlements; can you please tell me of the challenges that are related to disasters that those kids from the informal settlements are facing?" or "Tell me about the issues coming from the informal settlement. I understand your school is feeding learners from the informal settlement". (See Appendix 1.5.2: School 2, teacher 1 & 2 transcripts).

It was through the rephrasing of this question that the researcher got to understand that despite the fact that the teachers were clueless about the disaster-related issues happening around their schools, almost all the school communities had very serious disaster risk-related issues. However, different issues were presented by teachers from the same school. One mentioned the shack fires which were caused mostly in winter because the residents made fire and forgot to put it out when they went to sleep and consequently all the shacks were burnt down. Another teacher, like the one in the first school, mentioned the bomb that exploded in the informal settlement and its effects. Given the fact that the informal settlements are established on an unsafe location that used to be the training base camp for the military and that the place could be dangerous as there might still be nuclear weapons buried there which she said could at any time cause trouble, she said:

> There was a bomb that exploded in Atteridgeville in Mshengo. I saw it media and they said that people were just sitting and there was an explosion. You see that place used to be the military base, so there might be more bombs there... I think they were shocked, thinking that maybe one day they will die if that can happen again maybe while they are still asleep, anything can happen. People were worried saying that maybe the government should move people from that place because it is not safe. We don't know how many bombs are still left there (See Appendix 1.5.3: School 3, teacher 3)

As indicated in one of the quotations in this report above, it is clear that the learners and the schools were definitely affected by these disasters in a way that the kids would come to school with their clothes being wet, their books burnt and they would complain that they did not sleep the previous nights trying to take water out of their shacks. That put more pressure on the schools as they had to distribute their reserved stationery to the affected learners.

The other one mentioned that their school was next to a wetland that the municipality was not taking care of and as a result they experienced a problem with snakes. The area was always full of water when it rained and in most cases when the reeds in the wetlands were burnt down by the smallholders, the school was disrupted as the learners wanted to go and see what was happening. The school also experienced problems as a result of the smoke. This very same teacher also mentioned that their learners from the informal settlements who are transported by the Gauteng Department of Education's transport experienced problems coming to school during rainy seasons as the buses could not reach them, especially those staying on the other side of the river as the roads would be in a bad condition for the buses. She said:

We have informal settlements like Siyahlala-la, Phomolng, Brazaville, Jacksville and Mshengo from where our learners are coming and our feeder areas. We did not have transport means for learners coming from there and we applied for assistance with transport from the Department through scholar patrols that we do. The Department provided transport but still, some learners are always late because you'll find that they stay that side of the river or a dam where they have to pass coming to the school. The area is not accessible in most cases especially when it rains. Another disaster that we have in the morning is the fact that all learners will want to go to the toilet first thing in the morning probably maybe because the toilets at their homes are not that comfortable. The first period is always not fruitful because they all are at the toilet. You can see that to them, it is time when they got a comfortable toilet because it is not there at home (Appendix 1.5.2: School 2, teacher 2).

The third teacher from the school mentioned the floods as being their problem, but most of her concern was on xenophobia that was not mentioned by any of the teachers during the interviews. When talking to this teacher, the researcher was tempted to give her time to talk about this issue of xenophobia. She mentioned that their school had learners travelling from Sunny Side, another suburb in the Central Region of the City of Tshwane dominated by the influx of foreigners. This was because of the fact that: "You know our school is a no-fee school as compared to the rest of the schools around here. Because these parents also don't have any means, they thought our school was relevant for them…. (Appendix 1.5.2: School 2, teacher 3).

In addition they said what motivated the foreigners to bring their children to the school, according to the teacher from this same school who was earlier on quoted by saying that, "We have informal settlements like Siyahlala-la, Phomolong, Brazaville, Jacksville and Mshengo from where our learners are coming and our feeder areas…." the fact that it was not only because the schools were accessible, but also the fact that living in those settlement was the quickest way to access government services. This is what she had to say:

It is work or because most of them have a perception that these are the areas where they can easily access services like grants because these are the areas that get attention from the government. Again, the schools here are accessible…. Because a number of them are not working, only the father is working. They come with children who do not even have birth certificates and IDs, but through the Social Worker, they are able to get those quicker and free of charge. Here at our school we even had a special Home Affairs Day wherein they come, fill in forms and get the birth certificates and IDs and apply for the grants (Appendix 1.5.2: School 2, teacher 2).

These learners, she said, had to leave their school because of the xenophobic threats they experienced on the trains transporting them to school; "You know we lost trust from these parents. We tried by all means to talk to them, hold parents' meetings with parents from this community, but, unfortunately they were not convinced (Appendix 1.5.2: School 2, teacher 3). When asked if the threats were only on the trains and not from the Atteridgeville community, she said that even the community was threatening these learners because of the following:

> The comments are from both the members of the community and the parents to the learners at school. You know, we also have a bus system transporting our kids and the issue is that other schools around here do not have the no-fee and free transport benefit. They also have kids from the informal settlement who do not have transport means but it is only our school having those benefits. I don't know how it works but that's how things are.......I think it is the community issues more than the parent's issue, the issue of them taking their jobs, taking their benefits. As I told you, our school is a no-fee school so people think that these foreigners take their benefits away from them. Like the feeding scheme that we have here at school, sometimes we would give the leftovers to these parents but the community would not like it as they think these benefits are theirs (Appendix 1.5.2: School 2, teacher 3)

When asked why it was so important for the school to still have learners from foreign countries, this is what she had to say:

> You know, it is a give and take situation because they learn about our culture and our environment and we also learn about their culture and their environment. Like in Social Sciences, they learn about different religions and since they have their own different types of religions than us here, we do learn from them and also, the parents are so involved, we really enjoy having them here at school (Appendix 1.5.2: School 2, teacher 3).

When asked how the schools dealt with the effects of disaster problems they were encountering at the schools, especially the fact that most of them believed that the school communities would in future be hit by the same type of disasters, different perspectives were given. Four of them, two each from the same school, mentioned that they normally asked for donations and because they kept extra books, stationery and uniforms at schools, they were able to distribute those amongst learners who had been affected. This was what one of them had to say:

Most of the time when it is raining, the buses transporting these learners can't reach the stops where the learners must catch them and the children can't reach the school. Most of them the following day are complaining, saying they didn't sleep the whole night trying to take water out of their shacks. Or again, the fire can destroy the whole place. Sometimes it is fire burning their shacks and it affects us. We end up asking for donations in the form of clothes that is why we keep spare uniform here at school so that we are able to help them in such case (Appendix 1.5.2: School 2, teacher 2).

One of these four teachers mentioned that because of the good relationship they had with the local businesses, they always managed to get donations from them. She said:

We try our best. We are fortunate that we have built a good relationship with the local business. Like the local bakery and the one and only bakery in Atteridgeville and Saulsville, Kotu bakery, you know, that gentleman has been supporting needy learners from our school. He started with 10 kids from needy families but now it went to 20. It is not only Kotu Bakery; we also have Mr. Khumalo, running a Mzioxolo B & B. You know, that guy also has been supporting 20 needy families identified by the school with groceries, and we talk serious groceries like 10kg rice, 10kg maize meal, 10kg washing soap, 5L cooking oil, you know. Very big groceries, 20 packs… (See Appendix 1.5.3: School 3, teacher 1).

Surprisingly, the teacher from the same school as the one who talked about the assistance they received from local businesses said that she did not believe that their school community would be hit by disasters in future. She reiterated: "I have been living in this community here for about 50 years because I am this year 50 years old but it has never happened, so I don't think it will ever happen". (Appendix 1.5.3: School 3, teacher 3).

The teacher who talked much about the xenophobic threats, mentioned that they were very empowered and proactive in dealing with the threats in this way:

I think we are empowered. Before we were just reacting, but now we are proactive. We talk about it every day and even if we can hear just a comment, we take it seriously. I think if your child can come home and say another child at school said something bad about them, you can still take it light because we are all South Africans, but imagine if you are a foreigner and your child tells you the other child at school uttered some xenophobic words to them, you went take it lightly. So, these comments, we don't take them for granted (Appendix 1.5.2: School 2, teacher 3).

4.2.3. Safety and preparedness measures at schools

The culture of disaster prevention and risk reduction is still fairly new to the education sector. The purpose of this theme was to determine the extent to which the elements such as people, buildings, infrastructure and assets were vulnerable to hazards and exposed to the disaster risks. The theme also aimed at revealing what those environmental hazards were, as well as whether there were any thinking around any disaster risk management efforts in line with measures such as the proper location of the schools, structural and technological planning, safety measures and community participatory awareness programmes. It also wanted to check whether the case study schools had safety policies or not. If they had, to what extent did those policies cater for any emergency drills aimed at the cultivation of behavioural changes that were related to prevention, preparedness and response in the event of disasters or not.

Almost all the teachers in all the schools, except one, agreed that their schools would know what to do should their communities be hit by disasters. The one exceptional teacher mentioned that he was not sure whether their school would know what to do, but said that maybe the school would ask for donations, especially for children whose parents would be killed by those disasters. When asked on what his perception about what the role of the community should be, he said he thought that the communities were having too many problems, such as lack of proper drainage system and should see how to help themselves first before they could think of seeking the school's assistance. According to this teacher, the school never had a "policy on safety at schools" and said that it was not effective if it were there. He, however, acknowledged that the Gauteng Department of Education had conducted workshops on safety at schools, an initiative that had made him, together with other teachers who were trained on traffic safety, become involved in the scholar patrols. This teacher did not see the school as part of the community to work together to address their spatial planning problems especially as they had drainage "issues." There was an element of disintegration.

In contrast to this teacher, all the teachers who agreed that their schools would know what to do should their communities be hit by disasters gave varying responses on how they thought their schools would deal with this issue. Others mentioned that their schools had the school-based task teams driving all issues of safety at their schools. These they said, were teams used as platforms to do awareness programmes and workshops, as well as involving the structures and

the Non-Governmental Organizations (NGOs) in the communities from where their learners came. They emphasized that they still needed to consider co-opting some members of the communities into these workshops, so that the information could later be replicated to the entire communities. Others mentioned that added to the awareness workshops the schools would do, they would also use the spare stationery, the spare uniform they kept at schools, and the services of the learner support educators to counsel and to provide emotional support to learners who would be affected and traumatized by the disasters when they struck.

One teacher said should a disaster strike their community, their school would right away involve the councillor who would then talk to the municipality on their behalf. She, however, mentioned that the community was also involved with the issues of security at school, saying that they normally called the principal if there was no one at school and some foul play was suspected to be happening at school. This is what some of them had to say:

> I think what the school can do, is to come up with **a**wareness programmes and maybe as a school we can organize workshops in the community from where these learners are coming from, where these disasters are happening. We are having task teams working on these things and some of community members can be co-opted to be work-shopped and they will cascade the information to other community members. You know the school is a place where educated people are and can know how to assist the community because the awareness can replicate to the communities maybe through choosing a committee to work with communities to reduce the problem. We are having a committee that deals with this and they can cascade this to the community (Appendix 1.5.1: school 1, teacher 2).

> The community must have structures that will liaise with the school. Structures like NGOs and after care services so that from school learners can go straight to those structures for further help (Appendix 1.5.2: school 2, teacher 2).

> Besides this armed security that we have at school, should anything happen to our school, some other members are able to call the principal to inform her about any wrong doing taking place at school. There are people also from the community that have been give access to use the school premises for their church services and so they assist in taking care of the school. We have a neighbor that we have provided some space to do his vegetable gardening. So the relationship with the community is good (Appendix 1.5.2: school 2, teacher 2).

Things that we can use like our safety measures, evacuation processes, like taking the learners to safer places. I think we are empowered with safety measures for learners (Appendix 1.5. 3: School 3, teacher 3).

Two teachers from different schools felt that even if their schools would know what to do if disasters hit their communities. The communities should consider taking ownership of their issues. They both reiterated that the schools were there only as the sources of information to the communities and that they (schools) could only use this platform to cascade the information to the relevant authorities like the Department of Community Safety while the communities must play their roles. They complained about communities who would see schools as government institutions which were always there to provide solutions to all their problems. This is what they had to say:

The school is the source of information. Its role is to cascade that information to the community. The kids we have now know about xenophobia. You know, because we are a Zulu school, you will find them telling each other, ja… you are a Xhosa, ja… you are a Zulu. You know, we try to make them aware that xenophobia is not only happening to foreigners from outside and that the way they treat each other is also a sign of xenophobia…. Sometimes we try to stretch ourselves so much but we end up not achieving what we have to. You know, the issue of security, we can involve the SAPS, the Department of Social Services, you know. We can inform that please watch out, xenophobia is coming again, make sure you protect our learners in the train, but we can't because this is what the community should do. That is the role they must play. They are the people who see these kids every day. They are the ones seeing people who harass these kids everyday on the streets, on their way from school to home. There are these guys loitering every day, harassing these kids because they know these kids have money, they have cell-phones, etc. Sometimes the kids from Sunny Side will arrive late at school because the trains are late then you will hear comments from these guys saying, jaa… you don't want to learn, you arrive late at school, ja… you are wasting our money, you know, such comments are harassment. But we cannot do anything about that, we can only try to control the situation within our limits, within our premises, which is within the school environment. I think the community must play their role (Appendix 1.5.2: school 2, teacher 3).

The community should work hand in hand with the school. They should take ownership, although it is difficult to educate parents on this ownership and that they should work with the school. Most parents still think that schools are government and that they should get things from them (schools) as they are part of government. We have quite a good percentage of parents who claim that they are unemployed and cannot afford this and that. We usually request them to come and do

something for the school, like when we were still a fee paying school, most of them, both mother and father would claim that they don't afford to pay that fee, but they wouldn't even want to come and assist the school with things like manual cleaning, at least to safe the school some money to pay someone who cleans the classrooms since these kids are still very young and we cannot expect them to clean the classrooms by themselves (Appendix 1.5.3: school 3, teacher 1).

Most teachers agreed that their schools had policies on safety. One teacher mentioned that the policy was there but old and needed to be reviewed following the Department's guidance and motivation that communities and parents be involved in their children's safety measures at schools. He said that they had already started considering the proposal by involving the SAPS, Community Safety Department, the health workers and the Department of Social Development in their awareness workshops. This is what they said:

Yes and we hold them once in a year, but the awareness takes the whole week, so what we do is that we involve the SAPS, we involve the health care workers, we involve even the Social Workers. We develop activity programme for the whole week. In addition to that, although there is a programme from the Department, there is also a programme from the Gauteng Department of Education based on Traffic Awareness included in that particular week (See Appendix 1.5.2: school 2, teacher 1).

Yes. Like we know if the school can experience a disaster, like be on fire, learners will know where to assemble, using the evacuation routes in the school. We have people who are in charge. Teachers know about it, that is why we have a committee working on that (See Appendix 1.5.1: school 1, teacher 2).

Two mentioned that the development of their schools' policies on safety at schools was motivated by all the bad things that happened at their respective schools, and that they wanted to involve the parents in safety issues of their children. This is what they had to say:

It is due to the things that have occurred. Like we have a number of learners who are under-nourished and sometimes come with contagious diseases that affect other learners. For safety purposes, the policy also mandates parents to report to the school in such cases, they are involved. We also have nurses dedicated to the school so that when the learners are not ok, the nurses are easily and quickly called to the school; take the learner to the clinic or pace the child in a sick bay (in the school observation room.) Like this pandemic, HIV, parents were not free to come, talk and disclose about their children's problems but now the policy had made it easier. The parents can come to school, talk about it to the principal knowing that the issue will be handled in

a confidential way by the school, for the sake of the necessary treatment and support to the infected and affected learner (Appendix 1.5.2: school 2, teacher 2).

Problems we had inside the school and outside the school yard. We had a big situation one time when the learners were cleaning, they pushed the other against the window and that child was hit by a window and taken to the clinic. The nurse at the clinic wrote a report to the police station because they are obligated. You know, such things compelled us because we can be charged as a school. So we developed this policy as a means to protect ourselves…The learners and community we are serving are from the informal settlement, you know, they are just wild. We involve their parents because some of the things they do, you will be surprised. So we try to involve parents in the safety of their kids, like making them sign the indemnity form on the things we can do, as well as on what we think they should do (Appendix 1.5.2: school 2, teacher 3).

I forgot to mention that we need funds that can reinforce our security because we are so exposed to the thugs who can access the school campus any time. You see the structure of our school; they can get in and out unnoticed and can do anything to anyone in the school, learners or teachers. You see our learners' toilets are facing the gate and thugs can get in there anytime, and smoke their drugs like **"nnyaope"** there. I think they can even rape our learners since they are used to attacking them after school on their way to home. If we can get funds maybe to fix the gate so that it is always locked with the security guard so that whoever comes in must produce their ID, I think that can be much better (Appendix 1.5.2: School 2, teacher 2).

As to how they implement the policy, as well as the extent to which the implementation of the policy impact on the communities they serve, most teachers mentioned that the policy was mostly driven by the School-Based Safety Teams, who were teachers trained by the Gauteng Department of Education. All three teachers at the same school indicated that they had fire extinguishers as safety measures against fires; however, they mentioned that they had never done safety drills with learners as was required by the policy, the Gauteng Department and the Community Safety Department. Two of the teachers cited the structural arrangement of their school building to be the issue prohibiting them to follow the Department's guidelines on policy on safety at schools. However, they were convinced that the little they were doing had a positive impact on the communities they were serving. This is what they said:

I think we will improvise just to control the situation at that time, because if you look at the structure of our school, the entrance, people have an easy access to the yard without being noticed. Sometimes we see people already in the campus because the way it is, you cannot see

who is entering the gate at any given point in time. I am not trying to scare you but our principal was once held at gun-point at the office. We did not see these thugs coming in, we only saw them while they were there already and we couldn't do anything about that situation, fortunately they did not harm her. You know, the physical layout of our school is a disaster on its own. The school is a blessing but a disaster at the same time (Appendix 1.5.2: School 2, teacher 3).

We do have quite a number of committees like the safety committee that's responsible for the drafting of these policies. Members of the safety committees have been trained on fire. We do have fire extinguishers and first aid kids, however, unfortunately we do not do any drills, like training learners on how to assemble or evacuate should a disaster happen here at school, but I believe because our school is so small and our building are not 3-story buildings like those in the model C schools, our risk is very minimal. The policies should be in line with the guidelines provided by the GDE, although we are told we should customize the policies to suit our environment because in most cases these policies are not suitable to our environments. You will find that they are much more relevant to the city schools of the Model C schools… Eee..the impact is measurable in the sense that, like I said that most of these learners are from the shacks, especially in winter, the fires are a problem. In winter especially we educate them on how to handle the use of candles, paraffin lambs that they can't leave the candles on in the night, they can't leave the paraffin stoves on when they sleep with the purpose of keeping themselves warm. I think what we teach them here is easily cascaded to their parents at home. At least we are making a difference (Appendix 1.5.3: School 3, teacher 1).

What these teachers said regarding safety measures at their schools made sense when compared to the safety measures at the private school that out of interest, the researcher visited, hoping that an appointment for interviews with teachers would be secured. However, after the principal's indication that she was not going to have time to discuss the appointment, an informal interview with her secretary was done, which provided very important information to be used if one had to draw conclusions about these safety measures at schools in Atteridgeville.

The observation made at this school revealed more proactive safety measures as compared to the situation at the other three schools where the interviews were conducted. On arrival at the gates of the three schools where the interviews were conducted, the drivers had to come out of the car, open the gate themselves, drive in, close the gate again and park anywhere. Parking space was available without being noticed. At the entrance of the private school, the gate was opened by the remote control from the principal's office. On entering the gate, there was a guy

who directed visitors to visitors' parking, then ushered them to the principal's office where the secretary would attend to them before being directed to the principal.

This study revealed the vast differences prevailing at public schools and private schools whether in the townships, cities or rural areas in the country. The informal interview conducted with the principal's secretary at this school revealed that there were huge disparities regarding the paying of fees. While the three public schools visited were the no-fees schools, with all the teachers being black, the private school was run by the Board of Directors who appointed the principal, and the majority of the teachers were white. Learners' fees ranged between R 950.00 and R 1120.00 per month, depending on the learner's age and the demand of the curriculum. The school had learners from the neighbouring orphanage whose fees and subsidies were paid for by the government.

On the way out, the researcher noticed three cars following behind, wanting to go out. The time was 13:00 and it was already after school. While still expecting the principal's office to activate the remote to open, the driver immediately behind used her remote to open the gate. This was an indication that every staff member in that school had their own individual remotes to open the gate. It is a pity this informal investigation never went as far as getting to know how the teachers at this school made sense of their lesson planning through the flexibility of the curriculum to include the disaster risk reduction focus.

4.2.4. Understanding opportunities created by curriculum

The South African Disaster Management legislation (South Africa, 2002) and the National Disaster Management Framework (2005) require that disaster management capacity building, training and education be promoted throughout the Republic, including schools. They call for the integration of disaster risk reduction into the primary and secondary school curriculum. This theme was therefore aimed at checking the creativity of the teachers, in an attempt to implement the reviewed General Education and Training (GET) National Curriculum Statements, as well as to consider "the systematic development and application of policies, strategies and practices to minimize vulnerabilities and disaster risks throughout society, to avoid (prevent) or limit (mitigate and be prepared for) the adverse impact of hazards, within the broad context of sustainable development", were able to cover elements of disaster risk management in their lesson planning.

Given the fact that the United Nations International Strategy for Disaster Reduction (UNISDR) had in the years 2006 and 2007 focused on the theme "Towards a culture of risk reduction: Disaster management begins at schools", this theme again aimed at checking if the schools had given effect to this initiative and participated in any disaster risk reduction programmes, as well as having enough and relevant resources they could deploy in the development of these lesson planning. The overall aim is always to assist the communities to cope with extreme events of nature that induce more damage, and place more people at risk making them more vulnerable.

Almost all the teachers in all three schools, except for two who said the opportunity was there, but to a lesser extent, agreed about the flexibility of the curriculum to include any focus, including disaster risk reduction in their lesson planning. The impression received was that all the teachers were not confident about their answers regarding the learning areas in which the disaster risk reduction focus could easily be integrated. It seemed as if it was not the policy at any of the schools to consider these initiatives, but something that was done only by teachers who had interest in the subject. All of them gave their different views on the learning areas most relevant to address the disaster issues in their local environments. To get themselves out of the frying pan of these questions others mentioned Natural Sciences, Social Sciences and Technology, others mentioned Mathematics, Economic and Management Sciences. However, all of them mentioned Life Orientation or Life Skills as the most appropriate learning area that could be used across all phases to address the disaster issues the school communities might be experiencing.

One teacher mentioned that Grade 7 Social Sciences had natural disasters and that Grade 5 Social Science was dealing with epidemics, but said that they had a problem linking the curriculum with what is happening practically on the ground. This is what the teacher said:

> Grade 7 Social Sciences deals with natural disasters. I think Grade 5 deals with the epidemics. The problem is that we cannot link the curriculum with what is happening on the ground practically. According to these learners, what we teach in class ends there and has got nothing to do with real life. Right now something is happening in Somalia, the drought, but they cannot link that with what we are teaching them. Sometimes you ask them in class, have you seen the news on TV about drought, and what's happening in that country? They will just say, ahh…mam…meaning, they can't relate that to their everyday lives (Appendix 1.5.2: School 2, teacher 3).

When asked if she could think of any other learning area and the activities to be planned for those learning areas to create opportunities for the integration of disaster risk reduction focus, she mentioned Life Orientation which she said taught about road safety. This is what she said:

> Life Orientation, they are doing road safety. Sometimes they meet with other schools on this road safety issue. Content subjects, they are provided but sometimes we try to adjust them to suite our environment....They will provide a topic on poverty and to explain that, it is difficult because when you follow the provided terms and pictures that explain poverty, in most cases, they look like their homes, the shacks, so you have to be sensitive, not to relate poverty with the shacks because they turn and say mam said we are poor because we live in a shack. In most cases, we only talk of basic needs like, saying if you can't meet your basic needs then you are poor. Do you have food? If they say yes, then they are not poor. Do you have clean water, if yes then they are not poor. Do you have shelter, if yes, then they are not poor. To them, poverty is not associated with them but with other people because according to them, they have all it takes to be having basic needs and that takes them out of people who are classified as poor (Appendix1.5.2: School 2, teacher 3).

The other teacher who said the curriculum was flexible to include the disaster risk reduction focus, switched to a totally different angle when asked of the learning areas creating this opportunity and said: "Not a learning area, but the committee, we have the School Based Support (SBS) and the Life orientation and Life Skills educators do get training on how to do safety with learners" (Appendix 1.5.3: School 3, teacher 3).

When probed further, since the teachers were getting trained, whether they had an opportunity to do what they were being trained for at workshops to do practically in class with the learners, one said: "Unfortunately I am not in the Intersen (Intermediate and Senior phase) classes, but I think Life Skills provide for an opportunity where learners are taught of disasters, safety and measures to keep learners safe ....I am in foundation phase and our focus is on Numeracy, Language, Literacy and Life Skills" (Appendix 1.5.3: School 3, teacher 3).

Even though some mentioned earthquakes, floods and tornados, most of them said they would choose fire as the topic in the learning areas addressing the disaster issues. One of them said that was how he would go about planning activities around those topics:

> We usually discuss first in class with them, and then give them assignment to go and look for information either from news papers, magazines, and the internet. Sometimes we ask them to develop posters about those disasters and then they come and do presentations in class....We

are not specific to the common topics like fire because it is the most common disaster here. We try to broaden it up to cover any disaster that may happen anyway in the world. Like in rural areas where there are rivers and there are no bridges, we make sure that our learners know of floods and what to do in terms of floods as well as all these other related issues (Appendix 1.5.2: School 2, teacher 1).

When asked about the types of resources the schools would need to support the inclusion of disaster topics in their lesson planning, the majority of the teachers said that their schools did not have enough resources, and if they had to choose, most of them mentioned the fire extinguishers as the most important resources. However, this is what some of them had to say:

Yes we are trying our level best, there are charts that we use in class, there are pictures and sometimes we do visit the computer lab and use the Gauteng Online Computer lab for internet so that we can download video clips about these disasters so that learners can see them….The Computer lab resource has been provided for by the Gauteng Department of Education and we use their online internet. Depending on what is to be taught for the term, learners are free to use it any time. We do have the timetable for learners during school hours to come to the lab, but they are free to even come to the lab after school hours (Appendix 1.5.2: School 2, teacher 1)

We have fire extinguishers and the first-aid kids, but we do not do the drills regularly because each learner must be exposed at least twice a year. Because we do have new kids coming but we I don't think we do enough to drill them so that they know what to do should disasters maybe happen. Maybe the issue here is that no one wants to take responsibility. We all think it is not may job; the next person will do it, and so forth….We have safety team but because there are so many other committees other than this, I don't think we have succeeded in doing what we are supposed to do in those committees because one teacher ends up belonging to three or four committees. If you are to meet in a month, then it means you have eight meetings in that meeting (Appendix1.5.2: School 2, teacher 3).

Not being convinced about the responses provided, the researcher was tempted to go deeper and asked if the teachers had ever thought of involving the communities or the parents in the planning of their activities, especially around the issues that were directly affecting these communities. Furthermore, the probing question was about finding out what the role of the municipality or the Gauteng Department of Education was in assisting the schools to pick the right topics to be used to integrate any focus that had relevance to addressing their local issues. This is what one of the teachers had to say:

It is not easy to can involve their parents because they are not like here, at school but we just make reference, like timeously on media, especially now in winter, they talk of incidents like those of fires, like recently on media, there was an incident where about 300 shacks were burned down because of one person who left a candle unattended and people lost their belongings….Fire is the serious issue here because of the type of households, they don't have electricity, they use paraffin and if it sis not properly used, there will be chaos. Again, there is this unlawfully electricity connection which also poses a serious threat to this community. There are live electricity cables all over, posing a life threatening risk….Jaa… eee. .to some extend because as we go to workshops, the Department will always say they cannot spoon feed us. They will only provide some guidelines and then we can develop ours. Like I am a teacher at the township, my environment will be different from that of the city teacher, so when I plan my lesson, it must be relevant to my situation so that the very same learner must know what I am talking about. I gave an example of a fire hose that we don't have here so if I talk about it in class, learners won't know what I am talking about unlike the learner in the city who will understand far much better. At least if I talk about the fire extinguisher, they will know what I am talking about because we do have them here at school, and I can carry a free one to the class. But it is at least happening to some extend (Appendix 1.5.3: School 3, teacher 1).

This study proposes that the following interview held with one teacher be used as an indication that, especially around this theme, the teachers interviewed were just responding because they did not want to be viewed as being stupid maybe, but the element of the truth in what they were saying about how they integrated the local issues in their curriculum was totally lacking:

Q18. Do you think the curriculum provides for opportunities to include disaster issues in the Learning Areas? [Yes or No]

Response: Yes, but not as such. There are some other things that we see but the curriculum does not focus on.

Q19. Which Learning Areas in your school allow for the inclusion of disaster topics?

Response: Social Sciences

Q20. Which disaster topics do these Learning Areas address?

Response: The last time I remember, I asked learners to go home and research about the natural disasters.

Follow-up: Did you get feedback on what you were expecting?

Response: Not as such because we had problems that some learners did not understand the topic well and some learners if they don't understand the topic, they don't bring answers.

> *Follow-up: Which natural disasters in your mind, were you expecting them to research on?*
>
> *Response: About the floods and xenophobia that happened recently in SA.* ***Follow-up: What motivated your thinking about those two types of disasters?***
>
> *Response: I want them to know that when we have people from other countries, they must not treat them like they are not normal.*
>
> *Follow-up: Do you have floods or xenophobic attacks here in Atteridgeville?*
>
> *Response: Yes we do, I think it was a problem of job creation. (*Appendix 1.5.3: School 3, teacher 2).

4.2.5. General information

This is where participants are expected to relax and say anything that can have value in the research results/report. Most importantly, the researcher wanted to check if teachers were aware of any disaster management events or conferences taking place in the country, and whether or not they were represented or participated at such conferences. Conferences like the Disaster Management Institute of Southern Africa (DMISA) are the most important conferences teachers are expected to know of. These are conferences where resolutions influencing the education agenda are taken. Similarly, these are conferences that can increase the level of awareness of risks in schools, as well as building knowledge among teachers, parents and children because they are the platform for information sharing on hazards, mitigation measures, nutrition and development of preparedness plans.

Almost all the teachers, except for two who said they did not know of any disaster events, conferences or workshops happening across the country, said that they knew of these events, even though their schools never participated in any of the events, especially in the City of Tshwane. Two of them even mentioned the Climate Change Symposium to be held in Durban, in the Kwa-Zulu Natal (KZN) later in 2011. One mentioned the earthquake disaster occurrence of Japan in which many people were killed while others were left homeless. This is what some of the teachers who said they did not know of any disaster events had to say: "We haven't participated in any. Not in the City of Tshwane, maybe because we are not aware of them. As far as I am concerned, the information does not reach us" (Appendix 1.5.2: School 2, teacher 1).

Another response from a different school was, "Apart from print media, from where we as educators get to know, we get to know about this, from news papers, TV, etc, but not that of where the schools were involved or such. I would say, we don't get enough information cascaded down to the schools for them to participate in such events" (Appendix 1.5.3: School 3, teacher 1). As to what they thought should be done to increase the schools' awareness of the need to include disaster risk reduction focus in their lesson planning, they all emphasized the need for workshops to raise awareness on how to go about because "In the implementation of the curriculum, I think now we teach to test and not to equip, so we must ensure the curriculum focuses on equipping learners" (Appendix 1.5.2: School 2, teacher 3).

One of them reiterated that these would be the platforms to address the landscape issues in the informal settlements. He reiterated that for as long as the landscapes where the shacks are built are not ok, disasters would also never stop to occur. This is what some of them had to say:

> Yes, I know there is this one coming, the Climatic one. We see now that it is no longer raining but pouring throughout the year. It is winter now but we see rain, it's no longer like before when we knew that it will only rain in summer. That is why we cannot say we will rebuild our shacks when it is not raining in winter. As long as the landscape where the shacks are built is not ok, disasters will always be there. Even if the government is saying no you cannot build there, people still go on and build on mountains. There is a need to work on the landscapes in the informal settlements (Appendix 1.5.1: School 1, teacher 1).

> Work on the landscape in the informal settlements because people build in the mountainous areas which encounter problems like the ones I have mentioned. Maybe the workshops can help. The Department of Education must conduct workshops and maybe in subjects like Natural Sciences, they can teach topics like Impact assessment, mental impact because disasters happening affect people mentally. There were these discussions where they say they will merge Technology and Natural Science with focus on the Environmental Impact. We are doing it but not that much. We do not have restrictions on what we teach, yes we can be flexible and localize our own curriculum, but nowadays we have problems with time. We cannot do it after schools because children are always rushing for their transport. Yes if we had time, I know what it entails but if we had time, we could teach our children, and maybe use the environment to plant some trees, but there is no time (See Appendix 1.5.1: School 1, teacher 1).

> Maybe the Department of Education on their daily lives, they are experiencing this on their every day. Maybe the Department of Education must ensure that awareness on disasters is

strengthened. I think they should dedicate disaster management practitioners to schools so that they are closer to the schools to give advice on what to do if disasters hit. I think that Disaster management practitioners only come to schools when they are expected to provide reports on how they assist communities, which I think is not right. They must always be visible to assist schools, especially in informal settlement communities (Appendix 1.5.1: School 1, teacher 2).

I think the workshops on parents because these problems start at home and come to the school. The communities must also be workshop and the school as the pillars will come in to provide support. More awareness workshops can really help learners know of these things…..If we can have an opportunity to attend these workshops (Appendix 1.5.2: School 2, teacher 2).

Ja.. eee.. I think they should start with organizing workshops for teachers and maybe visit schools, organize road shows and maybe organize workshops for teachers and informing them on how, even if we don't have enough resources, how they can improvise to organise a good lesson plan to focus on disaster management even when their resources are not enough. I think they should start there (Appendix 1.5.3: School 3, teacher 1).

The first teacher at the first school was not even on the interview list, but was so curious about what the questions were all about, saying that she had to see the interview schedule since she was the coordinator for all the School Based Support Teams. After she had gone through the schedule, she informally opened a conversation, saying that their school was having serious problems because of learners who were from the informal settlements, where there were no religious denominations to instil morals into these kids. She went on, saying that it was good that the researchers also derived interest in their issues because the people from the City of Tshwane normally visited their schools when they were supposed to submit reports to the government, something that she said only benefited the disaster management practitioners and not the schools. She reiterated that the schools were actually neglected and it was going to be good if the City of Tshwane could dedicate coordinators to do awareness programmes for the neighbouring schools in the townships.

4.3. Conclusion

The chapter has attempted to present the content analysis of the interviews conducted with teachers at the three middle schools in the Central Region of the City of Tshwane Metropolitan Municipality. It has traced the practice of teachers with regards to the integration of disaster risk reduction focus within their lesson planning, as allowed by the Curriculum Statements within the Education policies**.**

CHAPTER 5

FINDINGS AND RECOMMENDATIONS

5.1 Introduction

This study aimed at investigating the ways in which teachers in the primary schools within the City of Tshwane Metropolitan Municipality plan their lessons to include a disaster risk reduction focus to address their local disaster problems.

Chapter 1 gave the background to the purpose of the study by highlighting concerns that societies needed to be aware of regarding disaster problems, as well as highlighting the need for reasonable measures to be taken worldwide and in South Africa particularly to deal with these disaster problems.

Chapter 2 provided a brief summary of the statistics of the most prevalent disasters, their extent in the world, the Southern African Development Cooperation (SADC) Region and South Africa respectively, and the disaster risk reduction measures that could be deployed to prevent and mitigate the adverse effects of the impacts of these disaster problems. It outlined various conferences held that brought with them, the resolutions on the development of policies towards addressing the social issues and the vulnerabilities that exposed a lot of communities to disaster risks. It also provided a framework for disaster risk reduction that included important elements such as risk assessment and analysis, awareness, knowledge development, public commitment and application of risk reduction measures amongst others. The efforts of the government of the Republic of South Africa in disaster risk management and the education reform was also alluded to.

This was done through the promulgation of the disaster management legislation and its related policies, as well as by transforming the education system with the purpose of creating conducive conditions to the transformation of societies through education and training. The chapter also reflected on the efforts of the City of Tshwane Metropolitan Municipality in an attempt to create safer and resilient communities through its Disaster Management Division by coordinating all hazard prevention, preparedness, mitigation, response and recovery of activities within the framework of sustainable development. It concluded by reflecting on various ways in which disaster risk reduction is enabled in the school curricula, emphasizing the possibilities across all

the subjects like Life Orientation, Social Sciences, Environmental Studies and Geography for both primary and secondary schools.

Chapter 3 explained how and why qualitative research, as opposed to quantitative approach, was chosen as the research design for this study. Semi-structured interviews and observations were selected as the tools to collect data, which were subsequently analysed through qualitative content analysis methods. Measures taken to ensure validity and reliability were also outlined in this chapter.

Chapter 4 presented the content data analysis report of the interviews conducted at the three primary schools in the Atteridgeville Township within the Central Region of the City of Tshwane Metropolitan Municipality. The following five categories of codes were used in the analysis process to guide the presentation of facts:

- Teachers' general understanding of the term "disaster".
- Teachers' perceptions about the effect of disasters within the school communities.
- The role of schools in addressing disaster risk problems/safety and preparedness measures within the school.
- Opportunities created by the curriculum to include Disaster Risk Reduction Focus.
- General information.

5.2 Findings of the study

Chapter 5 provides a summary of the findings on the subject about the perceptions of teachers in the primary schools within the City of Tshwane Metropolitan Municipality regarding the inclusion of disaster risk reduction focus in their lesson planning to address their local communities' disaster problems. This chapter also provides some recommendations on the solutions to deal with or address challenges teachers are facing in their attempt to use the curriculum to include a disaster risk reduction focus.

This study presented three case studies which demonstrated how primary school teachers within the City of Tshwane Metropolitan Municipality make an effort with their curriculum planning processes to address and manage their local disaster issues.

This investigation found that the most prevalent hazards in the study area of Atteridgeville resulted from the nature of the settlements most people live in, such as the risks of rapidly

spreading shack fires because of lack of electricity and the type of fuel used by the households. In addition to this there are risks associated with floods and the xenophobic attacks. Most of the informal settlements in Atteridgeville were found to be established on land previously used by the South African National Defence Force (SANDF) within the Department of Defence as a training camp. These places were found to be still characterised by the explosives resulting from the nuclear weapons, which were left buried underground when the camp was relocated. These explosives kill residents in the informal settlements.

The study revealed that shack fires in Atteridgeville informal settlements destroy hundreds of homes and affect many informal dwellers at a time. This is attributed to temporary materials that are used in the construction of these settlements. In addition, the lack of adequate services, leading to the use of gas, paraffin and fossil fuels, has meant that people are obliged to use these potentially hazardous fuel sources. Like in other informal settlements across the country, the shack fire problem in these areas is exacerbated by a virtually non-existent infrastructure, especially in the form of access roads, making access to dwellings by emergency services very difficult in times of need.

The data illustrated that given the situation, like many other schools in many parts of South Africa, many parts of Atteridgeville schools, are fed by learners from communities living in informal settlements. This situation was also exacerbated by the migration of people to the City of Tshwane in the hope of finding employment. These learners are particularly vulnerable to environmental hazards, as a result of the nature and location of their settlement, and/or from external threats coming from outside the settlements.

The City of Tshwane is aware of the environmental risks which these informal settlers experience, especially because the impacts of disasters everywhere in the country, would make it necessary for the government of the Republic of South Africa to mobilise their resources to assist these communities. However, as mentioned in Chapter 2, the assistance provided by the municipality seemed to be more reactive than pro-active, maybe because at the time of the study and in terms of the 2010-2011 Integrated Development Plan (IDP) of the City of Tshwane, there was no official and formalization strategy for the development of the informal settlements in Atteridgeville, pending the outcome of the geotechnical study that was going on during that IDP year. Accordingly, a decision has still to be taken on where to relocate these informal settlements.

The attempt to combine the thinking around these issues highlighted issues of the location, planning, shelter, services and the nature of livelihoods of the people in Atteridgeville informal settlements. When one focuses on the dire impacts of the threats and hazards mentioned to which people in these informal settlements are particularly exposed, it becomes clear that these events unfold against a background of the slow-motion disaster of poverty and homelessness, a factor that is aggravated by the fact that there is growth in absolute numbers of people living in poverty in the areas in and around this large metropolitan municipality. The exposure to risk of all households was brought about by housing types which are potentially dangerous or unhealthy. These households experience a high degree of vulnerability when it comes to recovering from shocks such as disasters and other emergencies.

The Constitution commits the government of the Republic of South Africa to ensuring that all South African citizens are given access to adequate services such as housing, health, education, medical facilities, clean water and so forth. Chapter 2 touched on a round of legislation, policies and programmes that the government has put in place to assist in carrying its Constitutional obligation of ensuring community development through service delivery as well as ensuring that through education. It produces future citizens that are aware of, have knowledge, skills and attitudes and are also better prepared to prevent, mitigate, respond and recover from the adverse impacts of disasters and their associated problems.

The policy on the National Curriculum Statements (Grade R-9) giving effect to Outcomes Based Education and Training approach has been aligned to the Constitution so that it is able to establish a society based on democratic values, social justice and fundamental human rights. The vision of this curriculum has reflected another Constitutional notion emphasising a life-long learner with respect for the environment and the ability to participate in society as a critical and active citizen. This education policy and other policy reforms have been developed for use by schools and teachers to play a vital role in creating awareness of the relationship between human rights, a healthy environment, social justice, and inclusivity.

The principles enshrined in the Disaster Management Act (South Africa, 2002), its supporting policy framework the National Disaster Management Framework of 2005, and all education policy reform mentioned in Chapter two (2), allow that the concerns mentioned above about the situation in the informal settlements, be addressed through foci across the curriculum in each Learning Area Statement. This holistic view emphasizes that the informal settlement issues and/or any other developmental issues should not be seen as being limited to a particular

subject taught at school, but as strands across the entire curriculum. In particular, the National Curriculum Statement's attempt to be sensitive to issues of poverty, inequality, race, gender, age, disability and such challenges as HIV/Aids, meaning that all these issues should be every teacher's concern and should be addressed through the curriculum.

The policies mentioned have room for progression and integration, where learners can use their knowledge and skills from one learning area to another to move progressively to other grades. In this way, the whole curriculum has to be linked and related. This encourages a situation where teachers, irrespective of the learning area they teach, should sit and plan together in order to collaboratively use the curriculum to address their common local problems.

5.2.1 Actual situation at primary schools

The situation that was found to be prevailing at schools with regards to the implementation of policies was surprising. This study was able to learn the vast differences prevailing at public schools and private schools whether in the townships, cities or rural areas in the country. The manner, in which teachers responded to the questions as highlighted in the data presentation chapter, indicated that teachers still lacked proper knowledge and understanding of their policies or maybe proper guidance from the curriculum developers on how they should make use of their curriculum to address their own local issues.

Chapter 2 emphasized the importance of developing a culture of prevention and mitigation as an effort to build resilient societies and communities. It emphasized the promotion of an increased awareness of the importance of disaster risk reduction as an integral component of sustainable development. Schools are always seen to be the focal points to raise awareness about these important developmental aspects. However, this study revealed that poor or lack of proper resources, support, security and safety measures at schools played a major role in hindering the successful implementation of the policies as alluded to in the above paragraphs.

The building structures of the schools in Atteridgeville expose the learners and teachers to dangerous environments. As mentioned in the data presentation chapter, while teachers lack valid reasons why safety drillings are not done with learners, the building structures of their schools also do not provide opportunities for implementation of rapid response measures like warning alarms, evacuation and escape routes in the event of disasters like fires and flooding. These arrangements present very convenient opportunities for anyone in the school campus to be more exposed to dangerous activities like criminal activities. The Gauteng Department of

Education and the Fire Department within the Municipality had provided schools with hand-held fire extinguishers. However, learners are not trained on how to use them.

As mentioned in this chapter and chapter two respectively, the disaster risk management and the education system policy frameworks indicated that there was a convincing alignment between the two fields and that could be achieved through the integration of disaster risk reduction focus into the school programmes. Accordingly, disaster risk reduction is enabled in the school curricula, emphasizing the possibilities across all the subjects with subjects like Life Orientation, Social Sciences, Environmental Studies and Geography for both primary and secondary schools having more relevance. However, the situation at the three primary schools had been found to present teachers with some limitations to incorporate disaster risk reduction activities into their lesson planning for formal teaching and education.

Apart from the fact that some teachers cited the challenges that were more in line with issues of sensitivity when it came to selection of topics to teach, there was limited flexibility on the part of teachers to adapt and accommodate the incorporation and integration of all the aspects of disaster risk reduction, irrespective of the wider spectrum of opportunities presented by the curriculum. Lack of skills, capacity and resources limited teachers and confined them to teaching about what was prescribed in the syllabus books while they ignored the most vital aspect of being able to relate their schools with part of the socio-economic problems making the communities more vulnerable to disasters. This is what one teacher had to say about the issues of sensitivity:

Q20. Which disaster topics do these Learning Areas address?

> **Response:** They will provide a topic on poverty and to explain that, it is difficult because when you follow the provided terms and pictures that explain poverty, in most cases, they look like their homes, the shacks, so you have to be sensitive, not to relate poverty with the shacks because they turn and say mam said we are poor because we live in a shack. In most cases, we only talk of basic needs like, saying if you can't meet your basic needs then you are poor. Do you have food? If they say yes, then they are not poor. Do you have clean water, if yes then they are not poor. Do you have shelter, if yes, then they are not poor. To them, poverty is not associated with them but with other people because according to them, they have all it takes to be having basic needs and that takes them out of people who are classified as poor (Appendix 1.5.2: School 2, teacher 3).

The study revealed that teachers felt that it was not going to be possible for them to include disaster risk reduction focus into their lesson planning across the entire learning areas of the curriculum as they were not disaster management specialists. They are still used to their subject teaching and day-to-day practice they learned from their training institutions. They cannot view the curriculum as holistic or interrelated, still thinking of it in isolation and struggling to keep abreast of educational developments and new methods of teaching. It is thus not going to be so easy for them, by themselves, to detach themselves from these habits and adjust to new imposed innovations within the very poorly resourced schools in which they work.

These challenges identify a serious inability of teachers to translate the disaster risk reduction discourse into classroom practice. They did not see how their everyday prescribed curriculum could be associated with the critical examination of the effects of cultural, social, economic, political, environmental and spatial planning practices on the landscape and the people. To them, disaster risk management knowledge is a prerequisite for one to investigate a disaster-related issue.

Schools are seen as the focal points for raising awareness about disaster risk management and disaster risk reduction. However, if teachers still lack proper knowledge and understanding of how to use their education policies to address their local issues, it is not going to be easy for them to present the various dimensions of disaster risk reduction within their communities through structured educational programmes. It did not and does not look like teachers will ever realize their primary role in communities and societies of being the main source of development of knowledge through the school curriculum.

All three cases studied, lacked an out-of-school social support system, which includes amongst others awareness raising, guidance on policy implementation as well as regulations for sustainable use of resources. Because of the huge gap existing among a range of sector departments within government like the municipalities through their disaster management practitioners, curriculum developers, community safety, health practitioners and many other role players, there is still more reliance on external humanitarian assistance. Instead of having all role players working together in putting together and implementing prevention and mitigation measures such community participatory risk assessments informing the public about the nature of the prevailing hazards and the changing conditions of the risks they are exposed to, as well as cooperation and coordination of disaster risk reduction planning, more reactive measures like fundraising and donations are preferred to deal with the effects of disasters.

There has been evidence that teachers do not see themselves as part of their communities and that the concepts of disaster risk management has not at all permeated their thinking. Teachers do not know how they can become community champions and agents by designing learning activities that position them and their learners in roles within the community. Parents seem not to have interest in assisting schools to develop policies that can assist in addressing the safety of their children at schools. There is little if any contact between teachers and the community, and a clear indication that teachers lack adequate knowledge and understanding of the policies governing their daily practices.

The inadequate practical tools and lack of guidelines to assist teachers to carry out programmes and activities addressing their local communities' issues make the situation worse. This is a huge gap in education in terms of increasing additional understanding about risks and to change public attitudes among different generations regarding the development of an appreciation of hazards and capabilities to manage risks.

5. 3 Recommendations

In support of the view that the implementation of disaster risk reduction activities cannot be viewed in a narrow perspective of just being a product, but with a perspective of being a process, the government of the Republic of South Africa has put in place sound and more practical disaster risk reduction policies to develop and establish populations that are committed to living their daily lives in accordance with the principles of sustainability. These are public education policies creating opportunities for teachers to develop programmes that are in line with the needs, priorities, indigenous knowledge and the capacity of the communities they serve. While it should be acknowledged that it would need quite a longer time and a range of programmes of activities before community behavioural change could be witnessed, the following recommendations can be implemented to assist in improving the situation:

- That the Curriculum Development Unit within the National Department of Education develop, for schools and teachers, national guidelines in the form of learning materials and practical programmes that can assist teachers to develop skills and augmented knowledge for the implementation of a disaster risk reduction focus in an already established curriculum.

- That the Curriculum Development Unit within the National Department of Education use its strategic planning to commit to addressing disaster risk reduction issues through schools as well as assisting schools to build a culture of society and community safety, where awareness of risk and adoption of risk-reducing measures are part of daily life.

- That schools be guided on how to take it a step further and develop their contextual local safety and disaster risk reduction policies.

- That teacher skills be harnessed through in-service training so that they become more effective in developing the qualities required for more progressive teaching and learning environments.

- A need for a rigorous teacher training that can provide teachers with skills to enable them to use techniques for planning their lessons and removing the constraints hindering them to successfully integrate a disaster risk reduction focus into lesson planning.

- A need for training that can equip teachers with methods and strategies they can employ within the varying contexts of their schools, as well as providing them with foundational knowledge that can enable them to recognize that they are part of their local communities, and that they can include that flavour and address their community needs and considerations through their teaching.

- A need to provide schools with proper and relevant resources to assist teachers to deal with challenges and demands brought about by the curriculum..

- A need to enhance the brief visits teachers get from the disaster management practitioners within Local Government with awareness raising workshops for schools on disaster risk management so that the message can reach out to large numbers of people who are learning together especially that children are believed to be more receptive to new ideas than adults, and that they can easily influence their peers and their parents on these issues.

5.4   Limitations of the study

Ideally, this study was supposed to involve a wider range of schools within the City of Tshwane Metropolitan Municipality, but due to time, financial resources and a prescribed volume for a mini-dissertation, it was confined to the three primary schools in Atteridgeville Township within the Central Region of the City of Tshwane Metropolitan Municipality.

The research was concentrated on the primary schools with the majority of their learners coming from the informal settlements that were more vulnerable to the risks of shack fires, floods and xenophobia. This report does not overrule the possibility that different results might have ensued if the research had been conducted in other primary schools within the municipality, but with different environmental characteristics.

5.5   Conclusion

This study investigated the ways in which teachers at the primary schools within the City of Tshwane Metropolitan Municipality planned their lessons to include a disaster risk reduction focus to address their local disaster problems. It has illustrated that none of these schools had an idea or clue on how to integrate disaster risk reduction focus into their lesson planning. This was found to be influenced by lack of skills on the part of teachers, as well as lack of guidance by the policy developers on how the teachers should interpret and use the curriculum and other policies related to their practice to deal with their local issues.

It has been recommended in this report that while curriculum developers within the National Department of Education should provide teachers with national guidelines in the form of learning materials and practical programmes on how to make sense of and an effort with their teaching practice, on the other hand, they provide training that can equip teachers with critical thinking and creative skills, as well as providing meaningful support that can motivate teachers in becoming prepared to put in more effort and to carry out new activities as introduced through curriculum innovations.

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APPENDIX 1.1: INTERVIEW QUESTIONS

QUESTIONS SEEKING TO UNDERSTAND TEACHERS'S UNDERSTANDING OF DISASTERS AND THEIR CAUSES

1. **Do you know what the word "disaster" means? [Yes or No]**
2. Can you explain the concept?
3. **Do you know what leads to the occurrence of disasters? [Yes or No]**
4. Can you please tell me what leads to the occurrence of disasters?
5. **Have you ever had disasters in your school community? [Yes or No]**
6. In the past three years, which disasters have affected your school community
7. **Has your school been affected by the occurrence of the disasters you mentioned? [Yes or No]**
8. How was it affected?
9. How did the school deal with those effects?
10. **Do you think that your school community can in future be hit by the same type of disasters? [Yes or No]**
11. Why do you think it can happen again?

QUESTIONS ADDRESSING THE SCHOOL'S DISASTER / SAFETY PREPAREDNESS

12. **Should a disaster strike this community, do you think the school will know what to do? [Yes or No]**
13. What do you think the school should do in case a disaster strikes?
14. **Do you think the community has a role to play in assisting the school to deal with disasters should they strike? [Yes or No]**
15. What do you think should be the role played by the community?
16. **Does the school have a policy on how to deal with safety and disaster issues? [Yes or No]**
17. What guided the school in the development of that policy?

QUESTIONS ADDRESSING OPPORTUNITIES CREATED BY THE CURRICULUM TO INCLUDE DISASTER RIK REDUCTION FOCUS

18. **Do you think the curriculum provides for opportunities to include disaster issues in the Learning Areas? [Yes or No]**

19. Which Learning Areas in your school allow for the inclusion of disaster topics?

20. Which disaster topics do these Learning Areas address?

21. Which activities do you plan to address these disaster topics?

22. Which disaster examples do you normally use in the activities addressing the disaster topics in the Learning Areas?

23. Do you have any specific reasons why you choose those specific examples? [Yes or No]

24. Can you please tell me what those reasons are?

25. **Does your school have resources to support the inclusion of disaster topics in your lesson planning? [Yes or No]**

26. Can you please list three examples of the resource toolkit you use to support your lesson planning?

27. **Does your school know of disaster events happening in the country? [Yes or No]**

28. Which of these disaster events has your school participated in?

   What do you think should be done to increase schools' awareness of the need to include disaster risk reduction focus in lesson planning?

APPENDIX 1.2: CATEGORIES OF INTERVIEW QUESTIONS

CATEGORIES OF INTERVIEW QUESTIONS	MAIN CODES EMMANATING FROM DATA
1. Do you know what the word "disaster" means? [Yes or No] 2. Can you explain the concept? 3. Do you know what leads to the occurrence of disasters? [Yes or No] 4. Can you please tell me what leads to the occurrence of disasters?	1. Teachers' general understanding of the term "disaster"
5. Have you ever had disasters in your school community? [Yes or No] 6. In the past three years, which disasters have affected your school community 7. Has your school been affected by the occurrence of the disasters you mentioned? [Yes or No] 8. How was it affected? 9. How did the school deal with those effects? 10. Do you think that your school community can in future be hit by the same type of disasters? [Yes or No] 11. Why do you think it can happen again?	2. Teachers' perceptions about the effect of disasters within the school's community.
12. Should a disaster strike this community, do you think the school will know what to do? [Yes or No] 13. What do you think the school should do in case a disaster strikes? 14. Do you think the community has a role to play in assisting the school to deal with disasters should they strike? [Yes or No] 15. What do you think should be the role played by the community? 16. Does the school have a policy on how to deal with safety and disaster issues? [Yes or No]	3. The role of schools in addressing disaster risk problems/ safety and preparedness measures within the school.

17. What guided the school in the development of that policy?	
18. Do you think the curriculum provides for opportunities to include disaster issues in the Learning Areas? [Yes or No] 19. Which Learning Areas in your school allow for the inclusion of disaster topics? 20. Which disaster topics do these Learning Areas address? 21. Which activities do you plan to address these disaster topics? 22. Which disaster examples do you normally use in the activities addressing the disaster topics in the Learning Areas? 23. Do you have any specific reasons why you choose those specific examples? [Yes or No] 24. Can you please tell me what those reasons are? 25. Does your school have resources to support the inclusion of disaster topics in your lesson planning? [Yes or No] 26. Can you please list three examples of the resource toolkit you use to support your lesson planning?	4. Opportunities created by the curriculum to include Disaster Risk Reduction Focus
27. Does your school know of disaster events happening in the country? [Yes or No] 28. Which of these disaster events has your school participated in? 29. What do you think should be done to increase schools' awareness of the need to include disaster risk reduction focus in lesson planning? 30. Is there anything you would like to say?	5. General information *(This is where participants are expected participants to relax and say anything that can have value in the research results/report)*

APPENDIX 1.3: INTERVIEW TRANSCRIPTS

1.3.1. SCHOOL 1

TEACHER 1

Q1. Do you know what the word "disaster" means? [Yes or No]

Response: Yes

Q2. Can you explain the concept?

Response: It is something causing problems to people, especially because its winter, it can burn. Just because if one burns, others, when they roll, others can burn.

Q3. Do you know what leads to the occurrence of disasters? [Yes or No]

Response: Yes.

Q4. Can you please tell me what leads to the occurrence of disasters?

Response: Floods and fire, the main one being fire because most of the shacks burn because when its cold, they use coal, firewood, paraffin to heat themselves and maybe they sleep and forget and get burned down.

Q5. Have you ever had disasters in your school community? [Yes or No]

Response: Yes. Floods and fire.

Q6. In the past three years, which disasters have affected your school community?

Response: Hence I say I stay there at the informal settlements there, things are happening there. Fire is one of them. Like this week on Monday, a father and child were killed by a nuclear explosive in that informal settlement.

Follow-up Q: Where did the weapon come from?

Response: That informal settlement is established on a dangerous place that was previously used as training and shooting camp/ base for the military. Most probably some of the explosive

weapons are still buried underground and with time they are exposed and explode to cause danger.

Follow-up Q: Does the municipality know that the place is a danger to the community?

Response: Yes they know and apparently people were told not to build shacks there but would not want to listen because most of them do not afford houses in the township and you know if the municipality insists, people always resort to strikes where they damage people's properties.

Follow-up Q: You say you also stay in the informal settlement?

Response: Yes, I am originally from Limpopo where I have a house that I pay for. I am just here in Pretoria, Atteridgeville because of work and cannot afford to pay for the second house or else, my family will suffer because I wouldn't have enough money to send back home for them.

Q7. Has your school been affected by the occurrence of the disasters you mentioned? [Yes or No]

Response: Yes.

Q8. How was/is it affected?

Response: The children are having disasters there and the problems come to the school. We always witness it if some of our learners are directly affected, like there is a death case at their homes. When we go there as a school to provide support, we come back crying after realizing that these kids just survive by the grace of God. They do suffer a lot. The conditions they come from are very heart-breaking.

Q9. How did the school deal with those effects?

Response: We normally raise funds and collect any materials that assist the families.

Q10. Do you think that your school community can in future be hit by the same type of disasters? [Yes or No]

Response: Yes.

Q11. Why do you think it can happen again?

Response: The situation is not changing. The informal settlement where the problems are coming from is still there, and there is no hope that it will change to better.

Q12. Should a disaster strike this community, do you think the school will know what to do? [Yes or No]

Response: Just go and help, raise funds.

Q14. Do you think the community has a role to play in assisting the school to deal with disasters should they strike? [Yes or No]

Response: Maybe they should start by helping themselves before they can help the school.

Q15. What do you think should be the role played by the community?

Response: In summer, when it rains, the whole informal settlement gets flooded. Everything gets wet, the beds, school books, everything. the community should help themselves. When it rains, thins get wet there. They must put drainage. It is difficult; however, they should maybe help each other by taking water out of their shacks after it has rained.

Q16. Does the school have a policy on how to deal with safety and disaster issues? [Yes or No]

Response: It is not actually a policy but if it is there, it is not effective.

Q17. What guided the school in the development of that policy?

Response: Workshops by the Department of education on safety issues. I am doing the scholar patrols. I am not the only teacher. Myself and other teachers attended the workshops on the scholar patrols for children's safety, and then we alternate.

Q18. Do you think the curriculum provides for opportunities to include disaster issues in the Learning Areas? [Yes or No]

Response: Not so much. Just a little bit.

Q19. Which Learning Areas in your school allow for the inclusion of disaster topics?

Response: In some subjects through the exam from the National Department of Education, like in Life Orientation. Just to teach them, like they should know what to do. If fire occurs, they can be taught how to use fire extinguisher. We know that every winter, fire becomes a problem.

Q20. Which disaster topics do these Learning Areas address?

Response: Fire.

Q21. Which activities do you plan to address these disaster topics?

Response: Children can be taught how to use the fire extinguishers. They should be taught how to be careful.

Q22. Which disaster examples do you normally use in the activities addressing the disaster topics in the Learning Areas?

Response:

Q23. Do you have any specific reasons why you choose those specific examples? [Yes or No]

Response:

Q24. Can you please tell me what those reasons are?

Response:

Q25. Does your school have resources to support the inclusion of disaster topics in your lesson planning? [Yes or No]

Response: No. We only do it by planting of a lot of trees can prevent fire, flooding and soil erosion.

Q26. Can you please list three examples of the resource toolkit you use to support your lesson planning?

Response:

Q27. Does your school know of disaster events happening in the country? [Yes or No]

Response: Yes, I know there is this one coming, the Climatic one. We see now that it is no longer raining but pouring throughout the year. It is winter now but we see rain, it's no longer like before when we knew that it will only rain in summer. That is why we cannot say we will rebuild our shacks when it is not raining in winter. As long as the landscape where the shacks are built is not ok, disasters will always be there. Even if the government is saying no you cannot build there, people still go on and build on mountains. There is a need to work on the landscapes in the informal settlements.

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Q28. Which of these disaster events has your school participated in?

Response: Not that I remember, but, I know that people from the City of Tshwane Disaster Centre normally come to take children if they have events of this nature to come and celebrate with them.

Q29. What do you think should be done to increase schools' awareness of the need to include disaster risk reduction focus in lesson planning?

Response: Work on the landscape in the informal settlements because people build in the mountainous areas which encounter problems like the ones I have mentioned. Maybe the workshops can help. The Department of Education must conduct workshops and maybe in subjects like Natural Sciences, they can teach topics like Impact assessment, mental impact because disasters happening affect people mentally. There were these discussions where they say they will merge Technology and Natural Science with focus on the Environmental Impact. We are doing it but not that much. We do not have restrictions on what we teach, yes we can be flexible and localize our own curriculum, but nowadays we have problems with time. We cannot do it after schools because children are always rushing for their transport. Yes if we had time, I know what it entails but if we had time, we could teach our children, and maybe use the environment to plant some trees, but there is no time.

Q30. Thank you very much for your time. We've come to the end of our interview. Is there anything you would like to say?

Response: I don't have anything to say but maybe if you can provide me with information so that I can also study disaster management.

TEACHER 2

Q1. Do you know what the word "disaster" means? [Yes or No]

Response: Yes

Q2. Can you explain the concept?

Response: It is an event that occurs unexpectedly and causing problems to the communities.

Q3. Do you know what leads to the occurrence of disasters? [Yes or No]

Response: Yes.

Q4. Can you please tell me what leads to the occurrence of disasters?

Response: Some of the things like paraffin.

Q5. Have you ever had disasters in your school community? [Yes or No]

Response: Yes.

Q6. In the past three years, which disasters have affected your school community?

Response: Fire because most of our learners do not have proper energy sources in their shacks and resort to any source of heating that can pose a disaster to them. These disasters affect the school because if learners do not have any books, stationery, proper clothing, this affects the learners. They cause mental damage especially if somebody from the family dies in such disasters.

Q7. Has your school been affected by the occurrence of the disasters you mentioned? [Yes or No]

Response:

Q8. How was it affected?

Response:

Q9. How did the school deal with those effects?

Response: We are including, … addressing such things through awareness workshops and even for the learners, we teach them about these disasters.

Q10. Do you think that your school community can in future be hit by the same type of disasters? [Yes or No]

Response: Probably.

Q11. Why do you think it can happen again?

Response: Like I am saying, 70% of our learners come from these informal settlements and for as long as these people they don't have electricity, they will keep on using fuel sources posing problems to them, they are always be vulnerable to experience these things.

Q12. **Should a disaster strike this community, do you think the school will know what to do? [Yes or No]**

Response: Yes.

Q13. What do you think the school should do in case a disaster strikes?

Response: I think what the school can do, is to come up with **a**wareness programmes and maybe as a school we can organize workshops in the community from where these learners are coming from, where these disasters are happening. We are having task teams working on these things and some of community members can be co-opted to be work-shopped and they will cascade the information to other community members. You know the school is a place where educated people are and can know how to assist the community because the awareness can replicate to the communities maybe through choosing a committee to work with communities to reduce the problem. We are having a committee that deals with this and they can cascade this to the community.

Q14.Do you think the community has a role to play in assisting the school to deal with disasters should they strike? [Yes or No]

Response:

Q15. What do you think should be the role played by the community?

Response:

Q16. Does the school have a policy on how to deal with safety and disaster issues? [Yes or No]

Response: Yes. Like we know if the school can experience a disaster, like be on fire, learners will know where to assemble, using the evacuation routes in the school. We have people who are in charge. Teachers know about it, that is why we have a committee working on that.

Q17. What guided the school in the development of that policy?

Response: The Department of Education because they have experienced these things so they guide the development of such policies.

Q18. Do you think the curriculum provides for opportunities to include disaster issues in the Learning Areas? [Yes or No]

Response: Yes**.**

Q19. Which Learning Areas in your school allow for the inclusion of disaster topics?

Response: Like I said earlier on, Life Orientation, these natural disasters are included and learners start knowing about them at this age.

Q20. Which disaster topics do these Learning Areas address?

Response: Communicable diseases fire and floods. They also assess learners on disasters.

Q21. Which activities do you plan to address these disaster topics?

Response: Let me give you an example like in case it rains heavily, maybe the rivers flood, they should know about basic help about what they should they do to get help. They should know about the role of the insurance in protecting buildings. In case your business is there, before going deeper into business, the first thing to ensure that the business is so safe, there is a need to insure your property against fire, that people are able to insure their properties for protection.

Q22. Which disaster examples do you normally use in the activities addressing the disaster topics in the Learning Areas?

Response: Fire and floods

Q23. Do you have any specific reasons why you choose those specific examples? [Yes or No]

Response: Yes

Q24. Can you please tell me what those reasons are?

Response: Fire is a serious problem to the area where most of our learners come from.

Q25. Does your school have resources to support the inclusion of disaster topics in your lesson planning? [Yes or No]

Response: Not that much.

Q26. Can you please list three examples of the resource toolkit you use to support your lesson planning?

Response: Fire extinguishers because fire is the most problematic one.

Q27. Does your school know of disaster events happening in the country? [Yes or No]

Response: I think so.

Q28. Which of these disaster events has your school participated in?

Response: Science is also addressing that. I know this year that there is this other conference in Durban on….climate change.

Q29. What do you think should be done to increase schools' awareness of the need to include disaster risk reduction focus in lesson planning?

Response: Maybe the Department of Education on their daily lives, they are experiencing this on their every day. Maybe the Department of Education must ensure that awareness on disasters is strengthened. I think they should dedicate disaster management practitioners to schools so that they are closer to the schools to give advise on what to do if disasters hit. I think that Disaster management practitioners only come to schools when they are expected to provide reports on how they assist communities, which I think is not right. They must always be visible to assist schools, especially in informal settlement communities.

Q30. Is there anything you would like to say?

Response: What are you going to do with the information to ensure that it helps the affected schools?

Response: The recommendations of the report will be submitted to the National Disaster Management Centre that funds the study, hoping that these recommendations will be considered.

1.3.2. SCHOOL 2

TEACHER 1

Q1. Do you know what the word "disaster" means? [Yes or No]

Response: Yes

Q2. Can you explain the concept?

Response: Disaster means things of an event.

Q3. Do you know what leads to the occurrence of disasters? [Yes or No]

Response: Yes

Q4. Can you please tell me what leads to the occurrence of disasters?

Response: In all the types of disaster, there are natural disasters and those that are of Human errors.

Follow-up: Can you please elaborate on your statement?

Response: You know I don't know how to put it.

Q5. Have you ever had disasters in your school community? [Yes or No]

Response: No

Q6. In the past three years, which disasters have affected your school community?

Response: Not that I know of. We haven't had any.

Follow-up: During our informal conversation, you mentioned that your school feed most children from the informal settlements; can you please tell me of the challenges that are related to disasters that those kids from the informal settlements are facing?

Response: Eee…The most common disaster is that one of fires. You find that during winter months, that they make fire and forget to put out the fire and they sleep their shacks get burned down.

Follow-up: How is that maybe affecting the school or the learners?

Response: There is a way in which they are affected because in the first place their school books and school uniform will be burned and my experience is that these events traumatize the learners. They want to come to school but don't have the facilities. Fortunately here at school we have a few extra books and clothes that we keep and give the learners who are have been affected as a means of support to the learners.

Q7. Has your school been affected by the occurrence of the disasters you mentioned? [Yes or No]

Response:

Q8. How was it affected?

Response:

Q9. How did the school deal with those effects?

Response:

Q10. Do you think that your school community can in future be hit by the same type of disasters? [Yes or No]

Response: Yes there is such a possibility.

Q11. Why do you think it can happen again?

Response: Because we are having an influx of people to the squatter camp and the shacks there are very close to each other, that is a challenge.

Follow-up: How old is the informal settlement where your learners are coming from?

Response: Shuu..about ten years old now.

Follow-up: Where do you think most people in the squatter camp are coming from?

Response: It differs, like in our case, we are a Zulu-based school, and most of the children that we get from the squatter camp are from the Eastern Cape.

Follow-up: How did these people end up being in Pretoria, especially around Atteridgeville, do you know the historical background of this squatter camp?

Response: In most cases it is because parents are working in Pretoria and they bring along their kids.

Follow-up: Pretoria being such a big City, why do you think motivates the influx of these people into Atteridgeville specifically?

Response: Atteridgeville is a friendly and peaceful township in Pretoria. I am personally born and brad of it, I know that.

Q12. Should a disaster strike this community, do you think the school will know what to do? [Yes or No]

Response: Yes

Q13. What do you think the school should do in case a disaster strikes?

Response: In case of learners from our school, then we know what to do, like I mentioned we have support tin the form of spare books and uniform that we provide to affected learners. Again, we have a female educator who is responsible for learner support, to provide emotional support to learners with learning barriers. She is basically responsible for that, as her role here at school to support the learners as mentioned.

Q14.Do you think the community has a role to play in assisting the school to deal with disasters should they strike? [Yes or No]

Response: Community must have structures that will liaise with the school. Structures like NGOs and after care services so that from school learners can go straight to those structures for further help.

Follow-up: Are there such structures in the community?

Response: There are such structures in the informal settlement.

Follow-up: Who is responsible for coordination of those structures in the informal settlements?

Response: School-base support team working with the structure on the ground.

Q15. What do you think should be the role played by the community?

Response:

Q16. Does the school have a policy on how to deal with safety and disaster issues? [Yes or No]

Response: Yes. **:** We do have a policy although it is an old policy that still needs to be reviewed because of the changes that the Department of Education came along with.

Q17. What guided the school in the development of that policy?

Response: The Department of Education (DoE) had some guidelines in terms of how to draft the policy, and then we followed the draft guideline.

Follow-up: What is the main objective of that policy?

Response: Safety for the learners, in the classrooms as well as in the school campus, so basically it is looking at safety.

Follow-up: You mentioned that the DoE proposed that the policy be reviewed. What do you think motivated that need for policy review, or what was not working well?

Response: They wanted the community to be part and parcel of the safety committee because in the past, it was only teachers and other stakeholders involved without the community.

Follow-up: What are the things that you are expected to do as part of the implementation of the policy?

Response: We are expected to do some awareness campaigns both for the learners and the community.

Follow-up: Have you ever had some awareness workshops with the learners and the community?

Response: Yes and we hold them once in a year, but the awareness takes the whole week, so what we do is that we involve the SAPS, we involve the health care workers, we involve even the Social Workers. We develop activity programme for the whole week. In addition to that, although there is a programme from the Department, there is also a programme from the DoE based on Traffic Awareness included in that particular week.

Follow-up: What is the involvement of the community during that week?

Response: The community is not involved to a large extend. We are only targeting the learners.

Follow-up: Do you do it for your school only, or do you do it jointly with the neighboring schools?

Response: It depends on what we want to achieve for the school. In the past, we used to combine the neighboring schools, but for the past two years, we did it individually.

Q18. Do you think the curriculum provides for opportunities to include disaster issues in the Learning Areas? [Yes or No]

Response: Yes it does.

Q19. Which Learning Areas in your school allow for the inclusion of disaster topics?

Response: Natural Sciences, Social Sciences and to an extend Technology.

Q20. Which disaster topics do these Learning Areas address?

Response: Disasters such as earthquakes, tornadoes, as well as the one which is safety on electricity as well as fire.

Q21. Which activities do you plan to address these disaster topics?

Response: We usually discuss first in class with them, and then give them assignment to go and look for information either from news papers, magazines, and the internet. Sometimes we ask them to develop posters about those disasters and then they come and do presentations in class.

Q22. Which disaster examples do you normally use in the activities addressing the disaster topics in the Learning Areas?

Response: We are not specific to the common topics like fire because it is the most common disaster here. We try to broaden it up to cover any disaster that may happen anyway in the world. Like in rural areas where there are rivers and there are no bridges, we make sure that our learners know of floods and what to do in terms of floods as well as all these other related issues.

Q23. Do you have any specific reasons why you choose those specific examples? [Yes or No] OUT.

Response:

Q24. Can you please tell me what those reasons are?

Response:

Q25. Does your school have resources to support the inclusion of disaster topics in your lesson planning? [Yes or No]

Response: Yes we are trying our level best, there are charts that we use in class, there are pictures and sometimes we do visit the computer lab and use the Gauteng Online Computer lab

for internet so that we can download video clips about these disasters so that learners can see them.

Follow-up: Who provided this computer lab resource and how often do you bring learners to the lab?

Response: The Computer lab resource has been provided for by the Gauteng Department of Education and we use their online internet. Depending on what is to be taught for the term, learners are free to use it any time. We do have the timetable for learners during school hours to come to the lab, but they are free to even come to the lab after school hours.

Follow-up: Who is manning or responsible for managing the lab?

Response: There is a HoD teacher responsible and that teacher is me, Mr. Motau.

Q26. Can you please list three examples of the resource toolkit you use to support your lesson planning?

Response:

Q27. Does your school know of disaster events happening in the country? [Yes or No]

Response: Yes, we do talk with children about the events happening in the world. We told them about the recent one that happened in Japan in March this year. Learners are also made aware of what is happening in other parts of the world.

Q28. Which of these disaster events has your school participated in around the City of Tshwane?

Response: We haven't participated in any. Not in the City of Tshwane, maybe because we are no aware of them. As far as I am concerned, the information does not reach us.

Q29. What do you think should be done to increase schools' awareness of the need to include disaster risk reduction focus in lesson planning?

Response: I think they should inform the children about the disasters and maybe at the same time, give projects like a research depending on the level of the learner. Just to go and find out of the dangers they are facing, in that way, I think the learners will be aware and that can also be part of the schools' projects.

Q30. Thanks Mr. Motau that was very informative. We have come to the end of our interview. Is there anything you would like to say?

Response: Since you are doing a research, I would really appreciate it if we could keep in touch even after your research so that if there are any school projects related to disaster management, are school can also be informed of those. Even if they could send some charts, I think the charts can play a major role.

My Response: I will try my best Mr. Motau, and thank you for your information and time.

TEACHER 2

Q1. Do you know what the word "disaster" means? [Yes or No]

Response: Yes

Q2. Can you explain the concept?

Response: Unhealthy hazards maybe in natural occurrences that can happen in an environment.

Q3. **Do you know what leads to the occurrence of disasters? [Yes or No]**

Response: Yes

Q4. Can you please tell me what leads to the occurrence of disasters?

Response: Like maybe in an industrial place, or maybe in a place like in our school, we have a wetland in any case because anything can happen through this wetland. We are next to the wetland.

Follow-up: Is the wetland taken care of?

Response: No, no, it is not taken care of, I would say so. We went several times to our municipality, trying to inform them about the need to care for the wetland but nothing happens. But then they are aware of that because in most cases, they send people who are doing a research or want to study more about wetlands to come and have a look at it. We are even brought to a programme as a school about raising awareness that a wetland is not only associated with disasters that can happen but can also be used fruitfully so.

Follow-up: Where is that wetland?

Response: On the North side of our school.

Follow-up: Is it somehow secured or is there any settlement next to it?

Response: I don't know what to say but it is extending into our yard. We have also discovered that even when it rains, that place is always full of water because it is like a low slope area.

Q5. Have you ever had disasters in your school community? [Yes or No]

Response: Because we are next to the wetland, we always have problems with snakes. At times we even find them in our cupboards. It is because of this wetland that is why I say it is one of the factors for disasters.

Q6. In the past three years, which disasters have affected your school community?

Response: Ja, like when they are burning reeds in the wetland during winter time, they like to burn and we experience some disturbance. We are experiencing a lot because there is fire from there and that normally gets into the school yard and catches the school's garden net. At times it happens by mistake because they do it during the day and then we are forced to close the windows.

Follow-up: Who is responsible for burning in the wetland?

Response: We don't know but there are some small demarcated yards for these community people.

Q7. Has your school been affected by the occurrence of the disasters you mentioned? [Yes or No]

Response: Yes

Q8. How was it affected?

Response: Ja, because learners get so excited because they want to see. They want to go outside to see what's happening and you'll find that some of them are coughing.

Thought of Question not in the schedule: Tell me about the issues coming from the informal settlement. I understand your school is feeder for learners from the informal settlement.

Response: We have informal settlements like Siyahlala-la, Phomolng, Brazaville, Jacksville and Mshengo from where our learners are coming and our feeder areas. We did not have transport means for learners coming from there and we applied for assistance with transport from the Department through scholar patrols that we do. The Department provided transport but still, some learners are always late because you'll find that they stay that side of the river or a dam where they have to pass coming to the school. The area is not accessible in most cases especially when it rains. Another disaster that we have in the morning is the fact that all learners will want to go to the toilet first thing in the morning probably maybe because the toilets at their homes are not that comfortable. The first period is always not fruitful because they all are at the toilet. You can see that to them, it is time when they got a comfortable toilet because it is not there at home.

Follow-up: Where do you think these people from the informal settlement are coming from?

Response: Rural areas because during school holidays, you wont find any of them here. They will tell you that mam, I went to KZN, Eastern Cape, from all over.

Follow-up: What do you think motivated their parents to come here?

Response: It is work or because most of them have a perception that these are the areas where they can easily access services like grants because these are the areas that get attention from the government. Again, the schools here are accessible.

Follow-up: Do you think the municipality is aware of these problems and what types of services are they getting from the municipality?

Response: Because a number of them are not working, only the father is working. They come with children who do not even have birth certificates and IDs, but through the Social Worker, they are able to get those quicker and free of charge. Here at our school we even had a special Home Affairs Day wherein they come, fill in forms and get the birth certificates and IDs and apply for the grants**.**

Q9. How did the school deal with those effects?

Response:

Q10. Do you think that your school community can in future be hit by the same type of disasters? [Yes or No]

Response: Definitely.

Q11. Why do you think it can happen again?

Response: Most of the time when it is raining, the buses transporting these learners can't reach the stops where the learners must catch them and the children can't reach the school. Most of them the following day are complaining, saying they didn't sleep the whole night trying to take water out of their shacks. Or again, the fire can destroy the whole place. Sometimes it is fire burning their shacks and it affects us. We end up asking for donations in the form of clothes that is why we keep spare uniform here at school so that we are able to help them in such case.

Q12. Should a disaster strike this community, do you think the school will know what to do? [Yes or No]

Response: I think we need to put our hands together when it gets there. We immediately involve the councillor and they are the ones informing the municipality. We have 80% percent of the good relationship with the councillor because our school is being used to hold ward meetings and for a number of councillor's committees.

Q13. What do you think the school should do in case a disaster strikes?

Response:

Q14.Do you think the community has a role to play in assisting the school to deal with disasters should they strike? [Yes or No]

Response: Besides this armed security that we have at school, should anything happen to our school, some other members are able to call the principal to inform her about any wrong doing taking place at school. There are people also from the community that have been give access to use the school premises for their church services and so they assist in taking care of the school. We have a neighbor that we have provided some space to do his vegetable gardening. So the relationship with the community is good.

Q15. What do you think should be the role played by the community?

Response: They do try but we have a number of instances where they come to the school for help, or whatever. If ever there is a bereaved family. Normally the councilors with the school give some donations. Here at school we provide assistance/donations through what we plant in the garden, which is mostly all sorts of vegetables throughout the year. It is just sustainable. These vegetables we also use them in our feeding scheme. The Department supply food for this feeding scheme.

Follow-up: Why did the Department initiate the feeding scheme at school?

Response: It is poverty and absenteeism because learners used to stay away from school since they would spend the whole day at school without eating anything. Now there is 100% attendance. On Fridays, they don't want to hear anything, they eat balanced diet. Even now they were eating oranges and it is much better. You know the suppliers just provide the basic food only like the Soya, but when you supplement it with these vegetables, it becomes tastier a balanced diet.

Q16. Does the school have a policy on how to deal with safety and disaster issues? [Yes or No]

Response: Exactly, yes.

Q17. What guided the school in the development of that policy?

Response: It is due to the things that have occurred. Like we have a number of learners who are under-nourished and sometimes come with contagious diseases that affect other learners. For safety purposes, the policy also mandates parents to report to the school in such cases, they are involved. We also have nurses dedicated to the school so that when the learners are not ok, the nurses are easily and quickly called to the school; take the learner to the clinic or pace the child in a sick bay (in the school observation room.) Like this pandemic, HIV, parents were not free to come, talk and disclose about their children's problems but now the policy had made it easier. The parents can come to school, talk about it to the principal knowing that the issue will be handled in a confidential way by the school, for the sake of the necessary treatment and support to the infected and affected learner.

Follow-up: You mentioned that you have nurses dedicated to the school, where are they coming from?

Response: They have been dedicated by the municipality, so they come every quarter to check our learners.

Follow-up: How does the policy impact of the community you are serving?

Response: I would say that it has made a certain difference because we try to engage parents in the development process; at least some parents become aware and enlightened of some of the issues. We acknowledge that we still struggle with issues of safety, and still have a lot to do. We are trying but I wouldn't give it 50% of achievement. We know that we haven't made an awareness of the policy to the entire community but our parents know about it. We strive to see the entire community to know about it.

Q18. Do you think the curriculum provides for opportunities to include disaster issues in the Learning Areas? [Yes or No]

Response: Yes

Q19. Which Learning Areas in your school allow for the inclusion of disaster topics?

Response: Maths, Ns, EMS, Social Science, I think all Learning Areas, but where they touch this the most the subjects I mentioned, but when it comes to Life Orientation, all learners become exposed to these topics basic LO provides basics for everything.

Q20. Which disaster topics do these Learning Areas address?

Response: In fact I would be able to tell a lot when it comes to my focus because I am in junior phase. But then in senior phase, I know they teach about the environment where they talk about natural disasters. Like in Mathematics they normally teach about transport and safety. In the foundation phase, we make awareness like water-wise, again it can be good or bad, especially as the shortage of water can also lead to a disaster.

Q21. Which activities do you plan to address these disaster topics?

Response: What we are doing, like knowing that nowadays water can be a problem unlike in the past when water was obtainable any time and since it has been included in the curriculum, so our school has provided us with the buckets to store water and the containers/mugs that learners must use to drink water with. Our taps is always locked to avoid learners letting water run freely from the taps and be wasted. We try again that in our garden to encourage our

learners to bring two-litter dirty water to water or garden with. There are basins provided also for learners to always wash hands. Those are some of the activities that we encourage.

Q22. Which disaster examples do you normally use in the activities addressing the disaster topics in the Learning Areas?

Response: I think in the higher classes they do that.

Q23. Do you have any specific reasons why you choose those specific examples? [Yes or No]

Response:

Q24. Can you please tell me what those reasons are? Not answered.

Response:

Q25. Does your school have resources to support the inclusion of disaster topics in your lesson planning? [Yes or No]

Response: We do have but they are not enough

Q26. Can you please list three examples of the resource toolkit you use to support your lesson planning?

Response: Fire extinguishers, these ones are the most important ones because fire is a problem here. I would also say anything that can chase snakes away from the school.

Q27. Does your school know of disaster events happening in the country? [Yes or No]

Response: Ja, not unless our government has updated the information and we were not informed of the new developments but we normally have a calendar of these days to celebrate and raise awareness on, like we normally get invited to the botanical gardens here in Pretoria to come and celebrate days like wetland days, or we always see these events on the TV but the Department is very much proactive on those.

Q28. Which of these disaster events has your school participated in, especially within the City of Tshwane?

Response: No.

Q29. What do you think should be done to increase schools' awareness of the need to include disaster risk reduction focus in lesson planning?

Response: I think the workshops on parents because these problems start at home and come to the school. The communities must also be workshop and the school as the pillars will come in to provide support. More awareness workshops can really help learners know of these things.

Q30. Thank you Ms. Chezi for you time. We've come to the end of our important information. Is there anything you would like to say?

Response: If we can have an opportunity to attend these workshops. I forgot to mention that we need funds that can reinforce our security because we are so exposed to the thugs who can access the school campus any time. You see the structure of our school; they can get in and out unnoticed and can do anything to anyone in the school, learners or teachers. You see our learners' toilets are facing the gate and thugs can get in there anytime, and smoke their drugs like **"nnyaope"** there. I think they can even rape our learners since they are used to attacking them after school on their way to home. If we can get funds maybe to fix the gate so that it is always locked with the security guard so that whoever comes in must produce their ID, I think that can be much better.

TEACHER 3

Q1. Do you know what the word "disaster" means? [Yes or No]

Response: I think I do

Q2. Can you explain the concept?

Response: Disaster means things that are out of the ordinary, I suppose.

Q3. Do you know what leads to the occurrence of disasters? [Yes or No]

Response: Yes

Q4. Can you please tell me what leads to the occurrence of disasters?

Response: Natural Disasters, there are human errors that leads to the occurrence of disasters.

Q5. Have you ever had disasters in your school community? [Yes or No]

Response:

Q6. In the past three years, which disasters have affected your school community?

Response: The recent floods, some of our learners were affected, their books got wet in their shacks and some could not attend the school. Again, we were also affected by xenophobia. Most of our learners travel by train from Sunny Side and they are originally from foreign countries and they hear in the train that foreigners will be attacked and then parents were forced to take their kids out of our school in fear of their lives.

Follow-up: Was the threat on the Xenophobic attack only on the trains and not from the community of Atteridgeville?

Response: There were threats also from the community of Atteridgeville, but around our school there were just comments from members of the community.

Q7. Has your school been affected by the occurrence of the disasters you mentioned? [Yes or No]

Response: Yes

Q8. How was it affected?

Response: The issue of Xenophobia has affected our relationship at school with that of parents. You know they bring their kids here hoping that they will be treated equally, but only to find that they now live under threats of being attacked because they are foreigners.

Follow-up: Why would parents from Sunny Side bring their kids here for schooling?

Response: You know our school is a no-fee school as compared to the rest of the schools around here. Because these parents also don't have any means, they thought our school was relevant for them. You know we lost trust from these parents. We tried by all means to talk to them, hold parents' meetings with parents from this community, but, unfortunately they were not convinced.

Follow-up: Do you still have learners this year from Sunny Side?

Response: Yes we do.

Follow-up: Do you think that because you still have learners from Sunny Side and other foreign countries, you can still experience the issue of Xenophobia?

Response: Yes, like in the beginning of the year, there were some rumors.

Follow-up: How important is it for the school to have learners from Sunny Side and other foreign countries?

Response: You know, it is a give and take situation because they learn about our culture and our environment and we also learn about their culture and their environment. Like in Social Sciences, they learn about different religions and since they have their own different types of religions than us here, we do learn from them and also, the parents are so involved, we really enjoy having them here at school.

Follow-up: What do you think motivates people from having such xenophobic attitude?

Response: I think it is the community issues more than the parent's issue, the issue of them taking their jobs, taking their benefits. As I told you, our school is a no-fee school so people think that these foreigners take their benefits away from them. Like the feeding scheme that we have here at school, sometimes we would give the leftovers to these parents but the community would not like it as they think these benefits are theirs.

Q9. How did the school deal with those effects?

Response: I think we are empowered. Before we were just reacting, but now we are proactive. We talk about it every day and even if we can hear just a comment, we take it seriously. I think if your child can come home and say another child at school said something bad about them, you can still take it light because we are all South Africans, but imagine if you are a foreigner and your child tells you the other child at school uttered some xenophobic words to them, you went take it lightly. So, these comments, we don't take them for granted.

Follow-up: Where do you think these xenophobic comments are coming from, is it from members of the community or?

Response: The comments are from both the members of the community and the parents to the learners at school. You know, we also have a bus system transporting our kids and the issue is that other schools around here do not have the no-fee and free transport benefit. They also have kids from the informal settlement who do not have transport means but it is only our school having those benefits. I don't know how it works but that's how things are.

Follow-up: What motivated the Department of Education to provide those benefits to your school?

Response: We applied for the services, we made a study and motivated to the Department about the type of kids we are having, where they are traveling from, how far they are from, etc. As far as I know, all the schools were given that opportunity, but as to which criterion they used to give us those benefits, I am not sure.

Q10. Do you think that your school community can in future be hit by the same type of disasters? [Yes or No]

Response:

Q11. Why do you think it can happen again?

Response:

Q12. Should a disaster strike this community, do you think the school will know what to do? [Yes or No]

Response: Yes

Q13. What do you think the school should do in case a disaster strikes?

Response: The school is the source of information. Its role is to cascade that information to the community. The kids we have now know about xenophobia. You know, because we are a Zulu school, you will find them telling each other, ja… you are a Xhosa, ja… you are a Zulu. You know, we try to make them aware that xenophobia is not only happening to foreigners from outside and that the way they treat each other is also a sign of xenophobia.

Q14.Do you think the community has a role to play in assisting the school to deal with disasters should they strike? [Yes or No]

Response: Yes.

Q15. What do you think should be the role played by the community?

Response: Sometimes we try to stretch ourselves so much but we end up not achieving what we have to. You know, the issue of security, we can involve the SAPS, the Department of Social Services, you know. We can inform that please watch out, xenophobia is coming again, make

sure you protect our learners in the train, but we can't because this is what the community should do. That is the role they must play. They are the people who see these kids everyday. They are the ones seeing people who harass these kids everyday on the streets, on their way from school to home. There are these guys loitering everyday, harassing these kids because they know these kids have money, they have cell-phones, etc. Sometimes the kids from Sunny Side will arrive late at school because the trains are late then you will hear comments from these guys saying, jaa… you don't want to learn, you arrive late at school, ja… you are wasting our money, you know, such comments are harassment. But we cannot do anything about that, we can only try to control the situation within our limits, within our premises, which is within the school environment. I think the community must play their role.

Q16. Does the school have a policy on how to deal with safety and disaster issues? [Yes or No]

Response: Yes, We have a policy on safety issues.

Q17. What guided the school in the development of that policy?

Response: Problems we had inside the school and outside the school yard. We had a big situation one time when the learners were cleaning, they pushed the other against the window and that child was hit by a window and taken to the clinic. The nurse at the clinic wrote a report to the police station because they are obligated. You know, such things compelled us because we can be charged as a school. So we developed this policy as a means to protect ourselves.

Follow-up: What is the involvement of the Department of Education in that regard?

Response: All policies we have must be approved by the Department before they can be implemented as the law of the school.

Follow-up: What type of impact does the implementation of that policy have on the community you are serving?

Response: The learners and community we are serving are from the informal settlement, you know, they are just wild. We involve their parents because some of the things they do, you will be surprised. So we try to involve parents in the safety of their kids, like making them sign the indemnity form on the things we can do, as well as on what we think they should do.

Q18. Do you think the curriculum provides for opportunities to include disaster issues in the Learning Areas? [Yes or No]

Response: Yes.

Q19. Which Learning Areas in your school allow for the inclusion of disaster topics?

Response: Grade 7 Social Sciences deals with natural disasters. I think Grade 5 deals with the epidemics. The problem is that we cannot link the curriculum with what is happening on the ground practically. According to these learners, what we teach in class ends there and has got nothing to do with real life. Right now something is happening in Somalia, the drought, but they cannot link that with what we are teaching them. Sometimes you ask them in class, have you seen the news on TV about drought, and what's happening in that country? They will just say, ahh…mam…meaning, they can't relate that to their everyday lives.

Follow-up: Which other Learning Areas do you think creates an opportunity for disaster topics?

Response: Life Orientation, they are doing road safety. Sometimes they meet with other schools on this road safety issue. Content subjects, they are provided but sometimes we try to adjust them to suite our environment.

Q20. Which disaster topics do these Learning Areas address?

Response: They will provide a topic on poverty and to explain that, it is difficult because when you follow the provided terms and pictures that explain poverty, in most cases, they look like their homes, the shacks, so you have to be sensitive, not to relate poverty with the shacks because they turn and say mam said we are poor because we live in a shack. In most cases, we only talk of basic needs like, saying if you can't meet your basic needs then you are poor. Do you have food? If they say yes, then they are not poor. Do you have clean water, if yes then they are not poor. Do you have shelter, if yes, then they are not poor. To them, poverty is not associated with them but with other people because according to them, they have all it takes to be having basic needs and that takes them out of people who are classified as poor.

Follow-up: I heard that in the informal settlement the most problematic thing is fire. What do you think causes that fire?

Response: I think it is the type of fuel they use. It is winter now and it burns so much, another problem being the layout of the shacks there. They are so close to each other that there are no access roads for the fire engine. By the time the fire engine arrives to the shacks where the fire started, the fire has long spread to other shacks. The fire that will take five minutes here to be put out, in that informal settlement it will take one hour because the fire engine struggles to reach out to it. Like now, we are from the holidays and we find that our tyres in the school campus have been taken and we suspect they were used there for heating purposes, so do you think you can control the tyre fire, no?

Q21. Which activities do you plan to address these disaster topics?

Response:

Q22. Which disaster examples do you normally use in the activities addressing the disaster topics in the Learning Areas?

Response:

Q23. Do you have any specific reasons why you choose those specific examples? [Yes or No]

Response:

Q24. Can you please tell me what those reasons are?

Response:

Q25. Does your school have resources to support the inclusion of disaster topics in your lesson planning? [Yes or No]

Response: Yes, even though I don't think they are enough.

Q26. Can you please list three examples of the resource toolkit you use to support your lesson planning?

Response: We have fire extinguishers and the first-aid kids, but we do not do the drills regularly because each learner must be exposed at least twice a year. Because we do have new kids coming but we I don't think we do enough to drill them so that they know what to do should disasters maybe happen. Maybe the issue here is that no one wants to take responsibility. We all think it is not may job; the next person will do it, and so forth.

Follow-up: I was going to ask if you have responsible teachers to coordinate that.

Response: We have safety team but because there are so many other committees other than this, I don't think we have succeeded in doing what we are supposed to do in those committees because one teacher ends up belonging to three or four committees. If you are to meet in a month, then it means you have eight meetings in that meeting.

Follow-up: How do you involve the community in those committees?

Response: We do involve them, like the SAPS especially when we attend to the sports activities at the stadium. We also involve the clinic next to us. There is also the police officer who is responsible for each school around here.

Follow-up: Should you be requested to list the types of disaster resource toolkits to assist your school, which ones would you prefer?

Response: The information charts or signage boards that can show the directions for evacuation routes, escape routes, the assembly area, etc.

Follow-up: Does your school have such routes as it is now?

Response: No

Follow-up: So, in case those information charts are provided, how would you use them?

Response: I think we will improvise just to control the situation at that time, because if you look at the structure of our school, the entrance, people have an easy access to the yard without being noticed. Sometimes we see people already in the campus because the way it is, you cannot see who is entering the gate at any given point in time. I am not trying to scare you but our principal was once held at gun-point at the office. We did not see these thugs coming in, we only saw them while they were there already and we couldn't do anything about that situation, fortunately they did not harm her. You know, the physical layout of our school is a disaster on its own. The school is a blessing but a disaster at the same time.

Q27. Does your school know of disaster events happening in the country? [Yes or No]

Response:

Q28. Which of these disaster events has your school participated in?

Response: There is safety week during which our kids are addressed. I am not sure who is organizing but because we have a calendar, we just align ourselves and also participate. We have Arbor week, we also celebrate the wetland day with the City of Tshwane because we do have a wetland next to our school.

Q29. What do you think should be done to increase schools' awareness of the need to include disaster risk reduction focus in lesson planning?

Response: In the implementation of the curriculum, I think now we teach to test and not to equip, so we must ensure the curriculum focuses on equipping learners.

Q30. Thank you Ms. Kubheka for your time. We've come to the end of our interview. Is there anything you would like to say?

Response: Thank you too, but you see, teaching is no longer lucrative.

1.3.3. SCHOOL 3

TEACHER 1

Q1. Do you know what the word "disaster" means? [Yes or No]

Response: I think I know.

Q2. Can you explain the concept?

Response: Well a disaster, I could bluntly say it is a mishap and a situation that is beyond one's control. It can be an event that can uproot a roofing or a fire that destroys property.

Q3. Do you know what leads to the occurrence of disasters? [Yes or No]

Response: Yes

Q4. Can you please tell me what leads to the occurrence of disasters?

Response: There are disasters that are natural. Like for an example, there can be a storm, you know but some disasters are caused by our negligence. Say for instance we become negligent with the chemicals or tools that we use. For an example, we have got some gas bottles in the school kitchen that we use to save electricity when we cook the learners' food since we have the feeding scheme here at school. You know, if the people using those gas bottles can be negligent, they can explode and cause a disaster. We do have a kitchen where we cook and

give food to learners coming from the disadvantaged community. We do have a parent who is not on our payroll who cook balanced meal everyday for these learners. You know, in the past, it used to be for a chosen number of learners getting the food, but nowadays, since we get enough supply, it is free for all, unless the learners themselves feel that they are ok and do not want anything during that particular meal time. The food is more than enough to an extend that come during school closing, we usually give the left overs to the parents, like the maize meal, beans, etc. When the schools close, we make sure that we share the food amongst parents.

Follow-up: You mentioned that you have kids from the informal settlements. Can you please share with me that information?

Response: Yes, we do have learners from Mshengu, Brazaville, Phomolong and the like informal settlements. This learners travel long distances of about 10 kilometres everyday to school and they are often with empty stomachs and we feed them every morning with porridge or soup, depending on the menu for that day.

Follow-up: Where are the people in the informal settlement coming from?

Response: Some are the residents coming from parts of Atteridgeville and Saulsville, butr most of them are the outsiders, the foreigners. As a result, we have a lot of foreign learners here at our school.

Q5. Have you ever had disasters in your school community? [Yes or No]

Response: We had disasters, although not very serious. In the past, we had storms, where you find that those shacks are being swept off by floods and the kids come here very wet and the school had to see how it could help. I remember we have our sister high school that had to donate some uniform to the school to be given to these learner. That sister school brought packs and packs of white shirts, grey funnel trousers for boys, track suites and other sports close.

Q6. In the past three years, which disasters have affected your school community?

Response: Yes, we once had a storm that uprooted our school's roofing especially at the office block and the kitchen. We as such made a submission to the Gauteng Department of Education (GED) requesting that the block be roofed again.

Follow-up: What effect did this storm have on the community?

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Response: Shacks, it was quite a problem, because learners came without books as they were drenged. We had to reissue them with the new stationery. It was quite a loss on their part.

Q7. Has your school been affected by the occurrence of the disasters you mentioned? [Yes or No]

Response: It didn't affect the school that much but because we had to loose the spare stationery at that faster rate and once off, that was a bit of a problem.

Q8. How was it affected?

Response: Same as above

Q9. How did the school deal with those effects?

Response: We try our best. We are fortunate that we have built a good relationship with the local business. Like the local bakery and the one and only bakery in Atteridgeville and Saulsville, Kotu bakery, you know, that gentleman has been supporting needy learners from our school. He started with 10 kids from needy families but now it went to 20. It is not only Kotu Bakery, we also have Mr. Khumalo, running a Mzioxolo B & B. You know, that guy also has been supporting 20 needy families identified by the school with groceries, and we talk serious groceries like 10kg rice, 10kg maize meal, 10kg washing soap, 5L cooking oil, you know. Very big groceries, 20 packs. But he had since stopped because he was not pleased with the attitude of those families. You know, while preparations for the 2010 FIFA World Cup were underway, he bought some properties in the Pretoria East area to be refurbished to run the B&Bs and it was announced at the parent's meeting that unemployed parents who are looking for a job, should call him and the job was guaranteed, but, none of those parents called to grab that opportunity. I think he was pissed off that these parents were comfortable that they are getting free groceries every month and do not want to work at least to earn money that could take them out of their bad situation.

Q10. Do you think that your school community can in future be hit by the

same type of disasters? [Yes or No]

Response: Ja.

Q11. Why do you think it can happen again?

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Response: with natural disasters, you can't run away from, but we tried to make contingency plans should such disasters strike again.

Follow-up: What are those contingency plans?

Response: The fact that our roofing was blown away and we saw the damage that was caused and we thought that should it come again, we shouldn't suffer the same damage. Like the things that could be damaged by water, were moved into the strong room. We no longer keep some sensitive things in the kitchen but we keep them in the strong-room.

Q12. Should a disaster strike this community, do you think the school will know what to do? [Yes or No]

Response: Same as above already answered.

Q13. What do you think the school should do in case a disaster strikes?

Response:

Q14.Do you think the community has a role to play in assisting the school to deal with disasters should they strike? [Yes or No]

Response: Yes

Q15. What do you think should be the role played by the community?

Response: The community should work hand in hand with the school. They should take ownership, although it is difficult to educate parents on this ownership and that they should work with the school. Most parents still think that schools are government and that they should get things from them (schools) as they are part of government. We have quite a good percentage of parents who claim that they are unemployed and cannot afford this and that. We usually request them to come and do something for the school, like when we were still a fee paying school, most of them, both mother and father would claim that they don't afford to pay that fee, but they wouldn't even want to come and assist the school with things like manual cleaning, at least to safe the school some money to pay someone who cleans the classrooms since these kids are still very young and we cannot expect them to clean the classrooms by themselves.

Q16. Does the school have a policy on how to deal with safety and disaster issues? [Yes or No]

Response: Yes

Q17. What guided the school in the development of that policy?

Response: We do have quite a number of committees like the safety committee that's responsible for the drafting of these policies. Members of the safety committees have been trained on fire. We do have fire extinguishers and first aid kids, however, unfortunately we do not do any drills, like training learners on how to assemble or evacuate should a disaster happen here at school, but I believe because our school is so small and our building are not 3-story buildings like those in the model C schools, our risk is very minimal. The policies should be in line with the guidelines provided by the GDE, although we are told we should customize the policies to suit our environment because in most cases these policies are not suitable to our environments. You will find that they are much more relevant to the city schools of the Model C schools.

Follow-up: What are the key issues expected to be addressed in the safety policy?

Response: Like you will realize that most township schools, particularly primary schools, we do not have laboratories with dangerous chemicals, the teachers and learners classes that are not well furnished or structured. Like most of the apparatus that they recommend in the policy, like the proper structures, the fire hose pipes in case of fires, we may only have the hose pipes that we use to water the gardens. We don't have enough resources used as the bench mark in the guide policy from the Department.

Follow-up: In the implementation of the policy, is the community involved?

Response: Not exactly. It is only now that we try to rope in the community, particularly in the media centre as we try to invite the community at the computer centre, at a price of course, then it is only that once we have the adult class for computer, them we can inform them of our school's safety measures.

Follow-up: You mention that it is unfortunate that you do not do drills with learners to train them on how to respond should a disaster strike. Is this one of the policy requirement?

Response: Exactly. I remember we once had visitors from the District office of the GDE and the Community Safety Department who were checking on such. They wanted to know if we had fire extinguishers, how many are there, are they in each classroom, how many people have been

trained, do learners do evacuation drills, and do they know where to run to should a disaster strike, and so forth.

Follow-up: But are the learners well acquainted with the details of the policy?

Response: I can't say the learners, but the committee is the one that is well acquainted with the policy. It is only when there is an emergency when we will be talking to the learners about that.

Follow-up: Because you are dealing with learners from the informal settlement, what type of impact does the implementation of the safety policy have on the communities from where your learners are coming?

Response: Eee..the impact is measurable in the sense that, like I said that most of these learners are from the shacks, especially in winter, the fires are a problem. In winter especially we educate them on how to handle the use of candles, paraffin lambs, that they cant leave the candles on in the night, they cant leave the paraffin stoves on when they sleep with the purpose of keeping themselves warm. I think what we teach them here is easily cascaded to their parents at home. At least we are making a difference.

Q18. Do you think the curriculum provides for opportunities to include disaster issues in the Learning Areas? [Yes or No]

Response:

Q19. Which Learning Areas in your school allow for the inclusion of disaster topics?

Response: Because we have learning areas such as Life Orientation which touches in most cases on such, apart from the Natural Sciences and Technology because on these two we do touch on disasters that can be caused by improper use of electricity. I think Life Orientation is one relevant learning area that touches on disasters.

Q20. Which disaster topics do these Learning Areas address?

Response: Eeee..when we do electricity both in Natural Science and Technology, we usually teach them on how to use electricity sustainably, like to avoid touching it with wet hands, bridging of cables, overloading of plugs, etc

Q21. Which activities do you plan to address these disaster topics?

Response: Eee.. it would vary, like I would say, if I were to introduce a lesson on safety hints on electricity, it will vary with educators, but there is ample activities, depending on teachers, You know, it is important to prepare thoroughly when going to class, for all the subjects in fact. You cannot go to class, especially of Natural Science and Technology and focus only on theory because those are practical subjects.

Follow-up: Have you ever thought of involving parents or the community in the planning of activities, especially around issues that directly affect the community?

Response: It is not easy to can involve their parents because they are not like here, at school but we just make reference, like timeously on media, especially now in winter, they talk of incidents like those of fires, like recently on media, there was an incident where about 300 shacks were burned down because of one person who left a candle unattended and people lost their belongings.

Q22. Which disaster examples do you normally use in the activities addressing the disaster topics in the Learning Areas?

Response: Fire is the serious issue here because of the type of households, they don't have electricity, they use paraffin and if it sis not properly used, there will be chaos. Again, there is this unlawfully electricity connection which also poses a serious threat to this community. There are live electricity cables all over, posing a life threatening risk.

Follow-up: Let us deviate a little bit and talk about the role of government or the involvement of the municipality and the Department of Education in assisting those communities. How is government involved in terms of assisting schools in picking up the right topics to teach about, given the conditions of the community the school is serving?

Response: Jaa… eee.. to some extend because as we go to workshops, the Department will always say they cannot spoon feed us. They will only provide some guidelines and then we can develop ours. Like I am a teacher at the township, my environment will be different from that of the city teacher, so when I plan my lesson, it must be relevant to my situation so that the very same learner must know what I am talking about. I gave an example of a fire hose that we don't have here so if I talk about it in class, learners won't know what I am talking about unlike the learner in the city who will understand far much better. At least if I talk about the fire extinguisher, they will know what I am talking about because we do have them here at school, and I can carry a free one to the class. But it is at least happening to some extend.

Q23. Do you have any specific reasons why you choose those specific examples? [Yes or No]

Response:

Q24. Can you please tell me what those reasons are?

Response:

Q25. Does your school have resources to support the inclusion of disaster topics in your lesson planning? [Yes or No]

Response: Not enough resources. As educators, we improvise and expected to be creative, not to always theorize.

Q26. Can you please list three examples of the resource toolkit you use to support your lesson planning?

Response: If we could get the fire hoses, more fire extinguishers, first aid kits, and particularly now that there are a few of us who attended this first aid kits courses, it becomes a problem when we do not have enough resources for the kit. We had been given these first-aid kits some donkeys years back when we attended the courses. The school is expected to improvise but maybe there is no budget to cater for that.

Q27. Does your school know of disaster events happening in the country? [Yes or No]

Response: At least my school is a bit fortunate because we have attended soccer games outside Atteridgeville. The transport and catering were provided for by the Department and the message for the event was on disaster management. Our under 11 socccer team were also on that magazine and they were ver excited. The venue was in Soshanguve and we played against Mamelodi and Soshanguve. There were plenty of food and our learners were treated to the niceties. The Department of Safety was also involved and there were trophies given

Q28. Which of these disaster events has your school participated in?

Response: Apart from print media, from where we as educators get to know, we get to know about this, from news papers, TV, etc, but not that of where the schools were involved or such. I would say, we don't get enough information cascaded down to the schools for them to participate in such events.

Q29. What do you think should be done to increase schools' awareness of the need to include disaster risk reduction focus in lesson planning?

Response: Ja.. eee.. I think they should start with organizing workshops for teachers and maybe visit schools, organize road shows and maybe organize workshops for teachers and informing them on how, even if we don't have enough resources, how they can improvise to organise a good lesson plan to focus on disaster management even when their resources are not enough. I think they should start there.

Q30. Thank you very much Mr. Ndlamlenzi for your time. That was very much informative and it will be of great assistance to me. We have come to the end of our interview. Maybe before we close, is there anything you would like to say?

Response: Eeee… laughing I wonder how my other colleagues will take this, I really enjoyed the interview because I like challenges and I was having fun indeed.

TEACHER 2

Q1. Do you know what the word "disaster" means? [Yes or No]

Response: Aaa, ja.. I think I know.

Q2. Can you explain the concept?

Response: A disaster can be something like a volcano or an earthquake, yes.

Q3. Do you know what leads to the occurrence of disasters? [Yes or No]

Response: No, I don't know.

Q4. Can you please tell me what leads to the occurrence of disasters?

Response:

Q5. Have you ever had disasters in your school community? [Yes or No]

Response: Ja, normally you will find that we have some learners from the disadvantaged families that are heading families because their parents died of some illnesses and we provide them with food from the feeding scheme and the garden we do here at school.

Q6. In the past three years, which disasters have affected your school community?

Response: I don't think I know of any.

Q7. Has your school been affected by the occurrence of the disasters you mentioned? [Yes or No]

Response: No.

Q8. How was it affected?

Response:

Q9. How did the school deal with those effects?

Response:

Q10. Do you think that your school community can in future be hit by the same type of disasters? [Yes or No]

Response:

Q11. Why do you think it can happen again?

Response:

Q12. Should a disaster strike this community, do you think the school will know what to do? [Yes or No]

Response: Yes

Q13. What do you think the school should do in case a disaster strikes?

Response: If we can get the whole problem, I think we can do something. We will have to see the affected family and see what we can do.

Q14.Do you think the community has a role to play in assisting the school to deal with disasters should they strike? [Yes or No]

Response: Yes

Q15. What do you think should be the role played by the community?

Response: The community should be able to come and have discussions with the school.

Q16. Does the school have a policy on how to deal with safety and disaster issues? [Yes or No]

Response: Yes

Follow-up: What is the main aim of the policy on safety?

Response: The main of the policy is to ensure that whatever problem we have, we must be able to deal with it.

Follow-up: Who developed the policy?

Response: The principal and people from the Department of Education.

Q17. What guided the school in the development of that policy?

Response: They do have the guidelines.

Follow-up: What do you think is the role of the community in the implementation of such a policy?

Response: Ja, the most important thing is to make sure that the community should know what to do if there are problems

Q18. Do you think the curriculum provides for opportunities to include disaster issues in the Learning Areas? [Yes or No]

Response: Yes, but not as such. There are some other things that we see but the curriculum does not focus on.

Q19. Which Learning Areas in your school allow for the inclusion of disaster topics?

Response: Social Sciences

Q20. Which disaster topics do these Learning Areas address?

Response: The last time I remember, I asked learners to go home and research about the natural disasters.

Follow-up: Did you get feedback on what you were expecting?

Response: Not as such because we had problems that some learners did not understand the topic well and some learners if they don't understand the topic, they don't bring answers.

Follow-up: Which natural disasters in your mind, were you expecting them to research on?

Response: About the floods and xenophobia that happened recently in SA. **Follow-up: What motivated your thinking about those two types of disasters?**

Response: I want them to know that when we have people from other countries, they must not treat them like they are not normal.

Follow-up: Do you have floods xenophobic attacks here in Atteridgeville?

Response: Yes we do, I think it was a problem of job creation.

Q21. Which activities do you plan to address these disaster topics?

Response:

Q22. Which disaster examples do you normally use in the activities addressing the disaster topics in the Learning Areas?

Response:

Q23. Do you have any specific reasons why you choose those specific examples? [Yes or No]

Response:

Q24. Can you please tell me what those reasons are?

Response:

Q25. Does your school have resources to support the inclusion of disaster topics in your lesson planning? [Yes or No]

Response: No we don't have much. We do have little and we need more resources

Q26. Can you please list three examples of the resource toolkit you use to support your lesson planning?

Response: I think the first will be a overhead projector

Q27. Does your school know of disaster events happening in the country? [Yes or No]

Response: No, I am not aware of that

Q28. Which of these disaster events has your school participated in?

Response:

Q29. What do you think should be done to increase schools' awareness of the need to include disaster risk reduction focus in lesson planning?

Response: Ja, we need more workshops so that we should know what to do should disasters strike

Q30. Mr. Seloka, we've come to the end of our interview. Thank you very much for your time and information and maybe before we close, let me give you an opportunity to say something or comment about the interview process. Is there anything you would like to say?

Response: No, I don't have anything, but how will your study help if we have problems.

My response: Like I mentioned at the beginning that my study is being funded by the National Disaster Management Centre within the Department of Cooperative Governance and Traditional Affairs, obviously after I have completed it, I will submit to them the report with recommendations saying that this is the situation that I found in Atteridgeville and it will be up to them what to do to assist the schools to deal with those problems.

Further Response from the participant: I think they should also involve us when there are more events so that we can teach the parents as well.

TEACHER 3

Q1. Do you know what the word "disaster" means? [Yes or No]

Response: Ja

Q2. Can you explain the concept?

Response: It means if something like earthquakes destroys houses and people. Like we saw recently I am not sure where, but I think it was in India (*I think she was referring to Japan)* we saw an earthquake killing people and destroying houses.

Q3. **Do you know what leads to the occurrence of disasters? [Yes or No]**

Response: Yes.

Q4. Can you please tell me what leads to the occurrence of disasters?

Response: According to my understanding it can be maybe that there is heat underground and the land cannot take that pressure and it starts to explode.

Q5. Have you ever had disasters in your school community? [Yes or No]

Response: No**.**

Follow-up: By community, I am not referring to the school campus only. The fact that you are serving a certain community, that then makes the school part of the community.

Response: There was a bomb that exploded in Atteridgeville in Mshengo. I saw it media and they said that people were just sitting and there was an explosion. You see that place used to be the military base, so there might be more bombs there.

Follow-up: Do you have learners from the informal settlement where the explosion took place?

Response: Yes

Follow-up: How do you think they were affected by the event?

I think they were shocked, thinking that maybe one day they will die if that can happen again maybe while they are still asleep, anything can happen. People were worried saying that maybe the government should move people from that place because it is not safe. We don't know how many bombs are still left there.

Q6. In the past three years, which disasters have affected your school community?

Response: No, I don't remember

Follow-up: Having learners from the Informal settlements, other than the explosion that happened there, what other disasters do you think can happen in those settlements?

Response: Not that I know of.

Q7. Has your school been affected by the occurrence of the disasters you mentioned? [Yes or No]

Response: No

Q8. How was it affected?

Response:

Q9. How did the school deal with those effects?

Response:

Q10. Do you think that your school community can in future be hit by the same type of disasters? [Yes or No]

Response: No

Q11. But if it happens because eras are changing do you think the school will know what to do? [Yes or No]

Response: I have been living in this community here for about 50 years because I am this year 50 years old but it has never happened, so I don't think it will ever happen.

Q13. What do you think the school should do in case a disaster strikes?

Response: Things that we can use like our safety measures, evacuation processes, like taking the learners to safer places. I think we are empowered with safety measures for learners.

Follow-up: You mention that you are empowered wit safety measures, how are you empowered?

Response: We were trained wee went to workshops on the safety of learners. that if such a thing happens we know what to do.

Follow-up: What are you expected to do?

Response: Like if there is fire, we can use fire extinguishers; move the learners out of class, and so forth.

Q14.Do you think the community has a role to play in assisting the school to deal with disasters should they strike? [Yes or No]

Response: I think they can

Q15. What do you think should be the role played by the community?

Response: We do have a good relationship with the community, especially the SGB.

Q16. Does the school have a policy on how to deal with safety and disaster issues? [Yes or No]

Response: Not on disasters but on safety issues

Follow-up: What is the main aim of the policy on safety?

Response: To ensure teachers know how to handle learners should a disaster once, especially the beginning of the year, we have meetings.

Follow-up: How do you implement the policy?

Response: Once or twice a year, we do revise. The responsible committees hold meetings, especially when an incident happens to review the policy.

Follow-up: What do you think is the impact of policy on the community especially the vulnerable ones?

Response: Normally while the learners are at school, we make sure they are safe, they don't get hurt and we are sure that we teach them also that they do the same when they get home.

Q17. What guided the school in the development of that policy?

Response:

Follow-up: What do you think is the role of the community in the implementation of such a policy?

Q18. Do you think the curriculum provides for opportunities to include disaster issues in the Learning Areas? [Yes or No]

Response: Yes

Q19. Which Learning Areas in your school allow for the inclusion of disaster topics?

Response: Not a learning area, but the committee, we have the School Based Support (SBS) and the Life orientation and Life Skills educators do get training on how to do safety with learners.

Follow-up: Do they get an opportunity to do it practically in the class with learners?

Response: Unfortunately I am not in the Intersen (Intermediate and Senior phase) classes but I think Life Skills provide for an opportunity where learners are taught of disasters, safety and measures to keep learners safe.

Follow-up: So you are responsible for the foundation phase, and what learning areas do you focus on in the foundation phase?

Response: Yes, I am in foundation phase and our focus is on Numeracy, Language, literacy and Life Skills.

Follow-up: What do you focus on in those Learning Areas

Response: Because I am in grade 1, I basically focus on learners knowing the sounds and how to write.

Q20. Which disaster topics do you think you can focus on in grade 1?

Response: Safety at schools and also at home

Q21. Which activities do you think you can plan to address these disaster topics with your learners?

Response: I can plan maybe in the kitchen, showing a kettle, water in a bucket, iron, and switched on and maybe some water lying around indicating to learners that if you put water in the electrified iron or kettle, it can explode.

Q22. Which disaster examples do you normally use in the activities addressing the disaster topics in the Learning Areas?

Response:

Q23. Do you have any specific reasons why you choose those specific examples? [Yes or No]

Response:

Q24. Can you please tell me what those reasons are?

Response:

Q25. Does your school have resources to support the inclusion of disaster topics in your lesson planning? [Yes or No]

Response: We do not have enough.

Q26. Can you please list three examples of the resource toolkit you use to support your lesson planning?

Response: I think the teachers like those of Technology, can teach of explosion, show learners that if you mix chemicals they can explode, but since I am in a foundation phase, I cannot name them, but I know they are there even if they are not enough.

Q27. Does your school know of disaster events happening in the country? [Yes or No]

Response:

Q28. Which of these disaster events has your school participated in?

Response: I can't say the school, but maybe educators, we can share with the learners. I am not sure of the recent bomb that happened in Atteridgeville if teachers were able to share the information with learners

Rephrasing the question: Apart from the destructive events of disasters, I am also referring to the workshops happening throughout the country to raise awareness on disaster management. Do you know of any?

Response: I am not sure.

Q29. What do you think should be done to increase schools' awareness of the need to include disaster risk reduction focus in lesson planning?

Response: They need to plan more workshops and include all the learners on these workshops.

Q30. Thank you Ms Vilane for your time. We have come to the end of our interview. Is there anything you would like to say?

Response: I think I learned something from you about these disasters which I believe should also be taught to these learners as they are the ones who are more vulnerable.