

Management of infrastructure in non-fee-paying schools in a selected South African province

by

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(11301555)

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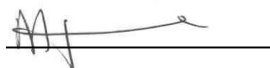
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Declaration of originality

I, Gerald Bonga Ngema (11301555), declare that the thesis, **Management of infrastructure in non-fee-paying schools in a selected South African province**, which I hereby submit for the degree Philosophiae Doctor in the Department of Education Management and Policy Studies in the Faculty of Education at the University of Pretoria, is my own work and has not previously been submitted by me for a degree at this or any other tertiary institution.

Signature: G. Ngema

Date: 21/02/2023

Dedication

This thesis is dedicated to my son, Menzi Ngema, for providing the utmost support to me from the inception of the study to the end. I am profoundly indebted to his invaluable support, without which the completion of this study would have been a roller-coaster.

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First and foremost, I am humbly thankful to God, The Almighty, for granting me the strength, perseverance, resilience, determination and vision to accomplish this research study.

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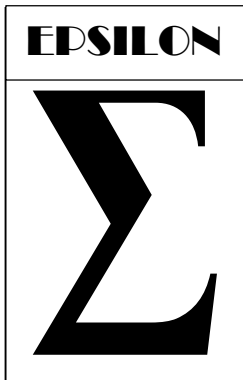
Special thanks go to Professor M.A. Mdhluli at my workplace, my late responsibility manager, Mr J.C. Khoza, and my brother, Thokozani Ngema. They openly showed faith in me and great interest in my research venture, and that enhanced my motivation.

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In the words of Nelson Mandela, “It always seems impossible until it is done”.

Language editor



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TO WHOM IT MAY CONCERN

This is to confirm that I have completed the language editing of the thesis **Management of infrastructure in non-fee-paying schools in a selected South African province** by Gerald Bonga Ngema submitted in fulfilment of the requirements for the degree of Philosophiae Doctor in the Department of Education Management and Policy Studies in the Faculty of Education at the University of Pretoria.

Yours faithfully

Isobet Oberholzer

23 February 2023

Abstract

Schools whose governing bodies only have Section 20 functions according to the South African Schools Act and are non-fee-paying-schools are disadvantaged in that they can only administer and control infrastructure but are not empowered to improve it. Non-fee-paying schools receive all their funds from the state, and these funds are ring-fenced to be spent on specific areas, of which maintenance of infrastructure is one. The question thus arises as to what happens if the funds allocated to a school are not sufficient to maintain the physical infrastructure of the school.

The primary aim of this research study was therefore to explore how infrastructure is managed in non-fee-paying schools in a selected South African province. This study is anchored on the management functions theory and participatory governance theory as its theoretical framework. This study employed a qualitative research approach with a case study design. The participants in the study were selected from six (6) primary and six (6) secondary non-fee-paying schools, and from four (4) district offices in the selected province. The individual participants in this study included twelve (12) school principals and twelve (12) school governing body chairpersons from the twelve (12) participating non-fee-paying schools, and eight (8) infrastructure-attached officials, two (2) from each participating district office. To this end, the data collection strategies included semi-structured interviews and document analysis. The findings suggest that the national Department of Basic Education and the provincial Department of Education have centralised the management of infrastructure in non-fee-paying schools. They are employing excessive bureaucratic management processes which are not only hampering the effective management of infrastructure in non-fee-paying schools but are also undermining the principles of participatory governance in these schools. This has resulted in the participating schools experiencing overwhelming infrastructure backlogs which are worsened by the insufficient funding to meet the infrastructure needs of non-fee-paying schools.

Key words:

decentralisation in education; management functions theory; non-fee-paying schools; participatory governance theory; school governance; school infrastructure

Abbreviations

ACE	Advanced Certificate in Education
ASIDI	Accelerated Schools Infrastructure Delivery Initiative
BOTs	Boards of Trustees (Egypt)
CFO	Chief Financial Officer
COGTA	Co-operative Governance and Traditional Affairs
COVID-19	Coronavirus originally identified in China in 2019
CPS	Construction Procurement Strategy
CREATE	Consortium for Research on Educational Access, Transitions and Equity
DBE	Department of Basic Education
DCES	Deputy Chief Education Specialist
DoE	Department of Education
EFF	Economic Freedom Fighters
EFMS	Education Facilities Management System
ESSPIN	Education Sector Support Programme in Nigeria
FDE	Further Diploma in Education
FET	Further Education and Training
GDP	Gross Domestic Product
HOD	Head of Department
ICT	Information and Communication Technology
IPIP	Infrastructure Programme Implementation Plan
IPMP	Infrastructure Programme Management Plan
LER	Learner-educator ratio
LIGs	Local institutions of governance
LRC	Learner Representative Council
LTSM	Learner-Teacher-Support Material
MEC	Member of the Executive Council
MIST	Ministry of Infrastructure, Science and Technology (Botswana)
MLGRD	Ministry of Local Government and Rural Development (Botswana)
MOBE	Ministry of Basic Education (Botswana)
MST	Mathematics, Science and Technology
MTEF	Medium Term Expenditure Framework
NCS	National Curriculum Statement
NDP	National Development Plan
NEIMS	National Education Infrastructure Management System
NGOs	Non-governmental organisations
NNSSF	National Norms and Standards for School Funding
NOUN	National Open University of Nigeria
NSBP	National School Building Programme
OECD	Organisation for Economic Co-operation and Development
PEDs	Provincial education departments
PISA	Programme for International Student Assessment
PRTT	Provincial Regional Training Trust
PT	Provincial Treasury
PTAs	Parents and Teachers Associations

RDP	Reconstruction and Development Programme
RNPE	Revised National Policy on Education
RSA	Republic of South Africa
SACMEQ	Southern and Eastern Africa Consortium for Monitoring Educational Quality
SANS	South African National Standards
SASIPIS	South Africa's Infrastructure Performance Indicator System
SBMC	School Based Management Committee
SGBs	School governing bodies
SMT	School Management Team
STAR	Tennessee Student Teacher Achievement Ratio
STD	Secondary Teachers Diploma
U-AMP	User-asset management plan
UNESCO	United Nations Educational, Scientific and Cultural Organisation

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CHAPTER ONE

BACKGROUND TO THE STUDY

1.1 INTRODUCTION

Marishane (2013:3) asserts that school infrastructure is one of several dimensions that contribute to quality education. This scholar observes that research-based evidence shows a link between learning outcomes (output) and the physical environment (input) in which teaching and learning takes place. This view is supported by Mestry and Bodalina (2015:6) who contend that the effective management of school infrastructure significantly impacts on the quality of teaching and learning in schools. According to South Africa's Infrastructure Performance Indicator System (SASIPIS) (2007:2), infrastructure should enable learners to inherently perform well. This includes ensuring, for example, that buildings are weather tight, structurally sound, have low operating costs, and are spatially and resource efficient.

In terms of the National Policy for an Equitable Provision of an Enabling School Physical Teaching and Learning Environment (RSA, 2010:5), school infrastructure remains a critical issue on the South African education agenda for a number of reasons. In the first place, infrastructure differentials are so large in South Africa and some of the infrastructure so inadequate that it is inconceivable that it may not impact on learner performance. Secondly, the highly unequal access to quality facilities remains critical in the light of the Constitution and the Bill of Rights which demand equity and equality. Matika (2018:1) argues that what is most troubling is that, although school infrastructure is but one of the many problems plaguing the schooling system in South Africa, it is a problem that is directly in the government's hand to fix. The solutions are technically straightforward; what seems to be missing is the political will to implement them.

The National Policy for an Equitable Provision of an Enabling School Physical Teaching and Learning Environment (RSA, 2010:4) states that despite evidence of progress that Government has made in the provisioning of infrastructure to schools, the challenges of inequalities in infrastructure still persist. Infrastructure development has taken place without specific national or provincial policies, norms or strategies to guide and support the development of physical teaching and learning environments.

SASIPIS (2007:2) maintains that infrastructure should effectively support the activities that are carried out in a school. For instance, school buildings should accommodate the current curriculum and relevant modes of teaching and learning. As Khumalo and Mji (2014:2) put it, infrastructure is an integral component of the learning and teaching context. These scholars maintain that this is because a school's infrastructure enables learners and teachers to access a wide range of tools, services and resources to support learning and teaching. For instance, information technology through the use of computers could be useful for teaching, learning and administrative purposes. However, a lack of electricity renders the virtues of information technology worthless in such a context. The study therefore infers that the inadequacy of infrastructure in schools is a critical factor in education because it may negatively affect the learning and teaching processes within the classroom.

Particularly in historically marginalised communities, the issue of school infrastructure in South Africa seems to be a matter of serious concern. In its Manifesto of 2nd February 2019 in Soshanguve, Pretoria, the Economic Freedom Fighters (EFF) raised concerns over inadequacies of school infrastructure in South Africa. The Economic Freedom Fighters noted that some schools still use the bucket toilet system, while many children are exposed to so-called "bogus imitation schools" (EFF, 2019:9). This political organisation lamented the fact that there are still scores of youngsters who have to walk long distances to attend school (EFF, 2019:9). The awareness about the gravity of the backlogs in school infrastructure in South Africa can also be traced in the 2019 Budget Speech by the Minister of Finance, Honourable Tito Mboweni. In terms of the 2019 Budget Speech (2019:13), over R30 billion was allocated to build schools and maintain schooling infrastructure. In terms of SASIPIS (2007:2), infrastructure should allow users to be comfortable, healthy and productive and should meet users' basic needs. Infrastructure should also guarantee that human rights are respected.

According to the Diagnostic Report of the National Development Plan (NDP) (2011:3), South Africa, amongst others, experiences the following central challenges: the standard of education for most black learners is of poor quality; infrastructure is poorly located, under-maintained and insufficient to foster higher growth; spatial patterns exclude the poor from the fruits of development; public services are uneven and often of poor quality; South Africa remains a divided society; and today South

Africa has one of the world's highest levels of inequality. The NDP (2011:4) predetermines the preceding challenges as realities that exert adverse effects on the provision of quality education for all in South Africa, which is directly dependent on the equal access to and management of school infrastructure on an equitable basis. Based on the preceding concerns about the state of infrastructure in non-fee-paying schools, this study was intended to explore if the management of school infrastructure satisfied the needs of the learners in facilitating the provision of quality education.

1.2 CONTEXTUALISING THE STUDY

In November 2013, the Regulations Relating to Minimum Uniform Norms and Standards for Public School Infrastructure were published in terms of Section 5A of the South African Schools Act 84 of 1996 (hereafter referred to as the Schools Act). In terms of this Section, every school must have water, electricity, internet, working toilets, safe classrooms with a maximum of 40 learners, security, and thereafter libraries, laboratories and sports facilities. The Regulations Relating to Minimum Uniform Norms and Standards for Public School Infrastructure (RSA, 2013:5) defines the infrastructural conditions that make a school a school. They stipulate the basic level of infrastructure that every school must meet in order to function properly. These standards set a yardstick for provincial education departments to work towards, and against which to be held accountable, and enable communities to hold government officials accountable. Therefore, the management of infrastructure of public schools is invariably affected by the foregoing regulations.

This study acknowledged that the management of infrastructure of public schools has to be understood within the context of other prescripts. Mestry and Ndhlovu (2014:1) assert that in terms of Section 34 of the Schools Act, the state is mandated to fund public schools from public revenue on an equitable basis in order to ensure proper exercise of the rights of learners to education and redress of past inequalities in educational provision. The Schools Act also makes provision for school governing bodies (SGBs) to supplement state funding by way of school fees and fundraising initiatives.

Sections 20 and 21 of the Schools Act (RSA, 1996) allow for differentiated levels of autonomy for SGBs of public schools (Du Plessis, 2020:177). Heystek and Nyambi

(2007:231) contend that schools ought to have sufficient funds to be allocated more powers and use such acquired status to their advantage.

Squelch (2000:137) declares that the concept of awarding management powers to school governing bodies (SGBs) in schools in South Africa originates from the government's intention to entrench democracy, unity, non-discrimination, redress, equity and equality. Davies (1999:13) confirms that such notion is a way of redressing the historic imbalances created by the apartheid ideology in educational settings. The proponents of decentralisation believe that the transfer of these powers or functions to the local school enhances participation and accountability, leading to a healthier and stronger relationship between schools and communities, and providing an alternative form of accountability to bureaucratic surveillance (Gamage,1994:45).

To address equity in funding school education, the South African government introduced the National Norms and Standards for School Funding (NNSF) policy in terms of Section 35 of the Schools Act. The NNSF policy provides a statutory basis for school funding in that schools are now classified into wealth quintiles and subsidised accordingly. Schools serving poorer communities ought to receive more state funding than schools serving better-off communities. According to the National Norms and Standards for School Funding (NNSF), Quintile 5 schools, the richest 20% of public schools, receive approximately six times less funding from the State than the poorest quintiles (Du Plessis, 2020:177). The implication is that the non-fee-paying schools are allocated R1 536 per learner by the State for the 2022 financial year as compared to Quintile 5 schools which are only allocated R266 per learner (RSA, 2022:2).

The Regulations Relating to Minimum Uniform Norms and Standards for Public School Infrastructure policy (RSA, 2013:6) applies to all public schools in South Africa. This implies that all learners in South Africa, regardless of race and class, should be able to learn in environments with adequate infrastructure. In this context, Seroto (2004:240) argues that a situation where learners in all nine provinces enjoy similar levels of infrastructure in education has not yet been reached. Non-fee-paying schools are the most affected and they lag behind in areas such as running water, electricity, buildings, teaching equipment, textbooks, stationery and furniture. Against this backdrop, Sayed and Motala (2012:1) contend that despite democratic

governance in South Africa, there is still growing evidence that access to quality education remains elusive for the majority of its children, which is contrary to the Bill of Rights as entrenched in the Constitution of the Republic of South Africa, 1996, which upholds equity and equality.

1.3 PROBLEM STATEMENT

Sub-section 20(g) of the South African Schools Act proclaims that the SGB should administer and control the school's property, and buildings and grounds occupied by the school, including school hostels, but the exercise of this power may not in any way interfere with or otherwise hamper the implementation of the decision made by the Member of the Executive Council (MEC) or Head of Department (HOD) in terms of any law or policy. The National Development Plan (RSA, 2012:310) proposes that greater management autonomy should be granted to public school principals by recommending that principals should gradually be given more administrative powers as the quality of school leadership improves, including financial management, the procurement of textbooks and other educational materials, and human resources management. Du Plessis (2020:6) argues that unless the system reverts to an approach which promotes support which is underpinned by a philosophy of improvement, rather than to ensure compliance, it is unlikely that the education-related objectives of the National Development Plan (RSA, 2012) will be attained.

A difference between “administering and controlling infrastructure” (Section 20 of the South African Schools Act and mostly applicable to non-fee-paying schools only) and “maintaining and improving infrastructure” (Section 21 of the South African Schools Act and mostly applicable to fee-paying schools only) is detected. According to the Schools Act, the SGB of a school must take all reasonable measures within its means to supplement the resources that are supplied by the government in order to improve the quality of education that is provided to all the learners at the school. The issue in this regard is that generally quintiles 1-3 schools are in terms of the National Norms and Standards for School Funding (NNSF) declared non-fee-paying schools and receive all their funds from the state (RSA, 2019:7). These funds are ring-fenced to be spent on specific areas, of which maintenance of infrastructure is one.

The questions thus arise: What happens if the funds allocated to schools are not sufficient to carry out maintenance? How do these schools develop their

infrastructure? How do schools and their governing bodies manage these funds allocated for infrastructure? How do the provincial education departments support these schools? What are the challenges experienced by these schools in terms of managing their infrastructure? How are these schools supported in addressing such challenges? Mathonsi (2004:20) strongly argues that while the Schools Act requires the school governing bodies to work in democratic and participatory ways to build relationships and ensure efficient and effective delivery of educational goals, the translation of the policy into practice remains a mammoth challenge, because “poor communities tend to lack access, resources, information or organisational skills to appropriately influence decisions about education or other social services”.

Mestry and Ndhlovu (2014:1) contend that while the intentions of the state to address equity and social justice are laudable, there is a long way to go in achieving good quality education, particularly for marginalised and disadvantaged schools. A number of schools in poor rural and urban working-class communities still suffer the legacy of large classes, deplorable physical conditions and the absence of learning resources, despite a major Reconstruction and Development Programme (RDP), the National School Building Programme (NSBP) and many other projects paid for directly from provincial budgets. Ndimande (2006:21) asserts that teachers and learners in poor schools are expected to achieve the same levels of teaching and learning as their compatriots in wealthier areas. Such contradictions within the same public school system probably reflect past discriminatory investment in schooling and vast disparities in personal income of parents.

Motala (2006:80) maintains that “while discrimination in physical, human and financial resource allocation has been removed, inequalities persist for a number of reasons, including the ability or inability of parents to pay school fees, the greater unavailability of qualified teachers in some schools, the leadership styles of school managers and unfavourable teacher-learner ratios, especially in township and rural schools, and public schools in general”. As for Mqota (2009:54), the funding provisions of the NNSF appear to have worked thus far to the advantage of public schools patronised by middle-class and wealthy parents of all racial groups (non-fee-paying schools excluded). To close the achievement gap, this study presumed that the schooling system in South Africa should address all pertinent infrastructural issues so that all learners can fully contribute to nation building.

Therefore, a gap in realising that non-fee-paying schools have not been empowered by the Schools Act to attain ideal levels of school infrastructure has been detected. As a result, many schools from poor economic backgrounds do not yet provide quality education, as this is to be derived from the provision of sound basic school infrastructure. Stewart and Zaaiman (2014:264) therefore note that the poor and under-resourced schools are found in quintiles one to three and are generally located in the rural and township areas. These schools remain under-resourced and as a result perform much more poorly. The inadequacies in the provision of basic school infrastructure in non-fee-paying schools are too huge to ignore. This creates a gap in achieving equal and quality education for all South African learners. In view of the foregoing contentions, this study perceived the inadequacies in the provision of infrastructure in non-fee-paying schools as a hindrance in the attainment of equitable and quality education for all South African learners.

1.4 THE RATIONALE FOR THE STUDY

As a government employee, I am presently a Senior Education Specialist (Subject Advisor) in one of the provinces in the Republic of South Africa. I visit schools for quality assuring the implementation of the National Curriculum Statement (NCS), I inevitably notice the discrepancies in infrastructure in non-fee-paying schools. The interest in undertaking this study was aroused by the quest to understand the causes of such discrepancies, and to explore the measures that could mitigate such drawbacks. This standpoint was premised on the notion that sound school infrastructure contributes to the conducive physical environment in which the delivery of quality education can be realised. As Moloi (2009:14) puts it, the school infrastructure such as school buildings, teaching and learning resources and premises form the physical framework within which the system of providing education functions. Infrastructure is an integral component of the learning and teaching context (Khumalo and Mji, 2014:2).

I was further intrigued by the realisation that the provision of education in South Africa is constitutionally inclined, and therefore the values and principles of public administration, of which education is a part, must be seen to be upheld at all cost. To this end, Section 195 of the Constitution of the Republic of South Africa, upholds, inter alia, that “public administration services must be provided impartially, fairly,

equitably and without bias; efficient, economic and effective use of resources must be promoted; and public administration must be development-oriented” (RSA,1996:107). This study maintained that the aforesaid principles need to be translated in the management of school infrastructure in South Africa. It was therefore one of the goals of this study to discover if the management functions of an organisation were being adhered to in managing school infrastructure.

Furthermore, South Africa currently forges its direction towards Vision 2030 as entrenched in the National Development Plan (NDP). In terms of the National Development Plan (RSA, 2012:296), the government undertakes to ensure that all children are able to access and benefit from education of highest quality, leading to significantly improved learning outcomes. This propelled me to assume that for non-fee-paying schools to provide quality education, basic school infrastructure should be available to all schools, regardless of the socio-economic environments in which they are.

1.5 THE RESEARCH QUESTIONS

The main research question was:

How is school infrastructure managed in non-fee-paying schools in a selected South African province?

The research sub-questions of the study included the following:

- What processes do non-fee-paying schools engage in when managing school infrastructure?
- What challenges do non-fee-paying schools experience in management of school infrastructure?
- What is the role of the provincial education department in the management of infrastructure of non-fee-paying schools?
- How do school governing bodies and school principals perceive the role of the provincial education department in the management of infrastructure of non-fee-paying schools?

1.6 THE RESEARCH AIM

The National Policy for an Equitable Provision of an Enabling School Physical Teaching and Learning Environment (2010:4) acknowledges the existence of inequalities in infrastructure among schools across South African communities. Considering this policy provision, the primary aim of this study was to explore how school infrastructure is managed in non-fee-paying schools in a selected South African province.

1.7 THE RESEARCH OBJECTIVES

The objectives of the study were as follows:

- To determine the processes which the non-fee-paying schools engage in when managing school infrastructure.
- To determine the challenges experienced by non-fee-paying schools in management of school infrastructure.
- To determine the role of the provincial education department in management of infrastructure of non-fee-paying schools.
- To determine how school governing bodies and school principals perceive the role of the provincial education department in the management of infrastructure of non-fee-paying schools.

1.8 THEORETICAL FRAMEWORK

This study used the management functions theory and participatory governance theory as its theoretical framework. Management functions theory has four commonly accepted functions of management that encompass the necessary skills of planning, organising, leading, and controlling in an organisation (American InterContinental University, 2020:1). Participatory governance is a variant or subset of governance theory that puts emphasis on democratic engagement, in particular through deliberative practices (Fischer, 2012:1).

1.8.1 The management functions theory

As the study was about the management of school infrastructure, Robbins and Decenzo (2009:5) conceive of management as the process of getting things done, effectively and efficiently, through and with people. In the same breath, Ferreira,

Erasmus and Groenewald (2015:297) maintain that management is the process of coordinating and integrating work-related activities in order to complete the tasks of an organisation effectively and efficiently with and through other people. Observing how organisations try to satisfy the ever-changing needs of society by utilising the scarce resources as productively as possible through decisions made by the managers, Smit, Cronje, Brevis and Vrba (2016:8) construe management as the process of planning, organising, leading, and controlling the scarce resources of the organisation to achieve the organisation's mission and goals as productively as possible.

This study maintained that the management of school infrastructure requires the execution of management functions. For managers to perform their tasks, Ferreira et al. (2015:297) contend that they need to perform four basic management functions: planning, organising, leading and controlling. Ferreira et al. (2015:297) and Wagner III and Hollenbeck (2002:17) view planning as deciding in advance what to do, how to do it, when to do it and who is supposed to do it. Winfield, Bishop and Porter (2004:183) acknowledge that one of the most important activities for a manager is that of planning. Good planning is an essential part of the success of any business. Bolton (2005:2) provides a view of planning that emphasises widespread public participation, sharing of information with the public, reaching consensus through public dialogue rather than exercise of power.

Secondly, in managing an organisation, managers have to perform the task of organising. Ferreira et al. (2015:297) and Hellriegel, Jackson, and Slocum (2001:10) enunciate that organising involves the structuring, coordination and directing of the organisation's resources in order to achieve the set objectives. Managers oversee all the resources of an organisation, including people, money, time, equipment and materials, by means of the process of organising. American InterContinental University (2020:2) expounds that from establishing internal processes and structures to knowing which employees or teams are best suited for specific tasks, keeping everyone and everything organised throughout daily operations constitute an organising function of management. Managers also need to be able to reorganise in response to new challenges (American InterContinental University, 2020:2). By organising effectively, managers can better coordinate human, material, and

information resources (Ferreira et al., 2015:297 and Hellriegel, Jackson, and Slocum, 2001:10).

With regard to the management function of leading, Ferreira et al. (2015:297), Robbins and Decenzo (2009:7) and Hellriegel, Jackson and Slocum (2001:11) unanimously assert that leading focuses on directing, communicating, guiding and motivating the human resources in the organisation. American InterContinental University (2020:3) proclaims that leading can manifest itself in a number of ways, including recognising when employees need an extra boost of reinforcement and praise to handling conflicts between team members fairly and decisively. Managers need to act as leaders in order to influence employees and subordinates to perform with the maximum application of their abilities in order to achieve set objectives (Ferreira et al., 2015).

Controlling, in the final analysis, constitutes a link between the four basic management functions. Ferreira et al. (2015:297), Wagner III and Hollenbeck (2002:20), Robbins and Decenzo (2009:7) and Smit, Cronje and Brevis (2016:9) concur that controlling is the process of developing performance standards according to set objectives as developed during the planning process, and measuring the actual performance of employees and teams in order to establish whether they are performing according to the standards set. Based on the preceding contentions, this study was intended to determine if the basic functions of management get honoured in managing infrastructure in non-fee-paying schools in a selected South African province.

1.8.2 The participatory governance theory

The participatory governance theory links to the Preamble of the Schools Act which inter alia states that the aim of the Schools Act is to “uphold the rights of all learners, parents and educators, and to promote their acceptance of responsibility for the organisation, governance and funding of schools in partnership with the State”. Participatory governance theory also links to the directive principles of the National Education Policy Act, 27 of 1996, according to which independent and critical thought shall be encouraged (section 4(i)) and broad public participation in the development of education policy and the representation of stakeholders in the governance of all

aspects of the education system shall be ensured (section 4(m)). This notion of “shared responsibility” is manifested in the Schools Act in that it provides for the provisioning of “public schools” rather than “state schools” (Du Plessis, 2020:166). Furthermore, Sub-Sections 195(1)(e) and (g) of the Constitution of the Republic of South Africa, 1996 stipulate that in public administration, people’s needs must be provided for, and the public must be encouraged to participate in policy-making; and public administration must be accountable.

According to Fischer (2012:1), participatory governance is a variant or subset of governance theory that puts emphasis on democratic engagement, in particular through deliberative practices. Participatory governance seeks to deepen citizen participation in the governmental process by examining the assumptions and practices of the traditional view that generally hinders the realisation of a genuine participatory democracy. Hollard (2013:2) describes participatory governance as a means to progressive realignment of institutions in favour of the poorest. Socially excluded groups’ access to entitlements within the policy process is mediated by governance systems. Speer (2012:2379) contends that participatory governance mechanisms involve citizens in decision-making over the distribution of public funds between communities and the design of public policies, as well as in monitoring and evaluating government spending. Beckmann and Prinsloo (2009:1) posit that the establishment of school governing bodies represents a significant decentralisation of power in the South African school system. The South African Schools Act, 84 of 1996 plays an important role in encouraging the principle of partnership in and mutual responsibility for education. With the introduction of school governing bodies (SGBs), the Schools Act aimed to give effect to the principle of the democratisation of schooling by affording meaningful power over their schools to the school-level stakeholders, including the governors serving on SGBs.

1.9. PARADIGMATIC PERSPECTIVE OF THE STUDY

A paradigm is a set of beliefs that guide the action that is taken and the decisions that are made in the process of doing research (Denzil and Lincoln, 2011: 245). In the social sciences, paradigms are referred to as research traditions or worldviews. However, what is important is that, by following a particular paradigm or research tradition, researchers adopt a specific way of studying phenomena relevant to their

field. Knowing what paradigm I ascribe to is important, because it determines what questions are considered worthy of investigating and what processes are required for the answers to these questions to be acceptable (Davis, 2014:19). In this context, De Vos, Strydom, Fouche and Delport (2011:12) argue that every study should be conducted within a certain research paradigm. Mhlanga (2019:58) posits that there are three major educational research paradigms: scientific, critical and interpretive paradigms.

The research paradigm I preferred depended on my perceptions of what real-world truth is (ontology) and how I knew it to be the real truth (epistemology) (Tuli, 2010:154). This study was anchored on the interpretive paradigm because I am of the conviction that school principals, SGB chairpersons and infrastructure-attached district officials are the relevant participants who can share their own realities in managing infrastructure in the schools of which they are required to manage. Interpretivism is directed at understanding the phenomenon from a subject's perspective in their own context (Creswell and Creswell, 2018:8). This accounted for my adoption of an interpretive paradigm to understand and make sense of the school principals', SGB chairpersons' and infrastructure-attached district officials' management of infrastructure in non-fee-paying schools.

The main idea on which interpretive paradigm rests is that people are fundamentally different from objects. Consequently, I could not study human beings in the same way I can study objects in the natural sciences, because, unlike objects, human beings change all the time and the environment in which they find themselves constantly influences them. Interpretivists, for example, argue that it does not make sense to study people in laboratory settings, as people do not live in laboratories, and as they are always influenced by the things that are happening in their environments (Du Plooy-Cilliers, 2014:27). Interpretivists believe that reality is a social construction and that it is dependent on the meanings that people ascribe to their own experiences and interactions with others. According to interpretivists, the social world is what people perceive it to be. It is fluid and fragile and changes as people's perceptions change (Du Plooy-Cilliers, 2014:29). The interpretive paradigm involves taking people's subjective experiences seriously as the essence of what is real for them (ontology), making sense of people's experiences by interacting with them and

listening to what they tell me (epistemology), and making use of qualitative research techniques to collect and analyse information (methodology).

1.10. RESEARCH METHODOLOGY

Baxter, Hughes and Tight (2010:183) assert that all research involves the collection of data, whether through reading, observation, measurement, asking questions, or a combination of these or other strategies. The data collected during and for the purposes of research may vary in their characteristics. There are two main types of research methodology that are often used in research studies, namely, the quantitative approach and the qualitative approach.

1.10.1 Research approach

In this study I employed a qualitative research approach. My choice of the qualitative approach was influenced by a number of factors. As a research approach, qualitative research is concerned with understanding the processes and the social and cultural contexts which underlie various behavioural patterns (Maree, 2007:51). According to Greetham (2008:64), qualitative research approach involves responses which are expressed in words, describing attitudes, feelings, opinions, customs and beliefs.

With the use of the qualitative approach, it was possible for me to view the object of my study through interacting with school principals, SGB chairpersons and district officials whom I interviewed (Bryman, 2012:399). A qualitative research approach propelled me to go to the participants, their sites or institutions (the field) in order to observe reality in the schools where the study was based (White, 2005:85). A qualitative research approach also enabled me to directly communicate with the participants in order to understand how they perceived the management of school infrastructure (White, 2005:86). Further, a qualitative research approach allowed me to gather multiple forms of data through, for example, interviews and document analysis, rather than relying on a single data source (White, 2005:85).

It has to be noted that the qualitative research approach has its weaknesses as well. Bryman (2012:405) points out that one of the disadvantages of the qualitative research approach is that it is too subjective. In the qualitative research approach, I am the main instrument of data collection and thus what I witnessed and heard and also what I decided to concentrate on could have been the products of my

predilections. I therefore strove to be objective by accepting the participants' responses as they were, without favour or prejudice. Bryman (2012:405) asserts that, because the qualitative research approach is unstructured and often relies on the ingenuity of the researcher, it is almost impossible to conduct a true replication of the research as there are often scarcely any standard procedures to follow. To mitigate this challenge, I adhered to the analysis elements such as trustworthiness, consistency, triangulation and credibility during data analysis.

1.10. 2 Research design

According to Kumar (2011:94), a research design is a plan, structure or strategy of investigation which is conceived so as to ensure that answers to the research questions or solutions to the research problems are found. Creswell (2013:114) details research design as the entire process – from conceptualisation of the study problem, agreeing on the research questions, collecting evidence, analysis and writing the report. This study followed a qualitative case study design. Maruster and Gijsenberg (2013:102) and Creswell (2013:114) highlight that the case study design involves the study of a case in a real-life context and setting.

The case study design was selected in order to assist me in gaining a clearer understanding and acquiring knowledge regarding the management of infrastructure in non-fee-paying schools. The case study design embraces the idea of multiple realities which allowed me to be as close as possible to the participants through in-depth interviews (Briggs, Coleman and Morrison, 2012:134; Maruster and Gijsenberg, 2013:103; Flick, 2014:48). A case study design provided me with multiple sources of information and facilitated the process of exploring and describing the processes and practices the SGBs followed in managing infrastructure in their schools (Fouche, 2002:293). Leedy and Ormrod (2001:87) proclaim that the strength of a case study is that it is useful for learning about situations which need to be addressed, as in the case of management of infrastructure in non-fee-paying schools.

1.10.3 Sampling

This study was conducted by applying non-probability sampling, using purposive sampling in the selection of participants. Creswell (2009:294) states that in qualitative data collection, purposive sampling is used so that individuals are selected because

they have experienced the central phenomenon. Purposive sampling was selected to enable me to select participants (cases) according to certain criteria, that is, selecting participants who had lived experiences on the management of school infrastructure and participants who were administratively involved in matters that affect the management of school infrastructure. Maree (2007:295) maintains that purposive sampling involved me hand-picking the participants based on exact characteristics in order to develop a sample that was large enough yet possessed the required traits.

1.10.4 Study sites

The sites for this study consisted of six (6) primary and six (6) secondary non-fee-paying schools, and four (4) district offices in a selected South African province. Broken down, this translated into three (3) schools per district and one (1) infrastructure-attached office per district. The selection of both primary and secondary schools was informed by the fact that both phases of schooling suffer the same infrastructural management challenges, so it could only be fair to elicit views from both contexts. The infrastructure-attached district offices are responsible for infrastructure management matters for schools, hence the significance of their inputs.

1.10.5 Participants

The participants included the school principal and the school governing body (SGB) chairperson of each of the twelve (12) participating non-fee-paying schools across four (4) districts of a selected province, and eight (8) infrastructure-attached district officials, two (2) in each district office. This amounted to the total of thirty-two (32) participants in the study. The selected participants are, according to the Schools Act, entitled to manage infrastructure in schools, and were therefore considered to be a representative sample for the study.

1.10.6 Data collection strategies

The data collection strategies were semi-structured interviews and document analysis. In order to facilitate data analysis, all interviews were audio-recorded with the consent of the participants. The relevant policies and legislation on school infrastructure were analysed.

1.10.6.1 Semi-structured interviews

Face-to-face, semi-structured interviews were conducted to generate qualitative data on detailed views and opinions regarding the manner in which schools managed their infrastructure. Welman, Kruger and Mitchel (2005:98) assert that semi-structured interviews constitute a useful method of data collection, as a broad list of themes and questions were to be covered that often became more refined as the interviews progressed. Tharenou, Donohue and Cooper (2007:54) state that semi-structured interviews have an “overall topic, general themes, targeted issues and specific questions” to uncover definitive information from the selected interviewees. I developed a set of predetermined open-ended questions on an interview schedule to guide me during the interviews.

Shortcomings do exist with the semi-structured interviews. I could, for example, get side-tracked by trivial aspects that were not related to the study (Maree, 2007:87). When this happened I guided my participants back to the focus of the interview. The influence of the interviewer could therefore be considerable (Bless, Higson-Smith and Kagee, 2006:116). I therefore avoided influencing the participants by the way I asked questions.

1.10.6.2 Document analysis

Baxter, Hughes and Tight (2010:186) assert that virtually all research projects involve, to a greater or lesser extent, the use and analysis of documents. Baxter et al. (2010:192) are of the opinion that the study of documents is popular because it is not possible to conduct a research study in isolation from what has already been done. In other words, it made sense to use documents if the data I required already existed in some form. Bryman (2012:554) attests that documents reveal something about what goes on in the organisation and could help me to have an idea about the trends that are being followed in managing the school infrastructure. For this study, unpublished documents from the provincial education department, annual reports and memoranda on school infrastructure were analysed with a view to attaining a perspective into the management of school infrastructure. This was because in terms of the Schools Act, the management of school infrastructure is delegated by the Department of Basic Education (DBE) to be handled at provincial and local school levels.

1.10.7 Data analysis

Sanders, Phillip and Thornhill (2009:57) proclaim that data analysis is the examination and breakdown of interview transcripts into logical and structured themes to uncover insights and clarify new understanding of the area of focus. In this study a thematic analysis method was utilised. Braun and Clarke (2006:6) assert that thematic analysis is a method for identifying, analysing and reporting patterns (themes) within data. It minimally organises and describes data in detail. Thematic analysis involved searching across the data to find repeated patterns of meaning. Therefore, thematic analysis is a method which worked to reflect reality, and to unpick or unravel the surface of reality.

Thematic analysis required a constant moving back and forward between the entire data set, the coded extracts of data, and the analysis of the data I produced. Writing was an integral part of analysis, not something that took place at the end, as it occurs with statistical analyses (Braun and Clarke, 2006:15). I immersed myself in the data to the extent that I became familiar with the depth and breadth of the content. I firstly transcribed data into a written form. This is because the process of transcription is an excellent way to start familiarising myself with the data (Braun and Clarke, 2006:17). Data analysis culminated in my writing of the report (thesis).

1.10.7.1 Trustworthiness

Maree (2007:80) enunciates that it is generally accepted that engaging multiple methods of data collection, such as observation, interviews and document analysis, leads to trustworthiness. In this study, I collected data by talking directly to people and allowing them to tell their stories (Creswell, 2013:98) and assessed documents for accuracy or evidence (Briggs, Coleman and Morrison, 2012:135). In addition, I sampled different categories of participants, both at local school level and at district level.

1.10.7.2 Credibility

Bryman (2012:390) asserts that the establishment of the credibility of findings entails both ensuring that research is carried out according to the canons of good practice and submitting research findings to the members of the social world who were studied for confirmation that the researcher has correctly understood that social world. Corbin

and Strauss (2008:108) contend that credibility in a qualitative enquiry implies that the findings are believable and that they reflect the researcher's, participants' and readers' lived experiences with a phenomenon. Credibility was further enhanced through the process of data analysis through which themes were developed.

1.10.7.3 Consistency

To maintain consistency in data collection and analysis, I was guided by the research questions and objectives (Maruster and Gijsenberg, 2013:103). I collected in-depth data by means of semi-structured interviews and document analysis, and multiple stages of data analysis involving transcribing and categorising data into themes (Creswell, 2013:115). I examined the data for regularity and consistency through the meticulous interplay between myself and the data and consistency with the participants' interpretations (Glaser and Strauss, 2012:120).

1.10.7.4 Triangulation

According to Schwandt (2007:84), triangulation is a means of checking the integrity of inferences the researcher draws. I made inferences from data, maintaining that a particular set of data supported a definition, theme, assertion or claim. I used data triangulation through obtaining data from different sources, namely, semi-structured interviews that were recorded and described in narrative format, field notes and document analysis. As White (2005:89) attests, triangulation entailed the use of more than one source of data to support my conclusions. Yin (2009:86) contends that using different sources of evidence is a major strength of case study data collection and the findings become more convincing. I was therefore able to address a broad range of historical, attitudinal and behavioural issues.

1.11. ETHICAL CONSIDERATIONS FOR THE STUDY

Hamilton and Corbett-Whittier (2013:110) define ethics as norms of conduct that distinguish acceptable behaviour. McMillian and Schumacher (2014:362) state that it is important for researchers to be fully aware of ethical and legal principles when conducting research to protect the rights and welfare of participants. Willig and Stainton-Rogers (2008) attest that ethical concerns are an intrinsic part of the research process. It was, therefore, paramount that I anticipated and planned to mitigate and adhere to the ethical conduct (Creswell, 2013:117; Flick, 2014:51).

Leedy and Ormrod (2001:84) contend that researchers should ensure that participants are not exposed to any undue physical or psychological harm. For that reason, COVID-19 protocols such as sanitising, wearing of a mask and social distancing were adhered to during the interviews. Prior to the commencement of interviews, I presented the participant with a letter of consent, in which the research process and the rights and responsibilities of participants were explained (Maree, 2007:300). I was honest and respectful towards all the participants.

Burns (2000:101) proclaims that both the researcher and participant must have a clear understanding regarding the confidentiality of the findings and the results of the study. All participants' information and responses shared during the study were treated as confidential and the results were presented in an anonymous manner for the sake of protecting the identities of the participants (Bryman, 2012:142).

Ethical clearance was obtained from the Ethics Committee of the Faculty of Education of the University of Pretoria; and the permission to conduct this research was requested and secured from the selected provincial department of education, as well as the SGB chairpersons and principals of the selected schools.

1.12 STRUCTURE OF THE THESIS

The structure of this study was provided in the form of a summary for each chapter. The study comprised six (6) chapters, as briefly presented in the following discussion.

1.12.1 Chapter One

In Chapter 1, I introduced the study, contextualised the study, provided the problem statement for this study, the rationale for this study, the research questions, the research aim, the research objectives, theoretical framework, research methodology employed in the study and ethical considerations. The purpose of this chapter was to give an overview of the study to the reader. Literature review was discussed in Chapter Two.

1.12.2 Chapter Two

Chapter 2 provided a discussion on the following topics that had a bearing on the title of this study: equity and infrastructure in non-fee-paying schools; the infrastructure in South African non-fee-paying schools; the relationship between school infrastructure

and learner performance; the link between educational resources and learner achievement at a school; educational planning and the utilising of school infrastructure; international trends on management of school infrastructure; and the status of school infrastructure in developing countries.

1.12.3 Chapter Three

In Chapter 3, I presented the theoretical framework that underpinned the study. This study was anchored on two-dimensional theoretical framework, which laid the basis for the study. The dimensions of the theoretical framework included the Management Functions Theory and Participatory Governance Theory.

1.12.4 Chapter Four

In Chapter 4, I discussed the following topics regarding the research methodology and research design for this study: philosophical assumptions underlying the study; research approach; research design; sampling; data collection strategies; data analysis procedures; quality assurance strategies; and ethical considerations.

1.12.5 Chapter Five

Apart from presenting the data and findings, the demographic description of participating schools and the biographic profiles of participants were presented in Chapter 5.

1.12.6 Chapter Six

In chapter 6, I answered the research questions. I also provided a discussion on the strengths of this study, limitations of the study, suggestions for further study and recommendations of the study.

CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

In this chapter, I presented a review of literature pertaining to the focus of the study. The chapter provided a review of management of school infrastructure from different perspectives as perceived by various scholars both domestically and internationally, with a view to contextualising the pursuit of the study. This review of literature therefore included equity and infrastructure in non-fee-paying schools; the infrastructure in South African non-fee-paying schools; the relationship between school infrastructure and learner performance; the link between educational resources and learner achievement at a school; educational planning and the utilising of school infrastructure; international trends on management of school infrastructure; and the status of school infrastructure in developing countries.

2.2 EQUITY AND INFRASTRUCTURE IN NON-FEE-PAYING SCHOOLS

Despite more than quarter of a century of democratic government in South Africa, there is growing evidence that equitable access to quality education remains elusive for the majority of its children. In 2007, the Department of [Basic] Education declared 40% of schools in the country to be 'no fee' schools and, by 2011, 60% of all schools had been designated as such (Sayed and Motala, 2012:673). While discrimination in social spending has been considerably reduced since the 1980s, spending inequalities remain because of the high costs required to achieve fiscal parity in education. In the immediate post-Apartheid period, a major emphasis was on distributing resource inputs through policy and legislation based on equity and redress, but by the turn of the century the education system could still be said to be characterized by "rampant inequality" (Sayed and Motala, 2012:673).

In South Africa the existence of inequalities in school infrastructure across schools of varying socio-economic environments engulfs the issue of equity. Barrett, Treves, Shmis, Ambasz, and Ustinova (2019:27) explain that according to the Centre for Public Education (2016) equity is achieved in education when all learners receive the resources they need to graduate fully equipped to succeed after high school. Whether the goal is a high school pass, university success, or just to finish elementary

school, policymakers aim to ensure an equal and fair distribution of the resources that learners need to achieve their goals, including adequate school facilities, so that every member of each age group has the opportunity to attend school. Similarly, Lumadi (2020:1) asserts that an equitable process in school education is one in which all learners are treated equally. Such a system is one in which all learners have similar opportunities, linked to the same school curriculum taught by teachers with equal expertise, where all learners have access to equivalent school facilities and where all schools receive the same financial allocation. Drijvers and Van Herwaarden (2000:10) explain that while equality means treating every learner the same, equity means making sure every learner has the support needed to be successful. Equity in education requires systems to be put in place to ensure that every learner has an equal chance of success. If only some learners have access to better schools, with better teaching and more government funding, that can be construed as unfair and inequitable.

Naidu, Joubert, Mestry, Masoge and Ngcobo (2008:163) argue that there is still general concern regarding the adequacy of resources available to poor learners in certain parts of South Africa, the inequities in school infrastructure, and the high financial burden faced by some parents. All these conditions have a serious impact on the provision of quality education. Nkosi (2011:18) contends that in terms of Section 34 (1) of the Schools Act the State is mandated to fund public schools from public revenue on an equitable basis in order to ensure the proper exercise of the right of learners to education and the redress of past inequalities in the education provision.

To address equity in funding school education, the South African government introduced the National Norms and Standards for School Funding (NNSF) policy (South Africa, 1998a). The NNSF policy provides a statutory basis for school funding in that schools are now classified into wealth quintiles and subsidised accordingly. Schools serving poorer communities must receive more state funding than schools serving better-off communities. In the same breath, Lumadi (2020:2) states that it is imperative for Government to provide the best schools for communities. To address inequality, schools that are in or near the poorest communities must receive the highest school allocations. It is the State's responsibility to measure the poverty of all communities in the country to know which

communities should receive better school funding (DoE, RSA, 2006). Nkosi (2011:18) argues that, as of now, it would be untrue to say that the declaration of certain schools into non-fee-paying schools has addressed equality and equity. On a similar note, Mestry and Ndhlovu (2014:10) assert that, ironically, although state funding to poorer schools has increased substantially, the provision of quality education and improvement in learner performance has not been forthcoming. Nkosi (2011:18) maintains that it is ironic that schools from middle-class communities still get bigger financial allocations as compared to schools in poor working class communities. However, contrary to the preceding contention by Nkosi, the latest adjusted funds distribution to schools in the different wealth quintiles as determined by the National Norms and Standards for School Funding (RSA, 2019), as depicted in Table 2.1, clearly indicates that the poorest quintiles are allocated approximately six times more than the schools in the wealthiest quintile.

	2019	2020	2021
NQ1- NQ3	1, 390	1, 466	1,547
NQ4	697	735	776
NQ5	241	254	268
No fee threshold	1, 390	1, 466	1,547
Small schools: National fixed amount	32, 197	33, 968	35, 836

Table 2.1: Adapted from the Amended National Norms and Standards for School Funding (RSA, 2019).

Equity should, however, not only be measured on financial terms. It also means that all schools should be safe from natural disasters or any other form of outside concern and should have all of the spaces, furniture, and equipment needed to deliver the curriculum in an effective way. Conversely, inequity means a lack of or insufficient bathroom facilities, inadequate separation between boys and girls, long or dangerous walking distances to school, or the fact that many poorer learners have to attend neglected schools as compared to other learners (Barrett et al., 2019:28). The study acknowledged that the bulk of money allocated for school infrastructure is only primarily devoted to maintenance of existing infrastructure. There are few concrete plans for budget allocations directed at addressing capital projects such as new

laboratories, libraries, maths laboratories, and ITC and media centres. In this context, Sayed and Ahmed (2011:108) argue that the monetary allocations to schools are intended to cover non-personnel recurrent items and small capital items required by the school as well as normal repairs and maintenance to all the physical infrastructure of the school.

Mestry and Ndhlovu (2014:10) affirm that although provincial education departments (PEDs) allocate substantial funding to poor schools, Heads of Departments (HODs) in the provinces restrict SGBs from spending the funds according to the needs of the schools. Instead, each year the HODs send out directives to schools in their province prescribing that the funds should only be utilised for learning and teaching support materials, repairs and maintenance of school property, and for the payment of services such as water and electricity. The funding allocations for capital projects are therefore not taken into consideration. In terms of Section 19 of the Schools Act, SGBs should be trained in financial management so that they will have the requisite knowledge and skills to make informed financial decisions for school improvement. These SGBs would be empowered to self-manage the school's funds (Mestry and Ndhlovu, 2014:10). Equity therefore seems to be far from reach if the infrastructural imperatives still lack in non-fee-paying schools.

In line with the preceding contentions, the Financial and Fiscal Commission for an Equitable Sharing of National Revenue (RSA, 2009:3) argues that Norms and Standards for School Infrastructure should be defined in broad terms as “the capital works required to provide education services”. Norms and Standards for School Infrastructure should: define capital expenditure (including issues of project and asset management); define minimum and optimum standards (including alternative service delivery infrastructure and the variance between provinces); and institutional roles and responsibilities. This process should include all the activities necessary to ensure that the works are delivered effectively, such as feasibility studies, project planning and capacity building to establish sound operational arrangements for the works. Norms and standards should provide a clear and comprehensive picture that consists of snapshots of the education system's current infrastructure environment and its targeted future environment, as well as a capital investment road map for transitioning from the current to the target environment.

2.3 THE INFRASTRUCTURE IN SOUTH AFRICAN NON-FEE-PAYING SCHOOLS

This study took the stance that the fundamental prerequisite for the delivery of effective education is the existence of suitable and safe school infrastructure (Dalton, 2005:9). To this end, Witten (2010:23) contends that the majority of schools in South Africa serve black urban and rural township communities that are located in poor socio-economic contexts. Almost all of these schools are under-resourced and do not have functioning laboratories, sufficient school materials and equipment, adequate sports fields, or access to internet facilities for their learners. Wiley (2009:22) concurs that many school buildings often lack proper plumbing, electricity, and suffer frequent losses due to inadequate securing of the building. Classroom space is often limited and children are often in class sizes of fifty or more.

2.3.1 The circumstances leading to the introduction of the non-fee-paying policy

Mokoalle and Burmistrova (2020:1) contend that after 1994, the newly elected democratic South African government of national unity, led by the African National Congress, had a huge task and responsibility to redress, transform and integrate several departments of education that were established as a result of the *Apartheid* system into a single department. The establishment of a national department of education had several implications, which included among others the remodelling of school funding, as the funding system at the time differentiated school funding on the basis of race, whereby white learners were financed and resourced four times more than their black counterparts (OECD, 2017).

Ahmed and Sayed (2009:203) explain that the challenges that faced post-apartheid education in South Africa after 1994 were enormous. A fragmented, racially divided education system with enormous differences in resources between racial groups needed to be transformed into an equitable, democratic and unified system catering equally for all South Africans. This overall transformation required vision and will across different aspects of South African education policy, and included policies on the financing of public education. Alongside the challenge of achieving equity was the need to provide free, basic education, as enshrined in the South African constitution. Mestry and Ndhlovu (2014:1) allude to the fact that since 1994, the government's efforts to redress historical imbalances and achieve equity were

fundamental policy mechanisms to restructure South African education. Equity reforms in post-apartheid South Africa were intended to equalise funding among provinces, schools and socio-economic groups. This was undertaken through national policies that would direct state funding to public schools. The most significant legislation was the National Education Policy Act (RSA, 1996b), the South African Schools Act (RSA, 1996a) and the Employment of Educators Act (RSA, 1998b).

The challenges in education were part of the broader struggle of the emerging state to transform the enormous inequalities in all sectors of South African society. In this context, the South African government pursued a particular policy path with respect to privatisation in education, with a focus on permitting public schools to charge fees (Ahmed and Sayed, 2009:204). The decision to charge fees was driven by two imperatives. On the one hand, there was the perceived fear of a middle-class (and white) flight from the public education system. Based on advice provided by international consultants, the post-apartheid state believed that allowing schools to charge fees to maintain quality was important in persuading the middle-class to have a stake in the public education system and thereby to be advocates of change. On the other hand, the fee charging of schools was cast as a measure to affect redress (Sayed and Motala, 2012:673).

The argument brought forward was that allowing user charges in wealthy schools would enable those who are able to afford it to pay for better education, thus releasing state resources for poor schools. It is for this very reason that the 'no fee' policy is limited to schools in quintiles one and two (and more recently three). The reality is that the resources that are spoken about in this context are limited to operating costs that represent a small amount of public and private resources for education. The assumption is that by releasing resources, the state is able to affect redress for disadvantaged communities. This school funding reform strategy potentially erodes the notion of education as a public good that is fully and fairly funded by the state and a right for all. Moreover, it assumes that the middleclass access the same schooling as the poor and therefore have an interest in improving education for all (Sayed and Motala, 2012:673).

2.3.2 The designation of non-fee-paying schools

Mestry (2014:1) states that there is a general move by different countries to abolish school fees in an effort to make education accessible to children in poor communities. The establishment of non-fee-paying schools was one of the ideals of the National Norms and Standards for School Funding (NSSF) policy. Sayed and Motala (2012:676) explain that in terms of the Amended National Norms and Standards for School Funding (Department of Education 2006), schools declared to be non-fee-paying schools are entitled to an increased allocation by the state to offset revenues previously generated through school fees, and fee charging schools (previously all schools) may apply to their provincial education department to be declared non-fee-paying schools, should they qualify. The lists of non-fee-paying schools are determined by each provincial education department, using a standard national procedure. Each school is assigned a poverty score using data from the community in which the school is located.

The three poverty indicators utilised for this purpose are income, unemployment rate and level of education of the community, which are weighted to assign a poverty score for the community and school. The school will then be assigned to one of the poverty quintiles determined nationally. The middle national quintile (quintile three) is referred to as the 'adequacy benchmark', since in theory this is how much money needs to be spent per learner to ensure they receive an adequate education. As indicated in Table 3.1, schools in this category will receive the minimum amount of R 1 547 per learner in 2021, as per the Amended National Norms and Standards for School Funding. Schools in poorer quintiles (quintiles one, two and three) are non-fee-paying schools and so receive larger allocations than those in better-off quintiles (the fee charging schools) (Sayed and Motala, 2012:676).

It is therefore on the basis of sociological ideologies on social stratification that schooling system in South Africa is categorised into quintiles. School categorisation is dispersed in such a way that it reflects the socio-economic status of the communities where the schools are located. Quintile 1, 2 and 3 schools represent communities with low economic muscle, and this reflects on inadequate school infrastructure. Quintiles 4 and 5 schools are identified as being in affluent communities, with adequate basic school infrastructure (Giddens and Sutton,

2013:487). However, Mestry (2014:4) cautions that the abolishment of school fees does not necessarily translate into automatic benefits in terms of quality learner performance, school effectiveness, efficiency and so on, considered against factors such as class size and the like. In analysing the impact of the NNSSF policy, Mestry (2014:4) contends that the implementation of this policy has not necessarily resulted in the attainment of social justice and equity in the South African schooling context.

2.3.2.1 The funding of public schools

According to Hindle (2007:38), the advent of a new educational dispensation was characterised by attempts by the newly established Department of Education to equalise spending and financing across all schools, both in terms of spending on learners as well as on teachers' salaries. The funding model was such that National Treasury would disburse funds to provincial governments according to a method that took into account various socio-economic factors, which in turn perpetuated disparities in spending between the rich and the poor provinces. Mokoalle and Burmistrova (2020:2) assert that schools are funded according to the National Norms and Standards for School Funding (NNSSF) policy (Department of Education, 1998, 2008). According to Mestry (2014:1), this policy was intended to redress the funding flaws of the past education dispensation as well as to equalise funding between previously disadvantaged and advantaged schools and to narrow the gap between rural and urban inequities.

Sayed and Motala (2012:674) assert that in seeking to fulfil both its internal and external obligations, the South African government over a decade and a half had introduced a host of policy and institutional reforms aimed at redressing the legacy of the apartheid era and making education more accessible. There are three key mechanisms that were developed to address funding issues: the supplementation of state resources through school fees (RSA, 1996a), the Equitable Share Formula, and the National Norms and Standards for School Funding (Department of Education, 1998), subsequently amended to introduce the non-fee-paying schools policy (Department of Education, 2006). Central to the reforms was first the Schools Act (RSA, 1996a), which empowered each school governing body (SGB) to take "all reasonable measures within its means to supplement the resources supplied to the school in order to improve the quality of education provided for all learners at the

school” (RSA, 1996a, Section 21). In practice, this translated into the levying of school fees. At the same time, the Act made provision for learners unable to afford the fees to be exempted following a means test.

Naidu, Joubert, Mestry, Masoge and Ngcobo (2008:157) highlight that in terms of the Schools Act public schools normally receive funds from a combination of three sources, namely; State subsidy, school fees and donations and fundraising. In the same breath, Van Rooyen (2012:35) indicates that public education is funded from two sources, namely public money provided by the state, and private money provided by individuals and/or organisations – mostly parents from the community. However, because many schools in South Africa are located within poor communities, their governing bodies rely solely on the State subsidy for their school budgets. The State subsidy is granted on a sliding scale according to quintiles which define the poverty ranking of schools.

The lack of sufficient public funding for education has resulted in a situation where the affluent subsidise their children’s education with private resources while the poor rely on a State which has insufficient resources to fund an acceptable level of education provision (Naidu et al., 2008:158). Reddy (2016:121) affirms that the category of non-fee-paying schools is entirely dependent on the government’s allocation of resources, and parents from poor socio-economic background play no role in contributing school financial resources.

Loock and Gravett (2014:4) assert that the National Norms and Standards for School Funding for Ordinary Public Schools, states that a school may carry out its own procurement and may deal directly with suppliers and contractors for the relevant budgeted items in accordance with standard procurement procedures, the financial directions issued in terms of Section 37 of the Schools Act, and paragraph 116 of the Norms and Standards document. This does not mean that the school governing body may not take advice from other stakeholders such as the principal, teachers or sponsoring body. Good governance principles and the provisions of sections 16(2) and 20(1)(a) of the Schools Act would indeed require of the school governing body to take such advice.

According to Kruger (2011:235), the funding of public schools occurs within the following two cost allocation categories: capital cost allocations, which include

allocations for new classrooms; and recurrent cost allocations - these include the following categories: immovable capital improvement and repair costs, which relate to maintenance and repairs to buildings; easily separable recurrent costs, which include supplies and services to the school; other recurrent and small capital equipment costs, including learning materials to learners; and hostel costs, where the recurrent cost allocations (transfer payments) are targeted as far as possible on the basis of need. This is determined on the basis of the physical condition, facilities and crowding of the school, as well as the relative poverty of the community around the school.

Mestry and Ndhlovu (2014:1) argue that while the intentions of the State to address equity and social justice are laudable, there is a long way to go in achieving good quality education, particularly for marginalised and disadvantaged schools. A number of schools in poor rural and urban working-class communities still suffer the legacy of large classes, deplorable physical conditions and the absence of learning resources, despite a major Reconstruction and Development Programme (RDP), the National School Building Programme and many other projects paid for directly from provincial budgets. Yet, teachers and learners in poor schools are expected to achieve the same levels of teaching and learning as their counterparts in wealthier areas. Such contradictions within the same public school system probably reflect past discriminatory investment in schooling and vast disparities in personal income of parents.

2.3.3 The challenges in the implementation of the non-fee-paying policy at provincial and school levels

Sayed and Motala (2012:269) contend that one of the difficulties in implementing the non-fee-paying policy is that the declaration of non-fee-paying schools has not been accompanied by adjustments in the equitable shares received by provinces or by other financial support such as a conditional grant from the National Treasury. Increases in school funding must be covered by ordinary changes to the baseline allocations of provincial governments, but poorer provinces are much more financially constrained in their ability to support and manage their relatively larger numbers of poor learners falling into those national poverty quintiles where schools may no

longer charge fees. The policy is also heavily dependent on provincial education department capacity to implement and monitor it.

However, Sayed and Motala (2012:681) indicate that in terms of the international Consortium for Research on Educational Access, Transitions and Equity (CREATE), the research study conducted in Gauteng and Eastern Cape provinces showed that the school leadership at almost all newly designated non-fee-paying schools were in general agreement that the non-fee-paying policy was a positive step. Principals remarked on increases in their enrolments, and most indicated that they were relieved not to have the responsibility of collecting fees from parents who may not be able to afford them anyway. Learners were going to school regularly, despite parents still having to shoulder the burdens of transport and uniform costs, with learner attendance encouraged by the fact that the school feeding scheme provided many of them with their most important meal of the day.

While most case study schools across both provinces welcomed their designation as non-fee-paying schools, several nevertheless queried the quintile in which they had been placed. For instance, some schools placed in quintile two felt that this was too high a ranking given the high rates of unemployment and heavy dependence on old age and social grants in the surrounding community. On the other hand, one school designated as a non-fee-paying school wanted to be re-designated as a quintile four school. Its principal reasoned that, since the parents in the school could afford the fees and did not request fee exemptions, having the income from school fees would allow the school to focus in a more concerted fashion on its core business of teaching and learning. He also expressed concern that his school's designation as a no fee school was leading to overcrowding and argued strongly that the presence of fees made for a better selection of learners (Sayed and Motala, 2012:681). Hall (2010:60) posits that the non-fee-paying policy is unlikely to have a major discernible impact on physical access to education, since South Africa already boasts a high net enrolment rate, and so for the policy's pro-poor effects to come fully into play, much more attention will have to be paid to improving the quality of education at all schools, the non-fee-paying schools first amongst them.

2.3.3.1 The significance of financial provision in the management of school infrastructure

The management of infrastructure cannot be explored in isolation from financial realities in the midst of which non-fee-paying schools operate. Kruger (2011:234) contends that as in many other social contexts, financial difficulties are being experienced in education in South Africa at present. Principals are expected to ensure that quality teaching and learning continue to take place while the budgetary provision allocated to them for that purpose is steadily reduced. This situation places considerable responsibility on the shoulders of school principals. Schools are indeed today in greater need of improved financial management than when funds were readily available. In view of the demands on those dealing with financial matters it is imperative that the school principals and members of school governing bodies should perform their financial management task with circumspection and thoroughness.

According to Sayed and Motala (2012:674), South Africa's decision to adopt a semi-market approach to schooling and to permit fees was made in an international context of burgeoning opposition to such fees, including the groundswell that led to Education for All and the Dakar Framework for Action. Nevertheless, the decision was justified on the basis of limited state resources to provide free education, as well as a desire to improve school-level accountability by increasing community control over school resources. The second major policy mechanism to address inequalities in the education financing system was the equitable share formula, which takes into account provincial variables such as the size of the school age population, the number of learners enrolled in ordinary public schools, the distribution of capital needs, the size of the rural population in each province and the size of the population for social security grants weighted by a poverty index (Sayed and Motala, 2012:675). The aim was to ensure that every province, whatever its financial standing, is able to spend an equitable amount on each learner. The formula was phased in between 1996 and 2000 in order to allow provinces, particularly the wealthier ones, to make adjustments in their budgetary allocations and thus if necessary offset any decline in expenditure (Sayed and Motala, 2012:675). Wildeman (2008:44) states that since provinces make their own decisions about how to spend their equitable share across social services (education, health and social welfare), the actual per capita education expenditure differs from province to province.

Lastly, according to Sayed and Motala (2012:675, the National Norms and Standards for School Funding (RSA,1998), implemented in 2000, required that 60% of the available resources be distributed to the poorest 40% of learners. Provincial education departments were tasked with developing policy instruments for ranking public schools. No financial benchmarks were stipulated except that the allocations to learners in the fifth quintile (i.e., the least poor schools) should be seven times smaller than allocations for learners in the first quintile (the poorest schools) These policy reforms have been acclaimed as having made great strides towards the attainment of equity and redress in education financing. Particular gains have been registered with regard to inter-provincial equity, by ensuring that every province is able to spend an equitable amount on each learner, although intra-provincial equity remains a challenge. Nevertheless, it has become clear that the gains are not being equally realised for all learners in the country, with large differences remaining in per learner funding across provinces.

2.3.4 The current conditions of infrastructure in non-fee-paying schools

According to Matika (2018:1), the National Development Plan (RSA, 2012) envisages that by 2030 South Africans will have universal early childhood education, high-quality schooling and full access to further education and training. Matika (2018:1), however, argues that the achievement of this vision stands to be seriously hindered by poor school infrastructure, as infrastructure plays a crucial role in the teaching and learning process. Matika (2018:1) posits that thousands of non-fee-paying schools still lack proper sanitation, water, buildings, electricity and the like. According to the Department of Basic Education's National Education Infrastructure Management System (NEIMS) Report (2006), there are 3 544 schools with no electricity and 913 with no ablution facilities, while 5 352 are still using pit latrine toilets. There are 2 402 schools with no water supply, while a further 2 611 have an unreliable water supply. Matika (2018:1) affirms that these schools are most likely to be found in townships and deep rural areas. Nkosi (2011:69) attests to the fact that the government still battles with addressing a wide range of resources which enable the schools to function properly, such as school buildings, classrooms, furniture, teaching equipment, books and writing materials, as well as access to sanitation facilities, water and electricity.

Matika (2018:1) maintains that there is a problem with the facilities that are supposed to be present at each and every school, such as libraries, computer rooms and science laboratories. These facilities are often missing in non-fee-paying schools, and children who do not enjoy access to them effectively receive an inferior education. Some schools do not even have sports fields, or extra-mural activities such as art and drama, which are meant to be part of the learning process. Similarly, Ncube (2004:69) argues that poor school facilities compromise the quality of education, especially in rural areas where classrooms, laboratories and libraries are scarce. It is thus clear that the level of education received in non-fee-paying schools is generally inferior to their fee-paying counterparts, largely due to the relative lack of facilities and infrastructure available in these schools.

The Guidelines Relating to Planning for School Infrastructure (DBE, 2012:4) proclaims, amongst other things, that the quality of school buildings is critically important in the drive for improving education. Good quality facilities provide teachers and learners with supportive environments that are responsive to their changing needs and could make a real difference to learning and teaching. Successful teaching and learning depends on the availability of crucial resources, such as learning materials and a teaching and learning environment that is conducive.

The Guidelines Relating to Planning for School Infrastructure document (DBE, 2012:4) further asserts that Goal 24 of Action Plan 2014, Towards the Realisation of Schooling 2025, requires the Department of Basic Education to provide every school with the physical infrastructure and an environment that inspires learners to want to come to school and learn, and teachers to teach. The guidelines are aimed at achieving the overall goal, namely to improve the quality of education for all learners in South Africa, as well as to provide the basic mix of educational resource inputs that will guide the provision of infrastructure to schools. For learners, these guidelines will provide an appealing environment that will stimulate their minds to learn and improve their performance, while providing them with similar experiences, irrespective of where they come from (DBE, 2012:4).

According to Barrett, Treves, Shmis, Ambasz, and Ustinova (2019:1), the Sustainable Development Goals, which are defined by the United Nations and scope the development agenda for all countries in the world, require countries to “build and

upgrade education facilities that are child, disability and gender sensitive, and provide safe, non-violent, inclusive, and effective learning environments for all”. Barrett et al. (2019:1) maintain that education is a fundamental way to achieve development and growth. Thus, it is essential to design educational infrastructure in such a way as to maximise the accessibility and effectiveness of the education being delivered.

According to Khumalo and Mji (2014:2), infrastructure is an integral component of the learning and teaching context. This is because a school’s infrastructure enables learners and teachers to access a wide range of tools, services and resources to support learning and teaching. For instance, information technology through the use of computers could be useful for teaching, learning and administrative purposes. However, a lack of electricity for instance, renders the virtues of information technology useless in such a context. The lack of resources is a critical factor in education because it may negatively affect the learning and teaching processes within the classroom.

It is reported on the one hand that lack of facilities and under-resourced schools are directly associated with the academic failure of learners (Lolwana, 2004:142). On the other hand, factors militating against rural learners’ academic success have been identified as poor infrastructure, poverty, and lack of supportive academic discourse (Banda and Kirunda, 2005:41). To illustrate how the physical environment affects learning, Dryden and Vos (2005:16) argue that while infrastructure backlogs of classrooms may be addressed, if sanitation meanwhile is not catered for, then learning and teaching problems will still persist. In a related manner, Mabogoane and Pateli (2006:87) point out that the realities of rural life related to poverty, lack of basic facilities and infrastructure in schools also play a negative role in attracting suitably qualified teachers.

Therefore, Leemans (2009:2) argues that contemporary school buildings should, first of all, be functional and sustainable. They should be safe, comfortable, easy to maintain and easily accessible. They should support the school’s pedagogical goal, provide a stimulating learning environment and be suitable for flexible and multifunctional use. In addition, they should be sustainable in various ways: they should have an open relationship with the surrounding community, they should have lasting architectural value, they should be economically sustainable, with a good cost-

return ratio for construction and management, and they should be environmentally friendly in terms of building materials, energy and water consumption.

According to the NDP (RSA, 2012:312), schools in many rural areas are the only public institution communities have access to. The non-fee-paying schools are typically located in areas with low levels of education, fragile social networks, largely dysfunctional community structures, no community libraries, limited access to media, and few sources of information about opportunities. Infrastructure shortages are particularly acute in poor communities where learners are at a significant disadvantage. The non-fee-paying school policy and school nutrition programme are important interventions to mitigate the negative effects of poverty on learning. Schools in these communities should be strengthened and equipped with the best infrastructure, equipment and resources (especially Information and Communication Technology (ICT) infrastructure) to strengthen their role in countering historical disadvantage. The non-fee-paying schools should be targeted for significant infrastructure upgrading.

2.3.5 The proposals of the National Development Plan on school infrastructure

In terms of the National Development Plan (RSA, 2012:311), South Africa should ensure that all schools meet minimum standards for infrastructure and commit to progressively upgrading each school's infrastructure to meet optimum standards. To accomplish this vision of the National Development Plan, this study maintains that the school management and governance structures should be equipped or be in a better position to apply their management and governance functions effectively. As indicated in the previous chapter, the school principals and SGBs should be able to devise strategic plans, organise human and material resources, take a lead in the organisation and set up control measures with a view to providing for and maintaining school infrastructure. The application of indispensable functions such as the co-ordination of tasks and resources, effective and comprehensible communication, informed delegation and motivation should be evident in schools and provincial departments of education, including district offices, for school infrastructure to be appropriately managed. Without sound knowledge and expertise in the execution of management functions by provincial, district and school management structures as a prerequisite for managing school infrastructure, the attempts to address

infrastructural backlogs in non-fee-paying schools could remain a futile exercise. Similarly, as an expression of the participatory governance theory, communities should be encouraged by both the PEDs and school management structures to proactively contribute in infrastructural management of schools. Ojha (2006:461) affirms that a range of experiences shows that community participation can improve the efficiency of programmes (in terms of uses of resources) and effective projects in the provision and delivery of services in undertakings such as infrastructure management in schools.

Non-fee-paying schools should be targeted when planning infrastructure to compensate for resource deficits in communities. There should be well-equipped libraries, laboratories, computer and media centres to ensure that learners in non-fee-paying schools have access to similar learning resources to their counterparts in less poor communities. Learner safety should be taken into account when planning infrastructure. High speed broadband should be readily available and incorporated into the design of schools, as this will enable greater use of technology in education and enhance the classroom experience for both teachers and learners. The use of mobile devices such as phones and tablets in distributing learning content should be explored. By 2030, South Africans should have access to education and training of the highest quality, leading to significantly improved learning outcomes (RSA, 2012:311)

2.4 THE RELATIONSHIP BETWEEN SCHOOL INFRASTRUCTURE AND LEARNER PERFORMANCE

According to the Department of Basic Education's Strategy to improve school management and governance in schools (DBE, 2013), it is generally accepted that there is a link between the physical environment and teaching and learning effectiveness, as well as learning outcomes. Poor learning conditions contribute to irregular learner attendance and drop out from school. Learners develop a negative attitude towards the school and their ability to engage in the learning process is compromised. The Strategy to improve school management and governance in schools (DBE, 2013) further maintains that school facilities that are well maintained prolong the life expectancy of school buildings, furniture and other equipment, and thus contribute to the effective learning and teaching in schools. When infrastructure

is neglected, funds that are allocated for the development of education end up being redirected towards endless repairs and renovations. The implementation of preventive programmes can prolong the life span of school buildings and facilities. The foregoing discussion should be construed in the light of the notion that effective school management is universally accepted as being the critical element in the success of a school (DBE, 2013).

This view is supported by Zain (2018:303) who argues that effective teaching and learning in schools require adequate infrastructure. The goal of school infrastructure in school education is to boost school attendance of learners, enhance staff motivation and improve academic accomplishments of the learners. The infrastructure includes classrooms, laboratories, halls, open fields, games equipment, dormitories and sanitation facilities. School infrastructure is, therefore, an essential component in ensuring successful education. According to Nepal (2016:44), a good infrastructure facility has always supported the educational enterprise. Research has shown that clean and good air quality, good light, a small, comfortable, safe environment, building age and condition, quality of maintenance, temperature, and colour, could affect student health, safety as well as a sense of self and psychological state (Nepal, 2016:44). In line with this standpoint, Mokaya (2013:11) maintains that academic achievement improves with improved building conditions, lightning levels, air quality and temperature. In addition, Mokaya (2013:11) establishes a correlation between school class size and learner achievement.

In a study of factors affecting learners' performance in schools in Canada, Mark (2002:52) found that one cannot expect high level of learner academic performance where school buildings are poorly located and substandard. He emphasises that well planned structures, clean, quiet, safe, comfortable and healthy environments are important components of successful teaching and learning. Kapur (2014:4) highlights that the availability of infrastructural facilities has a considerable impact upon the school environmental conditions. These facilities are also regarded as one of the important indicators of ensuring a conducive and favourable learning environment for the learners. Through the adequate development of infrastructure, the members of the schools are able to benefit in numerous ways. These include the following: they are able to perform their job duties in a well-organised manner, become motivated towards learning and implementation of job duties, the environmental conditions

within the offices, classrooms and other areas within the school become comfortable for the implementation of tasks and functions, the individuals feel pleasurable and contented within the school environment and they are able to work effectively towards the achievement of personal and professional objectives (Kapur, 2014:4).

Therefore, taking the aforesaid aspects into consideration, it is vital for school managers to adequately plan financial resources to bring about improvements in the school infrastructure. Good infrastructure is regarded as the base for good-quality education. The PEDs, school principals and SGBs need to ensure that they make appropriate decisions with regard to promotion of infrastructural facilities (Kapur, 2014:10). Zain (2018:299) confirms that experience demonstrates that by having the availability of good physical facilities, learners tend to have more interest in learning; and this conversely leads to higher performance. Nkosi (2011:19) argues that the underperformance of the learners, the decline of the teacher morale, the overcrowding in most public schools in the townships, the backlog of textbooks and learner support material and a shortage physical infrastructure like libraries in South African schools affect the quality of teaching and learning and all these factors are influenced by the resources allocated to public schools by the State.

Nepal (2016:45) proclaims that policymakers, such as the legislators like the Minister of Basic Education and MECs in provincial education departments, should be concerned about school infrastructure facilities and learner learning and achievement, not only because of health, security and psychological issues, but also because the failure to create and maintain the optimum learning environments can undermine other efforts to reform education. Nepal (2016:47) argues that for over a decade research has consistently confirmed that the physical environment impacts the learning environment and learner achievement. If a school provides a quality environment for learners, this will arrange mental preparedness to gain knowledge. Nepal (2016:48) confirms that many researchers such as Earthman and Scheneider (2000:48), Scheneider (2003:121; 2005:123) and Earthman and Lemasters (2011:89), maintain that physical facilities are necessary for learning and that learning cannot take place in neglected environments.

On a similar note, Hinum (2000:1) highlights that experience and research confirm that quality of facilities has an impact not only on educational outcomes but also on

the well-being of learners and teachers. There is a growing awareness of the role that educational facilities play in shaping attitudes toward the environment and the contribution they make to urban renewal. Xaba (2012:221) distinguishes between five aspects of school infrastructure maintenance, namely: organisation, inspection, planning, policies, and funding. He notes that, without policy directives informing how school facilities should be managed and maintained, schools would not have systematic processes aimed at ensuring that school facility maintenance promotes educational programmes. Xaba (2012:221) notes that school infrastructure managers generally do not have knowledge of school facility maintenance and concludes that facility maintenance at schools, and possibly at departmental level, is not accorded a priority status. He advocates SGB training to ease the burden of facilities management for the principal and senior staff and suggests the establishment of facility maintenance committees, drawing upon community expertise. In this regard, Marishane (2013:3) argues that when schools are funded, consideration has to be given to the maintenance aspect of the infrastructure and funding allocations need to be adjusted accordingly.

2.4.1 Influence of physical facilities on the learner performance in schools

According to Molaudzi (2019:43), the development and maintenance of physical facilities in schools by communities, parents and sponsors should continue to be encouraged, as it has been found that the lack of such facilities interfere with the learning process. Buka, Matiwane-Mcengwa and Molepo (2017:101) argue that poor learner performance in public schools indicate that the South African education system has reached a point that reflects an education crisis. Demotivating environmental conditions under which teachers in especially black schools work, exacerbate overcrowding in classes, poor infrastructure and a lack of basic resources, including human resources. Okongo, Ngao, Rop and Nyongesa (2015:120) highlight the importance of school facilities in relation to quality education with differences in school facilities being found to account for differences in learner achievement. Physical facilities include classrooms, auditoriums, administrative blocks, libraries, laboratories, workshops, computer centres and playgrounds.

For Okongo et al. (2015:120), learning experiences are fruitful when the quantity and quality of physical resources are adequate. Unattractive school buildings, crowded

classrooms, non-availability of playgrounds and surroundings with no aesthetic beauty may contribute to poor academic performance (Okongo et al., 2015:120). A similar view is expressed by the South African researchers in a debate on a relationship between school physical facilities and learner achievement in well-resourced and poorly resourced schools (Alexander, 2013:145; Bloch, 2012:119).

Zain (2018:300) contends that the purpose of providing a decent facility at school is to enhance the learning activity, and it is a booster to increase learners' achievement. The conditions of the school facilities are very crucial because they give impact towards learners' achievement (Earthman, 2002:163). Similarly, Adeboyeje (2000:78) and Emetarom (2004:102) state that facilities promote effective learning and teaching at schools. On the contrary, experience shows that insufficient physical facilities have a negative effect on learners' interest to learn. Hence, their academic performance is adversely affected. It is observed that learners have low performance when they are not having access to standard facilities such as library equipment and adequate seats in the classrooms (Akomolafe and Adesua, 2016:148). Therefore, all of these physical facilities will have an impact on the effectiveness of teaching and learning.

2.4.2 The effects of overcrowding classrooms on learner performance

One result of a lack of infrastructure is overcrowding in classrooms. According to West and Meier (2020:2), South Africa's increasingly poor Grade 12 outputs and current retention rates indicate that there is a crisis in education. One of the influential factors associated with poor performance and grade repetition is overcrowding classrooms. Overcrowding classrooms occur as a result of a shortage of teachers, a lack of school infrastructure and a high number of poorly resourced non-fee-paying (Quintiles 1–3) schools. According to the Department of Education (DoE) (2008: xii, 70) and Ndebele (2014:454), the influential factors associated with grade repetition and poor performance can be divided into two categories: “in-school” (i.e. supply side) and “out-of-school” (i.e. demand side) factors. The “in-school” factors include teachers' attitudes, the availability of trained teachers and school resources as well as adequate infrastructure, such as the availability of schools and classrooms. Examples of inadequate “in-school” factors, such as a lack of resources and inadequate infrastructure, include 41.8% of schools without electricity, 70% of

schools without access to computers, 79% of schools without libraries and overcrowding classrooms with an average learner-educator ratio (LER) of 33:1, that is, one teacher for every 33 learners (DBE 2013:85, 2014b:4; Ndebele 2014:463). It is, however, acknowledged that these aspects have improved in the last decade.

West and Meier (2020:2) contend that even though the DBE is currently investigating the possibility of eradicating backlogs, Skelton (2014:3-4), the United Nations Educational, Scientific and Cultural Organisation (UNESCO) Chair of Education Law in Africa and the Director of the Centre for Child Law, believes that the DBEs' strategic planning is questionable because they have underspent the Eastern Cape's Accelerated Schools Infrastructure Delivery Initiative (ASIDI) schools infrastructure backlog grant and only delivered 10 schools, while their target was 49 schools. Skelton (2014:1) is also of the opinion that failure to significantly improve school infrastructure in South Africa is because of the management capacity that is required by large infrastructure projects and according to her, the DBE lacks proper management. Improving the school infrastructure therefore remains a persistent concern for future quality education in South Africa. Objecting to Skelton to some extent, Abdoll and Barberton (2014: viii) are of the opinion that 2023/2024 is a realistic target date for the eradication of the school infrastructure backlog. This study, however, finds this timeframe to be too imminent to be realistic, given the huge school infrastructural backlogs at the present. The infrastructure delivery rate could be escalated if pressure is brought to bear on the Department of Basic Education to structure contracts differently, to attract big construction companies to either do the work directly or sub-contract it. Penalty clauses for non-delivery should be introduced (Abdoll and Barberton, 2014: viii).

For West and Meier (2020:3), the contributing factors to overcrowding of classrooms in South African schools include, *inter alia*, the lack of teachers as well as inadequate infrastructure, such as insufficient schools and classrooms. When considering only public schools having government-employed teachers (excluding governing body appointed teachers), the average national Learner Educator Ratio (LER) stands at 33:1 (DBE 2014b:4). However, there are provinces such as KwaZulu-Natal with a concerning average of 39:1. The LER of Gauteng Province is slightly lower than the national average at 31:1. Some schools in South Africa have even reported an LER of 50:1 and higher (DBE 2014b:4). According to a National Early Childhood

Development pilot project, 25:1 would be an appropriate LER within the South African context (Meier and Marais 2012:117). In 2002, the then DoE (2002:4) was of the opinion that 40:1 would be the ideal LER because of the simultaneous teacher shortages and infrastructure deficiencies. The admission policy of 1998, that forms part of the National Education Policy Act 27 of 1996, states that public primary schools should however not exceed an LER of 40:1 (RSA, 1996).

In many Western countries, classes exceeding 30 learners are considered in need of reduction in their number of learners because of the negative influence this feature can have on academic performance (Benbow, Mizrahi, Oliver and Moshiri, 2007:5). The Tennessee Student Teacher Achievement Ratio (STAR) project, which was conducted in the United States of America, concluded that classes with a ratio of 13–17:1 are defined as “small” (Barbara, Hedges and Konstantopoulos 2000:126). According to Meier and Marais (2012:117), acceptable international LERs differ according to the age of learners. For example, an acceptable LER for 6-year-olds and older is between 14:1 and 18:1. Meier and Marais (2012:117) are of the opinion that internationally, an LER of above 18:1 will be unacceptable.

The Organisation for Economic Co-operation and Development (OECD) created a forum in which governments can work together to share experiences, research and seek solutions for problems, such as high LERs. The OECD has an average membership of over 34 countries, including Finland, Australia and the Netherlands, all of whom promote a lower LER in schools (OECD 2011:392). When comparing the LER in South Africa with international LERs, South Africa’s average LER is much higher than the average of 16:1 in schools of OECD countries (OECD, 2011:396). Green, Adendorff and Mathebula (2014:6) are of the opinion that the current LER of 33:1 in South Africa is not likely to decrease significantly over the next few years because of the lack of infrastructure and spike in learner enrolment rates.

2.5 THE LINK BETWEEN EDUCATIONAL RESOURCES AND LEARNER ACHIEVEMENT AT A SCHOOL

The following section in this literature review was advanced on the basis of the fact that, apart from physical facilities of a school, school infrastructure inextricably encompasses educational resources as well. As Ubogu (2020:55) puts it, education does not exist in an empty environment but in an environment structured of physical

facilities and material resources that are to promote teaching and learning. Molaudzi (2019:28) asserts that the issue of whether educational resources have an impact on learner attainment has long been a contested issue among scholars. Contrary to conventional understanding, Rice (2007) opines that the total level of school resources is not closely related to learner performance although he challenges this interpretation of research evidence in the case of smaller class sizes. Hedges, Laine and Greenwald (2014:146) contend that to use data on the outcomes of education as the sole basis for accountability is to lose sight of the fact that aspects of provisioning such as school buildings and educational materials are also important.

In the context of the preceding contentions, Hanushek (2016:79) argues that the availability, adequacy and relevance of educational resource items contribute to academic achievement while unattractive school buildings, crowded classrooms, non-availability of playgrounds, and surroundings that have no aesthetic beauty may contribute to poor academic performance. This argument is supported by Grismer, Flanagan and Williamson (2008:132) who maintain that the absence of basic resources and the extreme overcrowding in schools in many developing countries mean that other factors that are crucial for quality education (such as teacher subject knowledge) may initially play a smaller role in the provision of quality education than otherwise have been a case. However, even as the budget situation improves, more resources do not always generate a similar educational improvement. Nonetheless, Sedibe (2011:13) asserts that research in the South African context has shown that the provision of basic resources does have positive effect on learner achievement.

Yadar's (2007:73) findings in a study on teaching and learning resources and academic performance in secondary schools in Ondo, Nigeria, were in line with the findings of a report by UNESCO (2008) that teaching and learning resources such as textbooks, classrooms, stationery and laboratories impact on the academic performance of learners (Molaudzi, 2019:30). Moreover, these results concurred with those by Motai (2006:212) who asserts that learning is strengthened when there are sufficient reference materials such as textbooks, classrooms, teaching aids and exercise books. Spaul (2011:98) contends that in the South African context, the performance of the learners at wealthier schools has been found to be better than that of the learners at schools where they experience a shortage of teaching and learning materials.

A study conducted by Adams (2017:121) on teacher effectiveness and learner academic performance in public secondary schools in Nigeria found that conditions that would promote effective teaching, such as availability of resources to teachers, infrastructure in good condition, as well as instructional materials, were generally lacking. According to Molaudzi (2019:31), conditions where resources are generally lacking would definitely have negative impact on the instructional quality in public schools which may translate to poor academic performance, attitudes and values on the part of learners. According to Bloch (2012:66), the majority of South African poor schools lack teaching and learning resources, and as a result reproduce poor performance.

Ballou (2008:101) argues that, compared to wealthy schools, poor schools often have fewer resources, either as a result of budget limitations or inequitable resource allocations to schools. Ballou (2008:101) contends that although additional resources are important, it is equally important too to ensure that they are available in the right combinations and also that schools adjust to using these resources effectively. In this regard, Fedderke and Luiz (2002:184) argue that quality performance at school level is influenced by the resource allocated to the school. For Chisholm and Kgobe (2003:187), quality improvement in education can be enhanced through the redistribution of state resources on an equitable basis, which will enable the removal of the backlog of classrooms, the improvement of learner-teacher ratios, the reduction of repetition and drop-out rates in black schools, the introduction of change in governance, curriculum development and the enhancement of the professional skills of teachers.

2.5.1 School libraries and South Africa's educational challenges

Hart and Zinn (2015:22) proclaim that apartheid's Bantu education policies calculatedly under-resourced the schools designated for black learners, and their schooling is perhaps where the heritage of apartheid is most evident. Advocacy for libraries has to confront the disturbing reality that many schools still lack basic facilities. In support of this contention, Le Roux and Hendrikz (2006:620) assert that there are substantial backlogs in the development of school library services in South Africa, especially in the remote rural areas, the location of which the non-fee-paying

schools mostly prevail. Delaney and Bates (2015:71) state that, in this digital age of e-books, many public schools are struggling to provide libraries for their learners.

While not dismissing these problems, the fundamental premise is that library programmes are not “extras”, rather, they provide a solution to what the NDP identifies as the major shortcoming of South African education system: the poor quality of school education outcomes (RSA, 2011:302). According to the South African Government News Agency (2014), the NDP echoes widespread concern over the underachievement of South African schools, especially considering the priority given to education in the annual national budgeting (Hart and Zinn, 2015:22). Similarly, Bloch (2009:17), argued that 60%–80% of schools are dysfunctional, although expenditure is five times more on them in real terms than in 1994. In this context, Jansen (2013:53) talks of a “barely functional” education system stumbling along in a “state of stable crisis”.

With reference to international research evidence of the contribution of libraries to quality education; the present study supported the fact that the high-achieving schools in South Africa are the schools with functional libraries (Hart and Zinn, 2015:22). What Bloch (2009:128) calls “the jewels of excellence in the South African school system” are the so-called Section 21 fee-paying schools that are predominantly in the historically advantaged sector of public schooling. These schools are able to raise funds from their relatively affluent parent bodies in order to supplement their government subsidies. They have continued to support their libraries without the government funding they received in the past, presumably because of the belief in the role of libraries in fostering their schools’ superior academic performance.

Given this kind of common-sense observation and the solid research evidence of the contribution of libraries to education quality, the fact that school libraries are to be found, on the whole, only in the historically advantaged sector of the South African schooling system points to the central issue of this section: namely, the imperative to provide fair access to libraries for the majority of children in non-fee-paying schools. Jansen (2013:50,164) warns that the historical achievement gaps between white and black apartheid-era schooling still exist, but that now they are more about socio-economic class. He expresses disappointment at the failure to provide decent

education in non-fee-paying schools, which he says are “running on empty”, as poor parents “understandably move their children to suburban schools - at great cost and risk” (Jansen, 2013:163).

Molaudzi (2019:49) asserts that in schools with good libraries and the services of a school librarian, learners perform significantly better in tests on basic research skills. Learners also perform significantly better in reading comprehension and in their ability to effectively express ideas in relation to their reading. On the other hand, the absence of libraries has had a significant impact on learner achievement, in some cases has made it almost impossible to pursue educational goals. The National Education Infrastructure Management Systems (NEIMS) Report (2009) revealed that South Africa’s learner outcomes ranked poorly on international stage, not only compared with learners from developed countries, but even compared with those from less developed parts of sub-Saharan Africa (Molaudzi, 2019:50). The daunting backlogs in school library provision mean that innovative models of service will be needed that cut across existing divisions (Hart and Zinn, 2015:19).

2.5.2 The role of school laboratories in learning

Owoeye and Yara (2011:68) conceptualise a laboratory as a room or a building specially built for teaching by demonstration of theoretical phenomenon into practical terms. Lee (2015:54) refers to the science laboratory as a unique learning environment, and as a setting in which learners have the opportunity to work cooperatively in small groups to investigate scientific phenomena. Molaudzi (2019:70) describes the laboratory as the only place in the school where certain kinds of skills and understanding may be developed. This is corroborated by Freitas, Gibson, Du Plessis, Halloran, Williams, Ambrose and Arnab (2015:91) who posit that when the learners use the science kit to perform experiments, both their conceptual understanding and experimental skills are developed. In addition, when the science kit is used by teachers in the classrooms to demonstrate phenomena and explain concepts to their learners, both their teaching skills and learners’ understanding are improved. Lee (2015:54) points out that laboratory activities have the potential to enhance constructive social relationships as well as positive attitudes and cognitive growth.

Yadar (2007:121) opines that no course in science and mathematics can be considered as complete without including some practical work. The practical work ought to be carried out by individuals either in science laboratories or in classes. It is an established truth that an object handled impresses itself more firmly on the mind than the object merely seen from a distance or in an illustration. Thus practical work forms an important feature in any science and mathematics course (UNESCO, 2008:46). According to UNESCO (2008:46), laboratory work has the following advantages:

- “It stimulates learners’ interests as they are made to personally engage in useful scientific activities and experimentation;
- It promotes that science is not only products or process;
- It affords the learner the basic skills and scientific method of problem solving;
- Knowledge obtained through laboratory work promotes long term memory; and
- A laboratory helps to provide a forum wherein the learners are given the exercise to subject beliefs, ideas, statements, or theoretical propositions to some forms of experimental test”.

According to Alharbi (2015:66), the absence of science laboratories in most non-fee-paying schools has not only compromised the implementation of the national curriculum but has also frustrated teachers as the balance of their teaching has teaching had to remain traditional (teacher-centred), with science teaching taking place through the lecture mode. The learners have consequently been subjected to rote learning instead of conducting experiments for fuller understanding of scientific terms and processes (Alharbi, 2015:66). Grant, Tamim, Brown, Sweeney, Ferguson and Jones (2015:140) proclaim that schools that pride themselves on their innovative approach to teaching, rightly realise that classroom instruction combined with laboratory experience yields best results. Evidence shows that this method increases mastery of the subject, aids in developing scientific reasoning, and cultivates interest in the subject (Molaudzi, 2019:70).

According to Haglund, Jeppsson and Ahrenberg (2015:16), it is imperative for schools to have the latest, high-quality laboratory supplies. Haglund et al. (2015:16) maintain that science differs from any other subject as, in order to understand its concepts, it necessitates looking beyond the books and conventional classroom

teaching. The effective teaching and learning of science involves seeing, handling and manipulating real objects, living organisms and materials. The knowledge that learners obtain in classrooms is ineffectual unless they actually observe the process and understand the relationship between the action and reaction (Haglund et al., 2015:17). Good schools thus combine classroom teaching with laboratory experiments to ensure that their learners grasp each concept thoroughly. The learners conversely are able to retain knowledge for longer when they see experiments being performed in front of their own eyes (Grier, 2015:81). Science laboratory equipment enables learners to interact directly with the data gathered while they obtain first-hand learning experience by performing various experiments on their own (Molaudzi, 2019:71).

By virtue of equipping themselves with the latest advanced materials and supplies, schools will be able to contribute effectively to the scientific advances yet to come. The advances and developments in the field of medical science and technology would not take place if schools did not prepare brilliant and dedicated scientists and researchers. Children develop an interest in scientific research in science laboratory. Schools, thus, play a vital role in bringing up the next generation of engineers and doctors (Engelbrecht, Nel, Nel and Tlale, 2015:160).

2.6 EDUCATIONAL PLANNING AND THE UTILISING OF SCHOOL INFRASTRUCTURE

School infrastructure such as school buildings and premises are the physical framework within which the system of providing educational functions. The planning, design and erection of buildings place enormous demands on the state treasury and should therefore be utilised in a controlled and purposeful way (Barnard, 2010:489). Barnard (2010:489) argues that in contrast to the situation in most developed Western countries where there is an oversupply of classroom space because the school population has declined, in South Africa, as is the case in most developing countries who are experiencing an increasing school population, there is a serious shortage of physical facilities (particularly among the previously disadvantaged schools) and school buildings and premises have to be supplied on a large scale. Only limited financial resources are available to meet the steadily increasing need for physical facilities.

Naidu, Joubert, Mestry, Mosoge and Ngcobo (2008:163) argue that despite remarkable advances made in access, funding and equity in the South African schooling system since 1994, there is still general concern regarding the adequacy of resources available to learners in certain areas, the inequities in school infrastructure and the high financial burden faced by some parents. All these conditions have a serious impact on the provision of quality education. These scholars (2008:164) maintain that the ability to develop the curriculum and improve teaching and learning to achieve education goals undoubtedly depends on infrastructure available in a school.

Barnard (2010:490) contends that to provide equal educational opportunities for each learner, regardless of race, colour, creed or sex, school infrastructure will have to be standardised. Optimal use will also have to be made of existing and available facilities. In future it will be necessary to distinguish between luxury and necessity. The emphasis must be on less opulent and more functional school buildings and hostels. The school environment has a formative influence on its users, as Winston Churchill once said, “We shape our dwellings and then our dwellings shape us” (Barnard, 2010:495). The planning and design of school buildings involve meeting certain requirements. To serve its function well, to meet the educational expectations of its learners and the community, to be truly great, the school building must be more than a container for the educational programme - the school building should be not only a functional servant of the educational programme but also a friendly, attractive and stimulating place – imparting a feeling of security and a sense of pride to all whom it serves (Barnard, 2010:495).

2.7 INTERNATIONAL TRENDS ON MANAGEMENT OF SCHOOL INFRASTRUCTURE

This section covered review of literature on the management of school infrastructure as practised by Finland, Egypt, Nigeria and Botswana. The purpose of this review was to establish if school infrastructure challenges are only inherent in South Africa, or whether such challenges are a global phenomenon. The study thus related what transpires in the selected countries with a view to contextualising the thrust of the study in the South African situation.

2.7.1 Finland

Lopez-Roldan and Fachelli (2021:106) explain that Finland is a country with a longstanding tradition in providing public education, with an advanced economy and an education system that has been a worldwide benchmark since the standardised Programme for International Student Assessment (PISA) evaluations. Education in Finland is considered a social right, and as a service provided by the state to its citizens (Blanco and Oinonen, 2019:212). Sormunen, Tossavainen and Turunen (2011:186) highlight that Finland has been ranked fourth in comparisons of child well-being among the Organization for Economic Cooperation and Development (OECD) countries (UNICEF, 2007) and among the best performers in educational attainment, based on PISA scores in reading, mathematics, and science in 2000, 2003, 2006, and 2009 (OECD, 2001, 2004, 2007, 2010). Due to the high standard of education in Finland, the learning opportunities of children from different backgrounds are similar, which is illustrated by very small differences in learning results between schools (Kupiainen, Hautamäki, and Karjalainen, 2009:110).

Bruns (2015:2) affirms that Finland is known to have achieved remarkable evolution into one of the world's top-performing education systems. The country is routinely in the top five of every international measure of education quality. The scholar (2015:3) contends that the school infrastructure in Finland reflects about seven percent of the Gross Domestic Product (GDP) the country invests in education. Older schools have been renovated with colourful, light-filled modern additions. Bruns (2015:3) further states that the objective of Finland's funding model is to equalise opportunity for all learners, and Finland succeeds in that area.

In Finland education is free and is applied equally to all schools. All children, no matter their socio-economic backgrounds, get the same quality of education. As a relatively wealthy country, Finland has high employment rates. Income inequality is low and there is a wide social security net ensuring all students are well fed and have access to quality education (Bruns, 2015:4).

2.7.1.1 Community participation in Finnish education

Sormunen, Tossavainen and Turunen (2011:188) assert that parental involvement in Finnish comprehensive schools takes various forms. Communicating is the most

common form. It includes parents' evenings, usually held once a semester; optional parent-teacher conferences, occurring once at each grade level (or more rarely, at selected grade levels); phone calls, usually if some problems have occurred; and information sent home by the teacher, via paper or email. Volunteering exists when parents attend the school as an audience, usually at school feasts once or twice a year or sometimes at other events. Parents can also collect money for a class trip or camp school, which is usually executed in the sixth grade. A few parents also participate in school councils and/or PTAs (decision-making). Involving the community has traditionally not been within the scope of collaboration in Finnish schools; parents participate in their child's homework at some level, but this is more an underlying assumption than a mutually discussed or highly encouraged element of schoolwork. On the other hand, information related to educational health or well-being intended for parents, usually provided at school by an outside lecturer, has been quite a popular phenomenon among Finnish schools at all grade levels, being one form of parenting.

The results of a study conducted by Sormunen, Tossavainen and Turunen (2011:201), showed that Finnish learners are taken care of in the school community, but the possibilities to support the children's healthy growth collectively with families are only partly developed. Based on the findings of the above-mentioned study, the following recommendations are provided for parents, teachers, and other school personnel (Sormunen, Tossavainen and Turunen, 2011:201):

- "Schools (and wider school districts and national policy) should emphasise parents' responsibility for their children's education;
- Schools should develop their environments as places where family involvement is welcome, well structured, and well supported;
- Preservice teacher education (as well as in-service training of teachers) in home-school issues should be examined and further developed;
- Appropriate teaching methods, such as simulation-assisted learning, should be used more in teacher education to improve the communication skills of future teachers;
- A novice teachers' mentoring system should be established in schools;

- Tested models and the latest research on home–school collaboration and partnerships should be utilised in all teacher education regardless of teachers’ working site or grade level;
- Education on family structures should be offered to school personnel;
- Collaboration with the home should start at the beginning of school and continue throughout the child’s school path;
- To achieve high quality in home–school collaboration, the whole school approach (e.g., health promoting school approach) should be implemented and personnel commitment obtained;
- The goals and strategies of home–school collaboration should be formulated together with families, described in the school’s policy, and made visible in everyday life; and
- The principal’s important role in promoting home–school collaboration should be noted, and appropriate education provided”.

This study viewed the foregoing recommendations as a signal that Finland is conscious about the importance of collaboration between the school and the community, and therefore intends to implement it in her education system. Elgundi (2018:11) argues that in the latest curriculum released in 2014, the Finnish National Board of Education (2016a:38) states the importance of cooperation and briefly explains what benefits are to be gained from it and touches on the issues which should be covered in home-school cooperation. Amongst other things, it states that it is the schools' responsibility to set up their cooperative efforts with the home. A connection is also made between the success of collaboration and the actions of school personnel, proclaiming that they must initiate collaboration and communicate with the children's guardians through a variety of methods including personal. Additionally, collaboration is described as occurring both in person - individually or in groups, and with the use of Information and Communication Technology.

2.7.2 Egypt

Krafft (2012:1) asserts that Egypt is failing to provide its youth with a high-quality education. Changes in pedagogy and curricula are vital to ensuring better educational and labour market outcomes. The structure of the education system and the distribution of educational resources reinforce existing inequalities rather than

providing opportunities for all youth. Loveluck (2012:6) contends that the quality of Egyptian school facilities has been found to have clear effects on the daily performance of both the teachers and the learners who use them. The structural constraints make it difficult for teachers to teach effectively during regular class hours. It therefore seems likely that a well-targeted capital injection aimed at improving school facilities would positively affect educational outcomes within Egypt's state school system. However, as in the case of South Africa, state resources are limited as the government budget is already under strain; the national budget envisages a deficit of 8.6 per cent of GDP.

Abdelhamid, Beshara and Ghoneim (2013:705) state that Egyptian schools should provide a physical setting that is appropriate and adequate for learning. Students learn better in an environment that is pleasant, safe, and free of health hazards. Poor maintenance increases running costs, such as for energy and cleaning. Other consequences of poor maintenance include the deterioration of parts of the building, an unsafe and unhealthy environment, a lower quality of teaching and learning. Thus, it can be concluded that the condition of schools in Egypt is an important concern. According to 2009/2010 statistics, the number of schools in Egypt was 44631, of which 39376 are public and 5255 are private. The total education expenditures in year 2005/2006 was 18.6 billion Egyptian pounds while in year 2010/2011 it was 36.3 billion Egyptian pounds, an increase of 94.8%. With the huge shortage in education expenditures in particularly developing countries, maintaining the operation and conditions of educational facilities becomes a challenge that requires various efforts related to facility condition assessment, resource planning and rehabilitation techniques. This urges the search for innovative developments that can achieve substantial benefits to the assets and country (Abdelhamid, Beshara and Ghoneim, 2013:706).

To mitigate the systemic challenges, the Egyptian Ministry of Education (2014:60) has devised strategic objectives which include the following:

- “Providing quality education opportunities for all learners who have joined the preparatory stage via a learner supportive educational environment, low-dense classes and equitable learning domain that considers the different social,

environmental and economic backgrounds of learners, focusing on school-based reform;

- To improve learner accommodation powers and enhance their learning levels;
- To maintain learners at school till the end of the stage, cutting down the class density to become 42 learners per class maximum at all preparatory schools;
- Decreasing the number of schools working more than one school period per day to the minimum;
- Providing a minimum level of basic school facilities for teaching and learning processes at all preparatory school stages and to allocate a proportionate amount of funds for maintenance;
- Eliminating the cheating phenomenon and to reduce flunking, discontinuation and dropout rates; and
- Introducing new school models that support excellence in mathematics, science and technology via science and mathematics clubs and innovation and language laboratories”.

The preceding mitigating measures could be understood as the Egyptian government’s efforts to make improvements in educational provision.

2.7.2.1 Community participation in Egyptian education

Baradei and Amin (2010:108) and Hussein (2016:16) assert that ever since the early 1990s, the government of Egypt started on an ambitious education reform programme. Although the initial main focus was on quantitative expansion and the building of more schools, at the beginning of the new millennium there was a perceived shift to focus on quality, and the main pillar of the qualitative reform efforts centred on enhancing education decentralisation and community participation. This shift is a reflection of a more widespread international trend in the field of education and the confluence of a number of managerial, political, economic, pedagogical, developmental and even human rights push factors calling for greater forms and levels of interaction between the school, the community and the home. The Egyptian educational context was no exception. Hussein (2016:17) argues that the “human rights push factor” regards quality of education as a main human right considering the fact that quality of education cannot be achieved unless schools are held accountable to parents and communities. One of the latest education reform

mechanisms resorted to was the implementation of the various forms of community participation in education, and specifically the formation of Boards of Trustees (BOTs) at the school level, as a main starting point for the enhancement of decentralisation and community participation.

As for Baradei and Amin (2010:110), decentralisation of education, as in any other type of decentralisation, includes both an administrative and a political aspect. Administrative decentralisation may be considered to be that which concentrates on the transfer of decision-making authorities and responsibilities to lower levels in the administrative system. However, political decentralisation is that which is related to implementing a greater degree of democracy at the local levels, and therefore entails a greater degree of community participation and sharing of stakeholders in the decision-making process. In order to implement a greater degree of education decentralisation in Egypt, there is a need to utilise two approaches: a top-down approach in order to achieve a greater degree of administrative and financial decentralisation, and a bottom up approach in order to achieve a greater degree of political decentralisation, encompassing within it community participation and greater involvement of various stakeholders (Baradei and Amin, 2010:110).

If education decentralisation means bringing the point of decision-making closer or nearer to the local people, then participation is likely to be the mechanism for holding the decentralised institutions accountable to the people. School governing committees and councils are considered one of the tools for practising community participation. However, for real participation to occur, these committees and councils should be accountable to the people. The community members should therefore be able to influence and sanction governance at the school level (Baradei and Amin, 2010:110, Hussein, 2016:17). Baradei and Amin (2010:115) argue that community participation in Egyptian education has taken several forms over the years. Before the 2005 decision to establish BOTs in schools, the traditional form of community participation was manifested in the role played by parents' councils at the school level. These councils had a limited role in monitoring the education process. The participation of parents in the activities of these councils was very weak to the extent that the meetings of these councils often had to be cancelled due to failure in having the required number of attending parents.

According to Baradei and Amin (2010:115), empowering parent' councils at the school level and enhancing their responsibilities were common recommendations of research and studies on education reform in Egypt. However, these recommendations did not receive the required attention until the early 2000s when individual governorates in Egypt, mainly Alexandria and Qena, piloted some community participation based interventions at school and educational district levels. These interventions were mainly based on the idea of constituting parallel structures to the parent' council. The new structure was called the Board of Trustees (BOT). The BOT membership was not limited to the parents, but it was expanded to include schoolteachers and civil society representatives. Through the BOT mechanism, many schools could attract business organisations to renovate and maintain existing schools and to contribute money or land to build new schools. Despite the success of the BOT experiments in the governorates of Alexandria, and later in Qena, and their ability in activating civil society organisations and citizens, many issues regarding the effective utilisation of BOTs in schools remained unresolved. One overarching issue was the minimal involvement level of BOTs in monitoring the educational and decision-making processes at the school and district levels. In this regard, this study perceives a similarity between SGBs in South Africa and BOTs in Egypt in that in the former, the proactive participation of SGBs in decision-making processes is hindered by lack of managerial knowledge, capacity, and administrative skills on the part of the community participants.

According to Megeed (2013:38), one example of a successful case of a community project is the Alexandria Reform Pilot Project from 2001–2004 that was created to support the community members to be more involved in the school management and to transfer more authority and responsibility to school administrators. Reported achievement included improving the BOT mechanism and developing the principle that the community has a vital role in monitoring the school management and raising funds for their schools. Because of the project's success in 2001, the Egyptian Ministry of Education authorised the Alexandria governorate to take necessary actions to implement the pilot project and to take independent actions to improve student learning, schooling and raising funds. Consequently, every school was able to create a mission, vision and school enhancement plan. In addition, the project

aimed to allow school leaders and managers to master new responsibilities, improve quality of education by using the decentralisation model.

Based on the initial success of the Alexandria experiment in particular, in 2005 the Ministry of Education issued Ministerial Decree No. 258 for 2005 - requiring all schools to establish BOTs. According to the decree, a BOT has 15 members; 5 parents who are not working in the school; 5 public figures selected by the governor (the governor may delegate other relevant officials the selection authority); three teachers elected by the school teachers; the school headmaster who serves as the executive manager of the BOT; and the school social work specialist who facilitates the BOT affairs. The BOT chairperson and his/her deputy are elected by the BOT members (Baradei and Amin, 2010:115).

According to Baradei and Amin (2010:116), the decree states specific responsibilities within the framework of the existing Education Law in Egypt. These responsibilities are as follows:

- “Participating with school management in developing an integrated plan to implement the BOT objectives and to develop the school;
- Monitoring and following up on the implementation of the plans and working with the school management in facing problems and difficulties;
- Supporting and modernizing the educational process through innovative financing mechanisms including community contributions and private sector donations;
- Maintaining effective connections with businessmen, public figures, and civil society organisations and involving them in community participation activities;
- Cooperating with the school management in designing an implementation plan for maintaining the school building, premises, and equipment; and
- Supporting educational interventions that target special students and those with disabilities;
- Assuring cooperation between the school and relevant institutions like universities, NGOs, youth centres, and public libraries;
- Supporting the effort of building a school-based database that covers students and teachers’ issues, in addition to physical infrastructure issues”.

Similar to SGB functions in South Africa, the responsibilities of BOTs in school decision-making processes are stipulated in explicit terms.

In the final analysis, Handoussa (2010:68) argues that school-based reform requires a wide-scale of community participation that is based on volunteerism; at the same time, the community should have a belief that their participation in school affairs is important. In Egypt, a legislative framework was thus developed, whereby a ministerial decision was taken to regulate the BOT in schools, as a tool for community participation, as it involves teachers, elected parents and figures from outside the school. BOTs are expected to have an effective impact on transparency, service delivery, and administration and school leadership. In addition, effective voluntary and community participation work is the keystone to decentralisation. In the education field, community participation preparation is strongly promoted, and decisions related to community participation are reviewed. Regulations that govern the BOT for every school are examined to ease the community participation, improve civil society skills, and increase experience in the school management to attain governance that is capable of rational planning, policy-making and implementing reform policies and plans (Handoussa, 2010:68). The afore-given review of literature reveals that, unlike in Nigeria, community participation in education in both South Africa and Egypt is legally instituted, through the Schools Act and Decree No. 258 of 2005 respectively.

2.7.3 Nigeria

2.7.3.1 The importance of infrastructural facilities in Nigerian schools

The importance of school infrastructure in the realisation of educational goals cannot be underestimated. Owoeye and Yara (2011:1) contend that school facilities have been observed as a potent factor to quality education. The importance of the provision of adequate instructional facilities for effective teaching and learning cannot be over-emphasised. Jacob and Nathan (2021:2) assert that the importance of infrastructural facilities to Nigerian schools include the following:

- “Infrastructural facilities aid effective delivery of administrative functions in schools;
- They make the delivery of services fast and reliable; they enable teachers to deliver lessons fast;

- Infrastructural facilities provide a conducive working environment for both teachers and learners;
- Infrastructural facilities enable learners to learn at ease and learn well;
- Infrastructural facilities enable the teachers to teach well, prepare their lessons, and deliver them online (ICT);
- School facilities aid the delivery of the teaching and learning process in the schools;
- The school offices provide a conducive working environment for teachers, the classrooms help the learners to learn while the school fence protects learners, the teachers, and school administrators from criminals; and
- The school plant protects the entire human resources from the sun, rain, heat, cold, and snow”.

Therefore, adequate and appropriate infrastructural facilities aid the effective provision of education at all levels of education (Jacob and Nathan, 2021:4). Learners learn and understand more when taught in an atmosphere with adequate infrastructural facilities. Several studies (De-Chiara and Crosbie, 2001; De Jong, 2001; Feliz, 2004; Tanner, 2006; Gometi, 2010; Usen, 2016) have shown that effective learning is enhanced by the provision of adequate educational facilities and school buildings in quantity and quality. Facilities constitute a strategic factor in organisational functioning. This is so because they determine to a very large extent the smooth functioning of any social organisation or system including education. Their availability, adequacy and relevance influence efficiency and high productivity.

3.7.3.2 The effects of inadequate school infrastructure in Nigerian schools

The effects of inadequate school infrastructure include an unconducive teaching-learning process, difficulty in individualising instruction by the teachers and encouragement of abnormal behaviour by the learners, and above all, misplacement of school objectives could be a repercussion. Owoeye and Yara (2011:34) state that unattractive school buildings and overcrowded classrooms among others contribute to poor academic achievement in the school system. Turupere (2016:9); and Ajayi and Yusuf (2009:21) argue that high levels of learner’ academic performance may not be guaranteed where instructional space such as classrooms, libraries, technical workshops, and laboratories are structurally defective, not available or inadequate.

The schools without libraries and laboratories will find it difficult to compete with schools that have functional libraries and laboratories. This is because both staff and learners have the opportunity of complementing classroom activities with resources available in the library (National Open University of Nigeria (NOUN), 2009:56). Many secondary schools in Nigeria are faced with the problems of inadequate infrastructural facilities. The lack of adequate physical facilities for teaching and learning has a negative effect on the quality of graduates produced, as these facilities are educational inputs that have a strong relationship with the high academic performance of learners (Jacob and Nathan, 2021:20).

2.7.3.3 Community involvement in school management

Osadolor (2016:112) contends that as management functions include planning, organising, staffing, coordinating, directing, reporting and budgeting, the participants in management exercise would be expected to be involved in the performance of the above tasks. Osadolor (2016:112) states that one major aspect of the efforts being made in some African countries at linking schools closely with their communities is the encouragement of the direct involvement of local people in the work of the school as managers and as financiers. Tanzania, Zambia, Ethiopia, Guinea, and Kenya, for example, have had experience of community involvement in the devolution of responsibilities for managing schools and school systems to local people. The practice varies from country to country, and in some countries where the local communities are directly involved in school management and governance, they often possess a genuine feeling that the school is their own. In Ethiopia, it is planned that parents be directly responsible for the management of their school, including the appointment, housing and payment of salaries of teachers. In Guinea, all schools are managed by local authorities (Pouvoirs Revolutionaries Locals) which plan building operations, organise school production, supervise instructions and maintain disciplines (Osadolor, 2016:112).

Contrarily, in Nigeria, nothing seems to have happened in terms of devolution of responsibilities managing schools to the local communities. In this regard, in spite of the unanimous climate of opinions on the need of the school to have an outlook of its community life, the gap between the schools and local communities in Nigeria has expanded more than ever in recent years. With regard to expected school-community

relationship, the relationship ought to mean genuine co-operation in planning and working together for good, giving as well as receiving ideas (Osadolor, 2016:112). Unfortunately, in Nigeria, parents and members of the community have remained isolated from places where decisions concerning their own schools are taken. So far, the only areas of community involvement in school management is that; they are encouraged to employ supportive teachers and non-teaching personnel and sometimes take part in activities of social, fund-raising or labour providing kind. These activities are usually organised by the parent-teacher associations and are teacher-dominated. Therefore, it can be safely concluded that, at present, community involvement in secondary school management is minimal or non-existent in Nigeria (Osadolor, 2016:112).

Abbass (2018:4) asserts that lack of community participation has, therefore, led to project failures to achieve the desired results with new and increasing problems added without the old ones being solved. The system flounders because communities are not involved in the forms and dimension of participatory education. Kanau and Harun (2013:1) affirm that one of the major problems affecting educational development in Nigeria is the common belief that providing education for all and at all levels is the exclusive responsibility of government.

Abbass (2018:4) argues that in order to achieve more with less, government must adopt participation and participatory methods in governance as a basic policy direction in order to have focus, purpose and relevance. Excessive dependence, centralisation and concentration of policy or authority bring about non-participatory planning. The social conditions for community participation must always ensure the beneficiary's participation in a number of ways. In the first place, it must be conceived that people or members of the community are not "the problem" and bureaucrats/politicians are not "the solutions". More often than not, bureaucrats/politicians are the problems, while the people are the solutions. Secondly, the nature and extent of the desired community participation must be unambiguous and acceptable to all stakeholders, right from its initial commencement with clear-cut and achievable objectives. Furthermore, there must be clear and acceptable road map with designs or plans for shared responsibilities at all stages of implementation. Finally, adequate financial commitment and disbursement enshrined

with explicit checks and balances must be provided to ensure popular community participation (Abbass, 2018:4).

Nnadi and Ugochukwu (2016:2284) argue that there has been a growing debate on the need for partnership in all national development endeavours. The educational system in Nigeria is no exception. The over-dependency on government for the provision of educational services through funding and infrastructural development (without a complementary support from the community) has been faulted by experts who note that the community as an institution defines the existence and sustainability of any educational system in operation. Therefore, in a discourse on community involvement in any educational system, especially in Nigeria, one must not underscore the role of the community in such a system as well as the reciprocal influence which the educational system impacts on the community. The preceding background information shows that communities are not adequately involved in education which is meant for them. There is, therefore, the need for repositioning the Nigerian educational system using adult and non-formal education to re-awaken the consciousness of the communities on the need for their full participation in the provision of education in their respective communities (Nnadi and Ugochukwu, 2016:2284).

Olumade and Olatoun (2015:12) assert that in its effort to reposition the education sector as a result of the warning signs of poor education being provided, the Nigerian government has introduced the School Based Management Committee (SBMC) initiative to ensure effective participation of community members in governance of schools in Nigeria. It entails the decentralisations of aspects of decision-making to the school level and it involves the management of human, financial and other resources, depending on governmental preference. This study acknowledges the vast differences in community participation in education between South Africa and Nigeria, as community participation in South Africa although yet not fully institutionalised, is a statutory requirement, which is not the case in Nigeria.

2.7.4 Botswana

Regarding the educational context of the country, Botswana has universal primary education for all children in public schools. Private primary schooling is optional and parents may choose private primary schools for various reasons; the perception that quality of schooling is higher in private schools could be one such reason (Ntinda, Ntinda and Mpofu, 2015:120). Pheko (2008:6) reports that Botswana public school classroom facilities are generally insufficient and overcrowded so much so that learners may not perceive themselves to be receiving quality teaching. Teaching is more effective when facilities and infrastructure such as attractive school buildings, electrification of buildings, furniture, libraries and books are available (Botswana Ministry of Education, 2004). School infrastructure motivates and provides a comfortable learning and teaching environment (Babitseng and Buaduo, 2009:20). In particular, the availability of learning and teaching resources is an important quality of schooling indicator because those resources are associated with superior learner attainment (Ngware, Oketch and Ezech, 2010:11; Odhiambo, 2008:121; Riddell, 2003:24). Based on the Southern and Eastern Africa Consortium for Monitoring Educational Quality (SACMEQ) data (2000 to 2005), Riddell (2008:11) reports that quality education is at variance between rural and urban schools, the latter having more resources and better qualified teachers. In their study, Monyatsi and Monyatsi (2007:2) report on imbalances in the distribution of facilities and infrastructure in Botswana public primary schools in favour of the urban schools; which make for qualitatively different learning environments.

According to Makwinja (2017:48), through the Ministry of Education and Skills Development, the Botswana government translated and adapted the Millennium Development Goals through sustainable universal access to all equally for both girls and boys. As a result, the key dimensions of educational performance, e.g., enrolment, adult literacy, school infrastructure, basic equipment, supply of teaching materials and teacher qualifications have improved markedly since independence. The secondary school infrastructure has improved to a certain level but a lot still needs to be done. Although many schools have adequate classroom space and furniture, there is limited technology and internet services (Makwinja, 2017:49).

2.7.4.1 Background to Botswana's community participation in education

According to Pansiri and Bulawa (2013:68), the idea of involving parents in the school system is universal and perhaps as old as the history and philosophy of the education system. The traditional education systems of Botswana were culturally based, driven by community leaderships and focusing on reproducing useful members of the societies. As soon as Botswana gained independence in 1966, local authorities were established and mandated to run primary education (which was then basic education) while the Ministry of Education (MoE) took responsibility for secondary and tertiary education. This was the first initiative to extend formal educational opportunity to every community in the country. Pansiri and Pansiri (2011:284) explain that at that stage, the country immediately adopted democracy, development, unity and self-reliance as the four national principles to guide the country's philosophy of nation building, or what is known as Education for Democracy. Pansiri and Pansiri (2011:284) further explain that "within the philosophy of self-reliance, Parents and Teachers Associations (PTAs) became a cornerstone in the impetus for educational development". The history of education in Botswana shows that school and family relationship is viewed as a major component of a successful and effective school in this country.

2.7.4.2 Parents and Teachers Associations' involvement in education

Pansiri and Bulawa (2013:73) maintain that across the globe, PTAs are legitimate but voluntary structures that are meant to mediate between schools and communities; between teachers and parents; and between schools and families. While these institutions are voluntary, they have become "mandatory" in terms of education policies across the globe. According to Sebidie (2015:9), the Botswana Ministry of Education 's policy on education encouraged primary schools to establish effective parent-teachers' associations in order to improve children's academic performance. This idea was adopted by the government and included in the Revised National Policy on Education that was to be implemented by government primary schools (RNPE, 1994). The initiative was meant to encourage parents to support their children's educational activities, promote parent-school relationships in educating children, to provide a plan for interaction with the community and parents concerning

problematic issues of learner-discipline and academic underachievement, and raise funds for school projects.

Schools in Botswana, like anywhere else, use set guidelines to establish PTAs. The guidelines have been drawn to assist both the school heads and parents on how to establish and run PTAs. So, the existence and functioning of a PTA is an expected school-head driven responsibility. However, both the Western (Desforges and Abouchaar, 2003:121; Harris and Goodall, 2006:34) and African literature (Sifuna, 2007:112; Pansiri, 2008b:78; Pansiri and Pansiri, 2011:285) are however, awash with evidence that PTAs are weak and less active. Some barriers of parental participation in both PTAs and the education of their children include negative attitudes and lack of abilities of parents, poor work and health conditions, and weak leadership knowledge and skills of school heads and teachers (Pansiri and Pansiri, 2011:286) and rurality and remoteness of the communities (Pansiri, 2008b:82). Pansiri and Bulawa (2013:71) argue that to overcome these barriers, parents want heads of schools to treat them with respect and as equals. One critical type of involvement of parents in schools, but often failing in most schools, is in decision making, that is, governance and advocacy. A few studies of primary education programmes in Botswana identify marginalisation of parents from school instructional management systems in remote schools and the predominance of bureaucratic type of governance where parents are less involved (Pansiri, 2008a:92; 2008b:84). Another study discovered little participation by parents in poverty stricken location in urban area (Pansiri and Pansiri, 2011:284).

In a study conducted by Pansiri and Bulawa (2013:73) on the work of PTAs as perceived by head teachers in Botswana, the data yielded the following findings:

- “More PTA members had little knowledge about the work of PTAs;
- Parents who were PTA members in urban areas were abler than those in rural and remote areas;
- Little was done to formally introduce PTA committee members on their expected roles;
- Attendance to PTA committee meetings was low;
- There was a low level of participation by committee members;
- Much of the PTA activities were not planned for;

- Plans were used more in the urban schools than the rural and remote schools;
- Head teachers in rural and remote schools felt strongly that PTA members did not know their roles more than the urban ones;
- Head teachers at urban schools experienced better PTA participation than rural and remote schools;
- Parents did not volunteer their services to help their schools; and
- Concerning parents' affordability to pay any fees if requested by the school, rural and remote head teachers were more affected than urban ones".

Concluding this sub-section, Pansiri and Bulelwa's study shows that Botswana's schools apply the democratic principles to elect PTAs. However, the capacity of parents to serve and participate in committee programmes is lacking. According to school heads' experiences, the involvement of parents in PTA activities is lacking because they fail to respond to PTA invitations, do not contribute ideas that help to improve school results, and do not volunteer their services to help the school. The urban-rural-remote differences appear to be a factor. This accounts for the absence of functional home-school partnerships and collaboration, or a problematic social distance between home and school (Pansiri and Pansiri, 2011:285). The PTAs seemingly exist in name only, not in function.

Sebidie (2015:10) highlights the importance of parental involvement at various levels of children's school career. Parental involvement is supported by all role players such as the teachers and education policy-makers. Parents however sometimes experience challenges and serious hindrances that prevent them from being actively and effectively involved in their children's school activities. This apparent absence of parental involvement in their children's school careers impacts negatively on the progress and achievements of their children. Du Plessis (2020:169) affirms that lack of education level, lack of education in parent involvement, a fear of so-called "academic victimisation" and non-attendance at meetings are factors that contribute to a lack of participation by black African parents in SGB-related activities.

Some resemblances can be drawn between the Botswana's PTA scenario and the role of SGBs in non-fee-paying schools in South Africa, where there is an incessant outcry on the part of school managers about the lack of optimum participation by parents in school decision-making processes. In this regard, the NDP (RSA,

2012:311) proclaims that many school governing bodies are significantly hampered by parents' lack of expertise and social status relative to school management. In terms of the Strategy to Improve School Management and Governance in Schools in South Africa (RSA, 2018:4), unproductive schools always have a non-functional SGB. Such SGBs rarely have meetings in such schools. Most of these governing bodies have little or no understanding of their roles and responsibilities. They either rubber stamp the decision of the principal or cause conflict in the school. In addition, parents of children in poor performing schools are often not involved in the education of their children. They do not receive regular feedback on the progress of their children. Communities around are not proud of such schools and therefore disengage.

2.8 THE STATUS OF SCHOOL INFRASTRUCTURE IN DEVELOPING COUNTRIES

Bonner, Das, Kalra, Leathes and Wakeham ([sa]:20) contend that many schools in developing countries are poorly designed and constructed, with facilities that are badly laid out and that are either too hot or too cold or are dark, unhygienic, uncomfortable, inaccessible, dangerous and generally not conducive to effective teaching and learning. These problems are often caused not by a lack of resources but as the result of inappropriate standards, a lack of imagination, a poor understanding of the links between infrastructure provision and education delivery and an incorrect perception that doing things differently would increase costs. These scholars contend that good design does not have to cost more – in fact it should improve overall value for money as well as making the whole school environment more welcoming and a place where teachers are supported, and learning is encouraged.

2.8.1 The guiding principles of design

Bonner et al. ([sa]:20) argue that while school designs may vary between and within countries, it is possible to set out general principles of good school design that apply almost everywhere. These are : the 'whole school environment' should be considered not just the classrooms; the spaces provided accommodate the required functions; buildings are accessible for all, appropriate in scale and attractive to the users; designs relate closely to the culture of the surrounding community and the local

architectural tradition; designs respond to the local climate, topography and any potential hazards and construction should be simple and cost effective and aims to minimise maintenance costs.

The design standards have significant implications for capital and maintenance costs and need to be based on the local climatic, educational and economic conditions. Standards need to be modest yet provide safe, attractive and durable learning environments. They need to be flexible rather than prescriptive, possibly in the form of performance specifications and buildings should have a design life of at least 25 years. National standards are often inappropriate or non-existent and will therefore need to be reviewed or developed if not in place. Once this has been done a range of standard designs can be prepared (Bonner et al., ([sa]:21).

Bonner et al. ([sa]:1) set out how effective government programmes can be designed and implemented with a view to providing well planned, good value primary school infrastructure that meets the needs of users and contributes to better teaching and learning.

2.8.2 The scale of the challenge

In sub-Saharan Africa and the poorest countries in Asia, the challenge of providing adequate primary education facilities is huge. To meet the Education for All target of providing universal access to primary education worldwide it is estimated that up to 10 million classrooms need to be built at a cost of US\$72 billion (World Bank, 2003:59). In sub-Saharan Africa alone it is estimated that up to US\$30 billion will be required to address the shortfall in provision of suitable and safe learning environments. Typically, classrooms are overcrowded, many buildings and other facilities are inadequate, sites are poorly planned and there is little maintenance. This situation is deemed not conducive to good teaching and learning (World Bank, 2003:59).

2.8.3 The importance of educational infrastructure facilities

The condition, location and nature of school infrastructure have an impact on access and quality of education in numerous ways: the closer a school is to children's homes, the more likely they are to attend, both because of distance and safety issues; where the quality of infrastructure (particularly water and sanitation facilities) is improved,

enrolment and completion rates are also improved and there is less teacher absenteeism, and where the condition of school facilities is improved, learning outcomes are also improved. A basic minimum package of school infrastructure which is accessible, durable, functional, safe, hygienic and easily maintained therefore needs to be part of any strategy to meet the Millennium Development Goal for primary education (Bonner et al., ([sa]:1).

2.8.4 The importance of stakeholder-collaboration on educational inputs

Bonner et al. ([sa]:1) assert that however good the provision of infrastructure is, it is not sufficient on its own to improve access and quality. For effective delivery there should be progress across the board particularly with regard to the supply of good quality teachers and teaching and learning materials. Infrastructure provision will support an education programme that will include other educational inputs such as curriculum development, textbook development and distribution, strengthening school management, and teacher training and deployment. It is recognised that coordination with other sectors such as health, water and transport are also important in improving access and quality. In the same light, Skelton (2014:4) argues that if no children are to be left behind, then developing countries must find the means to provide equal opportunities for all children to learn in a decent environment. Parent bodies, education advocates and activists must seek new partners and learn new skills to hold governments accountable and ensure that they deliver on their obligations regarding the right to education. These new partners may include lawyers and economists, procurement experts, infrastructure planners and construction experts. Public private partnerships may need to be explored. This study therefore acknowledged the conception of the provisioning of education as not only a state matter, but a societal enterprise.

2.8.5 Meeting the challenge

Bonner et al. ([sa]:2) argue that given the need for infrastructure and the limited resources available, there is a responsibility on governments and development partners to work together to develop approaches that will contribute to significant, measurable and sustainable progress towards national goals and targets and provide good value for money. The approaches required to achieve this should be based around the development of long term partnerships with a strong focus on good

governance, capacity building, developing management systems and on ensuring that schools and communities (through school governing bodies and parent-teacher associations) have participation in the process. Communities, non-governmental organisations, the private sector and religious organisations can and do make valuable contributions but do not replace the government's responsibility for providing adequate facilities. Skelton (2014:4) conversely argues that it is now necessary to ensure that the right to a basic education is a justiciable right, and that governments failing to provide adequate quality education to all their citizens must be held accountable. Litigation can be an effective instrument in this challenge.

2.8.6 The value for money in the provision of school infrastructure

Unit costs of construction are important, considering value for money allows a greater emphasis to be put on how infrastructure supports other educational inputs, how buildings are used and maintained, where resources are targeted and what added value can be incorporated into the construction process. Issues to be addressed when considering value for money therefore include: targeting investments to where the need is greatest; coordinating programmes with other educational interventions; putting schools and communities at the centre of the process; using modest design standards which provide safe, attractive, durable and flexible learning environments and allow access for all; ensuring that there is a balance between new construction, renovation and maintenance; using procurement approaches that are simple, transparent and lower costs; focussing on the quality of construction; emphasising the provision of water, sanitation and hygiene promotion; increasing the efficiency of building use, and providing predictable, long term financial support, capacity building, monitoring and evaluation, and creating a 'child-friendly' enabling learning environment, with particular attention to the needs of girls (Bonner et al., ([sa]:2).

In the same context, Causta, Glewwe and Krause (2015:1) contend that governments of developing countries generally accept that education provides many benefits, and so they have steadily increased their funding of education. In Latin America, public spending on education as a percent of Gross Domestic Product (GDP) increased from 3.9 percent in 1995 to 4.4 percent in 2010, and some countries spend even more: Costa Rica, Cuba, and Jamaica, for example, all spend more than 6 percent of their GDP on education. International development agencies have also called for

greater resources to be devoted to education (OECD, 2013). Similarly, Murillo and Roman (2011:1) assert that the results of the research conducted by UNESCO on the incidence of school infrastructure and resources and its impact on the academic performance of primary education learners from 15 countries in Latin America indicate the need to continue investment in resources and facilities and to incorporate this factor into school effectiveness models that are meant to become universal.

In the final analysis, Zain (2013:303) affirms that effective teaching and learning in schools require adequate infrastructure. The goal of school infrastructure in education is to boost school attendance of learners, enhance staff motivation and improve academic accomplishments of the learners. The infrastructure includes classrooms, laboratories, halls, open fields, games equipment, dormitories and sanitation facilities. School infrastructure is, therefore, an essential component in ensuring successful education. Research by Mokaya (2013) confirms that improved academic achievement is associated with adequate space for classrooms, ample spacing in the libraries, properly equipped science laboratories, adequate water and sanitation facilities and active participation in co-curricular activities. The above-given literature review therefore formed the basis upon which this study was advanced.

2.9 CONCLUSION

In this chapter, I provided a broad discussion about the topic and that which has already been researched about it and other concomitant key issues. I also discussed the school infrastructure context nationally, in the rest of Africa and internationally. The review of literature helped surfaced the reality that equity of access to resource allocation cannot be claimed to have been attained as long infrastructural backlogs in non-fee-paying schools still prevail. The next chapter provided the discussion on theoretical framework that underpinned this study.

CHAPTER THREE

THEORETICAL FRAMEWORK FOR THE STUDY

3.1 INTRODUCTION

In Chapter 2, I provided a broad discussion about the topic and that which has already been researched about it and other concomitant key issues. I also discussed the school infrastructure context nationally, in the rest of Africa and internationally. In this chapter, I presented the theoretical framework for the study. The aim of the chapter was therefore to provide a discussion on theoretical framework on which this study was anchored, with a view to contextualising the pursuit of the study. As informed by the focus of the study, the theoretical framework comprised two dimensions namely, the management functions theory and the participatory governance theory respectively.

3.2 THE MANAGEMENT FUNCTIONS IN AN ORGANISATION (THE SCHOOL)

As the concept of management is the focus of investigation in this study, the explanation of its meaning in an organisation was necessary. According to Smit, Cronje, Brevis and Vrba (2011:8), management can be described as the process of planning, organising, leading, and controlling the scarce resources of an organisation to achieve the organisation's mission and goals as productively as possible. Oosthuizen (2011:56) describes management as the process of co-ordinating work-related activities so that the people performing them complete these activities effectively and efficiently. In each management function, the manager needs to apply all the management tasks, namely; planning, organising, leading, and controlling.

Oosthuizen (2006:85) contends that successful planning, organising, leading and control can only take place if secondary tasks such as motivation, communication and decision-making are effectively incorporated, with a specific focus on organisational, departmental and individual objectives. Cronje, Du Toit, Marais and Motlatla (2006:122) assert that management may be formally defined as the process whereby human, financial, physical and information resources are employed to reach the goals of an organisation. For Hellriegel, Jackson, Slocum, Staude, Amos, Klopper, Louw and Oosthuizen (2008:9) the concept management refers to the tasks or activities involved in managing an organisation: planning, organising, leading and

controlling. In the following sub-sections, the four management functions in an organisation, namely; planning, leading, organising and control were expounded.

3.2.1 Planning

Planning is generally described as deciding in advance what to do, how to do it, when to do it and who is supposed to do it (Ferreira, Erasmus and Groenewald, 2015:297; Wagner III and Hollenbeck, 2002:17; Oosthuizen, 2011:60). Cronje, Brevis and Vrba (2011:9) construe planning as the management function that determines where the organisation wants to be in future: in other words, its vision, mission and goals. Brevis (2008:41) adds that planning means determining the future position of the organisation and deciding on the strategies needed to reach that position. As for Cronje et al. (2006:157), planning, as the first element of the management process, is the setting of goals and the development of a plan of action to achieve the goals as productively as possible.

During the planning phase, the vision, mission and goals are determined as well as the resources needed for the task. Van der Walddt and Du Toit (2011:181) assert that planning is a basic management function which helps an organisation to keep up with change and helps managers to determine in advance what the organisation should achieve. Van der Walddt and Du Toit (2011:182) assert that planning is a basic process involving every manager to some extent and the purpose of a plan is to facilitate the achievement of an organisation's goal, mission and objectives. Planning is therefore aimed at determining future circumstances and identifying the measures needed to realise them. According to Van der Walddt and Du Toit (2011:183), the following advantages of planning can be identified:

- “Planning promotes co-operation between the various departments and individuals in an organisation;
- If objectives are formulated clearly and suitable plans are prepared, tasks and resources can be allocated so that everyone can contribute effectively to the achievement of the objectives;
- Planning gives direction to an organisation in that it helps formulate objectives and shape plans that indicate how to achieve the objectives; and

- Planning forces managers to look to the future, and this eliminates crisis management since management has to anticipate threats in the environment and take steps in good time to avert them”.

Van der Walddt and Du Toit (2011:185) argue that planning does not take place in a vacuum. Effective planning should always be linked with the achievement of objectives. The strengths, weaknesses, opportunities and threats of an organisation should be known before the actual planning process begins. Winfield, Bishop and Porter (2004:183) acknowledge that planning is one of the most important activities for a manager and that good planning is an essential part of the success of any organisation. Bolton (2005:2) provides a view of planning that emphasises widespread public participation, sharing of information with the public and reaching consensus through public dialogue rather than exercise of power.

For Smit et al. (2011:9), planning forces an organisation to be proactive, and not reactive. It forces management to consider possible changes that may occur and then prepare timeously for such changes. Planning ensures that managers and employees focus on the attainment of the same goals. Sound plans are essential when monitoring the progress of an organisation, as actual results can be measured against clearly stated goals and deviations from the goals can be identified and rectified. The Department of Basic Education (DBE) (2009:8) argues that good planning requires a clear sequencing of priorities. The previous lack of National Minimum Norms and Standards for School Infrastructure (herein referred to as National Norms and Standards) significantly contributed to the weak planning for the provision of core elements of the teaching and learning environment. A lack of National Norms and Standards also made it difficult for South Africa to improve equity in resource inputs and the associated education quality. It was for this reason that the national policy proposed a gradation of levels of provision of the teaching and learning environment which would be used to set provision benchmarks and targets to be reached over time.

3.2.1.1 Strategic planning

Van der Walddt and Du Toit (2011:285) regard strategic planning as an important tool of strategic management. Strategic planning involves establishing the direction of an organisation, such as the goal and mission, most important clients and role players,

barriers to be overcome and alternatives for rendering services. Strategic planning enables organisational managers to evaluate, select and implement alternatives for rendering effective service. It is interwoven in the whole management process. The main purpose of strategic planning is to improve the productivity and effectiveness of an organisation by analysing community needs, formulating organisational objectives and identifying steps to achieve these objectives. Oosthuizen (2007:41) and Brevis (2008:52) confirm that strategic planning includes developing a vision, mission statement and long-term objectives, and determining in advance how they will be accomplished. This is done with due consideration of the norms, values and philosophy of management and the employees of the organisation, its internal strengths and weaknesses and the external opportunities and threats in the organisational work environment. Weitsz (2008:100) states that strategic planning enables the organisation to choose the best goal and decide how the organisation will be run to accomplish the goal. Smit et al. (2011:134) assert that strategic plans are designed to ensure that the organisation as a whole is aligned with the changing external environment. Planning at strategic level includes creating a vision of the future for the entire organisation; translating the vision into a realistic mission statement; translating the mission statement into measurable long-term goals; and choosing the strategies to attain the preceding objectives.

Smit et al. (2011:9), Brevis (2008:52) and Rudansky-Kloppers (2011:87) contend that strategic plans are developed by top management in the organisation. These scholars maintain that the strategic plans, including the strategic goal, serve as the focal point for all other plans and goals. The strategic plan must be cascaded down into medium-term tactical plans and goals. These must in turn be translated into short-term operational plans and goals. The operational plans are made by lower management, and these are shorter term plans which might have daily, weekly and monthly schedules. A hierarchy therefore depicts these three types of plans and goals. Planning and goal formulation are thus not only concerned with what the organisation has to do, but also how it is to be done.

3.2.1.2 Budgeting

Smit et al. (2011:146) and Lussier (2015:426) state that, as a planning tool, a budget is a financial plan that deals with the future allocation and utilisation of resources over

a given period. Although budgets are typically thought of in financial terms, they are also relevant in terms of the allocation and utilisation of raw material, labour, office space, computer time, and the like. A budget can be seen as a tool that managers use to translate future plans into quantitative terms, as rands and cents. Smit et al. (2011:147), Lussier (2015:427) and Bloom and Boessenkool (2006:188) maintain that although budgeting is an important part of planning, it also serves as a control mechanism for evaluating organisational activities. A budget exercises control in two ways: it sets limits on the number of resources that can be used by a department or unit; and it establishes standards of performance against which future events will be compared. Generally, budgets help managers to co-ordinate resources and projects, and they help to define the standards needed in all control systems. They provide clear guidelines on an organisation's resources and on their utilisation. Budgets also facilitate performance evaluation of managers by assessing a unit, department or section against specific standards (Smit et al., 2011:427).

Bloom and Boessenkool (2006:189) and Weitz (2008:100) confirm that the budget is one of the most important planning and control mechanisms of an organisation. A complete budgetary system can therefore lead to effective planning, provided it is based on realistic assumptions. The compilation of a budget starts with a forecast of future income, without which no budgeting is possible. A complete budget that links with an organisation's objectives enhances the decision-making processes and has the following uses (Bloom and Boessenkool, 2006:189):

- "It serves as a planning tool, and its compilation normally leads to a refinement of the short-term plans;
- It is a means of conveying policy to subordinates who are responsible for implementing policy-specific guidelines;
- It is an instruction to subordinates and delegates the authority they need in order to act;
- It provides a means of co-ordination within and among departments; and
- A budget is of great value to newly appointed managers who need to settle into their new work environment".

Planning which is not informed by the available budget would therefore be tantamount to a futile exercise on the part of managers in an organisation.

3.2.1.3 The importance of planning

As indicated in the preceding sections, planning forms the basis of all the tasks of management because it gives the organisation its direction and determines the actions of management. Without planning, organising would be haphazard, and it would be extremely difficult to lead subordinates and explain clearly where the organisation is heading. Moreover, any control measures would only be subjective, as there would be no norms and standards against which to judge actual performance. Cronje et al. (2006:141) state that planning is indispensable for the following reasons:

- “Planning gives direction to the organisation in the form of goals and in the form of plans, indicating how to set about achieving them;
- Planning promotes co-ordination between the various departments and employees in the organisation - once goals have been clearly formulated and plans have been developed, tasks and resources can be allocated so that everybody involved is able to contribute effectively to the realisation of the goals;
- Scarce resources can be channelled and utilised rationally, which is necessary for the productivity and ultimate success of the organisation;
- Planning ensures that the organisation keeps abreast of technological development. The influence of modern technology on contemporary organisations, especially in the development of complex products (modern physical structures in a school) using complicated processes, makes heavy demands on planning;
- Lastly, planning promotes cohesion amongst the various functional management areas, such as finance or communication, in an organisation”.

According to Rudansky-Kloppers (2011:77), planning is necessary in an organisation because it helps the organisation to discover new opportunities and to anticipate and avoid future problems. Each organisation should look to the future and anticipate changes and reflect on how these changes will influence the organisation; planning provides the road map that guides the organisation where to go and how to get there. Planning helps the different functional areas of an organisation to work together; by creating desirable changes, improving productivity and maintaining stability. Planning improves the chances of achieving organisation's goals; and through the realisation

of the organisation's goals, planning enables the organisation to achieve long-term growth, maintain success, and survive. Planning is therefore a strategy, a cluster of decisions concerning what organisational goals to pursue, what actions to take, and how to use resources to achieve goals (Jones, George and Hill, 2008:9).

3.2.2 Organising

In managing an organisation, managers have to perform the task of organising. Smit et al (2011:9) proclaim that organising is the second step in the management process. Once the goals and plans have been determined, managers have to allocate the organisation's human and other resources to relevant sections. DuBrin (2009:8) explains that organising is the process of making sure the necessary human and physical resources are available to carry out a plan and achieve organisational goals. Organising involves the structuring (arranging), co-ordination and directing of the organisation's resources in order to achieve the set objectives (Ferreira, Erasmus and Groenewald, 2015:297; Oosthuizen, 2011:61; Hellriegel, Jackson, Slocum and Staude, 2007:14). According to Lussier (2015:191), structuring refers to arrangement of positions in the organisation into work units or departments and the interrelationships among these units or departments. In this context, organising typically involves developing a framework or organisational structure to indicate how and when employees and other resources should be deployed in order to achieve goals (Brevis, 2008:41). The success of the organisation lies in directing the different resources towards the achievement of a common set of goals.

According to De Beer (2011:93), organising involves combining activities so that organisation's goals can be achieved. As a management task, organising is mainly a matter of classifying activities, putting them into divisions, creating posts in these divisions, and deciding on employees' jobs, responsibilities and authority. Tasks, roles and responsibilities have to be defined to ensure that each person knows what he or she is responsible for within the organisation (Smit et al., 2011:11). According to Cronje et al. (2006:158), organising means that managers have to develop mechanisms to facilitate the implementation of the strategy or plan. Arrangements have to be made to determine what activities will be carried out, what resources will be employed, and who will perform the various activities. This involves the distribution of tasks among employees, the allocation of resources to persons and departments,

and giving the necessary authority to certain employees to ensure that the tasks are in fact carried out. Moreover, there must be communication, cooperation and co-ordination between the individuals and the departments or sections performing tasks.

Managers oversee all the resources of an organisation, including humans, money, time, equipment and materials, by means of the process of organising. By organising effectively, managers can better co-ordinate human, material, and information resources. This task involves delegating (passing on) work to other employees so that they can carry out the necessary activities effectively, and act according to their set authority and responsibilities (Oosthuizen, 2011:61). Van der Walddt and Du Toit (2011:188) explain that organising means classifying and grouping functions and allocating groups of functions to employees in an orderly pattern so that employees aim at achieving the organisational objectives. At a school level, micro-organising entails organising within the organisation and refers to the division and allocation of functions to employees. Micro-organising thus involves, amongst other things; horizontal division of work, assignment and delegation of authority, coordination, setting channels of communication, and control (Van der Walddt and Du Toit, 2011:188).

3.2.2.1 Co-ordination

Van der Walddt and Du Toit (2011:192) define co-ordination as a process which ensures that the activities and personnel of public institutions (e.g., schools) across the spectrum of an organisation (e.g., the Department of Basic Education) do not overlap and that the organisational units work together to achieve the objectives set by legislation, which in the case of education is the Schools Act. At a micro-level, such as a school, managers and school governing bodies (SGBs) are responsible for co-ordinating all activities of the various divisions within an organisation so that everyone strives to achieve the objectives without wasting limited resources which could emanate from overlapping. Co-ordination can therefore be described as putting together the parts of an organisation to achieve the outcomes one wants, in the most efficient way (De Beer, 2011:95). Co-ordination covers all management functions and is one of the most important principles in the organising process.

Smit et al. (2011:221) and Lussier (2015:188) explain that co-ordination ensures that all departments, sections, and individuals within the organisation work together to

accomplish the strategic, tactical (medium-term) and operational goals of the organisation. Co-ordination entails integrating all organisational tasks and resources to meet the organisation's objectives. Similarly, Cronje et al. (2006:169) indicate that without co-ordination, individuals and departments lose sight of the organisation's primary goals and of their part in that effort. Therefore, co-ordination is the synthesis of separate parts into a unity, and as such it is the binding factor in the managerial process. As such, the co-ordinating process is about ensuring that all of the resources available are arranged appropriately, function effectively and are in harmony in order that the plan can be realised (Martin, 2008:64).

Oosthuizen (2007:89), De Beer (2011:96) and Smit et al. (2011:221) identify three parts to co-ordination, namely; the chain of command; unity of command; and span of control. The chain of command denotes the line of authority that flows from the top of the organisation down to any employee. This chain clarifies relations, avoids confusion and tends to improve decision-making and communication. Smit et al. (2011:221) state that a clear, unbroken chain of command should link every employee with someone at a higher level, all the way to the top of the organisation. The unity of command means that each employee should answer to only one immediate supervisor. This is premised on the fact that if each employee has only one manager, this will make it easier for the employee to understand what is required of her or him. However, matrix organisations use a dual line of command as they believe that this helps in co-ordinating across functions and between different locations. With regard to schools, the principal, for example, is not only responsible for executing policies of the provincial department of education, but also is responsible for executing policies determined by school governing bodies. It is in this duality of accountability frameworks where the management of infrastructure rests in a school situation. This aspect was further discussed in detail later in the chapter. The span of control refers to the number of direct subordinates reporting to any manager (Van der Walddt and Du Toit, 2011:189; Smit et al., 2011:221).

Van der Walddt and Du Toit (2011:206) highlight that the following factors can impede co-ordination in the organisation: low employee morale with poor motivation; lack of cooperation; poor relations between individuals, divisions or department; exaggerated importance or urgency of one task, which could mean that individuals or departments focus on completing that task and consequently regard the task or

activities of others as less important; poor planning; and ineffective communication. As mitigating factors, Van der Walddt and Du Toit (2011:207) argue that plans and objectives achieve co-ordination by ensuring that all units direct their efforts at the same main organisational goals. Management information leads to better internal communication, which in turn leads to better co-ordination. Other factors leading to the increase in co-ordination potential are lateral relationships and direct contact between employees (Van der Walddt and Du Toit, 2011:207).

3.2.2.2 Delegation

Smit et al. (2011:223) refer to delegation as the process of assigning responsibility and authority for attaining organisational goals. Responsibility and authority are delegated down the chain of command from a person at a higher level in the organisation to an employee at a lower level. Delegation is practically a process through which managers assign a portion of their total workload to others. In this process, authority is also passed on to an employee, who then has the authority to deploy the necessary resources in order to complete the delegated task. De Beer (2011:99) construes delegation as the process by which managers allocate to subordinates the responsibility and authority to make decisions about goals and carry them out in certain situations. When delegating, a manager can establish measurable goals and standards to which the subordinates agree. Hellriegel et al. (2008:211) explain that delegation of authority is the process by which managers assign to subordinates the right to make decisions and act in certain situations. Thus, in addition to assigning a task to a subordinate, the manager also gives the subordinate adequate decision-making power to carry out the task effectively. Delegation of authority occurs in conjunction with the assignment of responsibilities.

Smit et al. (2011:236) maintain that delegation is important from the organisation's perspective as it promotes succession planning. Should the manager retire, resign, or get promoted to a higher level, a subordinate could more easily be able to move into the manager's position. From a manager's point of view, delegation is used to enable the manager to get more management work done. By participating in more challenging jobs, subordinates learn to develop their decision-making and problem-solving skills and, in the process, improve their managerial skills. At a school level, the school governing body (SGB) and principal can delegate the management of

infrastructure to any School Management Team (SMT) member to take charge of the renovation or maintenance engagements on their behalf. The SMT member, e.g., Head of Department (HOD), can be delegated to lead the Maintenance Committee on behalf of SGB and principal.

3.2.2.3 The importance of organising

Organising is an integral and indispensable component of the management process (Cronje et al., 2006:159). Without it, the successful implementation of plans and strategies is out of the question because of the absence of a systematic allocation of resources and individuals to execute the plans. According to Cronje et al. (2006:159), the following are the reasons why the organising function is important in an organisation:

- “Organising entails a detailed analysis of work to be done and resources to be used to accomplish the aims of the organisation. It is through organising that tasks and resources, and methods or procedures, can be systematised;
- Proper organising ensures that the joint and co-ordinated efforts of management have a much greater and more effective result than the sum of individual efforts;
- Organising divides the total workload into activities that can comfortably be performed by an individual or a group;
- Tasks are allocated according to the abilities or qualifications of individuals, thus ensuring that nobody in the organisation has either too much or too little to do, with anticipated ultimate result of higher achievement; organisation promotes the productive deployment and utilisation of resources;
- The related activities and tasks are grouped together rationally in specialised departments in which experts in their particular fields carry out their given duties; and
- The development of an organisational structure results in a mechanism which co-ordinates the activities of the whole organisation into complete, uniform, harmonious units”.

The preceding section serves as an indication that no matter how good the management plans may be, if the organisation fails to employ, co-ordinate and utilise the available resources for tasks and activities to be promptly carried out, such plans

are highly unlikely to be achieved. Leading as a management function would be discussed.

3.2.3 Leading

Smit et al. (2011: 315) argue that leadership is different from management. The two are distinct and complementary sets of management activities. A person, for example, can be a manager, a leader, both, or neither. For success in an increasingly complex work environment, it is necessary to be both. Both sets of activities are necessary in order to increase the performance of the organisation. Successful organisation therefore seeks out good managers with the leadership potential to develop into leader-managers. Once organisations understand the fundamental difference between management and leadership, they can begin to develop their top managers to provide both leadership and management expertise. Leading and leadership have in this study been used interchangeably as management functions (Smit et al., 2011: 315).

Ferreira et al. (2015:297), Robbins and Decenzo (2009:7) and Hellriegel et al. (2007:11) are unanimous in that leading focuses on directing, communicating, guiding and motivating the human resources in the organisation. Managers need to act as leaders in order to influence employees and subordinates to perform with the maximum application of their abilities in order to achieve set objectives (Ferreira et al., 2015:297). Smit et al. (2011:309) argue that leading is the management function that activates employees to do things willingly. Leading refers to directing the human resources of the organisation and motivating them in such a way that they will be willing to work productively to reach the organisation's mission and goals. This means managers in the organisation must know how to motivate their employees. Managers are responsible for getting things done through other people - they collaborate with their superiors, colleagues, and subordinates, with individuals and groups, in order to reach the goals of the organisation. Leading the organisation means making use of influence and power to motivate employees to achieve organisational goals (Smit et al., 2011:309).

Van der Waldt and Du Toit (2011:196, 2008:41) and DuBrin (2009:8) maintain that leading is the process of influencing the employees – who also are resources – to work willingly towards achieving organisational goals. It is the process of leading and

inspiring the employees to carry out task-related activities of the group. Leaders use their power and influence to do this. The success or failure of the organisation's functions starts with the vision and leadership skills of top management, then managers and supervisors. Smit et al. (2011:311) argue that leadership is the process of directing the behaviour of employees towards reaching the organisation's mission and goals. It involves taking the lead to bridge the gap between formulating plans and reaching goals; that is, translating plans into reality. Leadership is, therefore, the activity that infuses energy into the organisation to activate its employees and other resources to get things moving and keep them in motion.

More specifically, according to Smit et al. (2011:310), leadership entails formulating the organisation's vision, mission, strategic goals, and strategies and communicating these to employees; giving orders and instructions to employees; deliberating with them and supervising their work; taking steps to improve their performance; disciplining them and dealing with conflict. As a leader, the manager needs to communicate his or her vision and expectations to employees and in the process, inspire and motivate them. From a management perspective, leadership can thus be defined as influencing and directing the behaviour of individuals and groups in such a way that they work willingly to pursue the mission and goals of the organisation (Smit et al., 2011:310).

3.2.3.1 Motivation

Motivation is generally regarded as the most important component of leadership. Management should be able to encourage employees to work together to achieve the objectives of the organisation. Activities have to be carried out and leaders have to instil a zest to employees to take action. Leadership depends largely on the ability to motivate, influence, lead and communicate with subordinates (Van der Walddt and Du Toit, 2011:209). Robbins, DeCenzo and Coulter (2015:331) proclaim that motivation is the process by which a person's efforts are energised, directed, and sustained towards attaining a goal. For Hellriegel et al. (2008:267), motivation is any influence that triggers, directs or maintains goal-directed behaviour.

DuBrin (2009:371) explains that motivation refers to two different but related ideas. From the standpoint of the individual, motivation is an internal state that leads to the pursuit of the objectives. Personal motivation affects the initiation, direction, intensity,

and persistence of effort. For example, a motivated employee gets going, focuses effort in the right direction, works with intensity, and sustains the effort. From the standpoint of the manager, motivation is the process of getting employees to pursue organisational objectives. Motivation is the expenditure of effort to accomplish results. The effort results from a force that stems from within the person. However, the manager or team leader, or the group, can be helpful in igniting the force.

Employees need motivation to achieve an acceptable level of performance. Motivation is that driving force that causes, channels and maintains human behaviour. It is an inherent force that propels an individual to perform beyond expectation. Managers should therefore have a basic understanding of the reasons for human conduct in order to influence employees' actions. However, it entails a psychological process which cannot be observed or measured directly, but which can only be deduced from human behaviour (Van der Walddt and Du Toit, 2011:196).

3.2.3.2 Communication

Brevis (2008:68) and DuBrin (2009:408) unanimously contend that communication is an integral part of all management functions. In order to plan, organise, lead and control, managers have to communicate with their subordinates. According to DuBrin (2009:408), effective communication is the manager's potent tool for inspiring employees to take responsibility for implementing the vision of the organisation. Decision making necessitates communication, and management by objectives relies heavily on communication skills. Communication can thus be described as the process of transmitting information and meaning. This process is used when there is something that the sender wants the receiver to know, understand or act upon. For example, top management (sender) may want to convey to middle management (receiver) what the new strategy for the next few years will be (Brevis, 2008:408).

DuBrin (2009:409) explains that communication is the process of exchanging information by the use of words, letters, symbols, or non-verbal behaviour. Similarly, Hellriegel et al. (2008:323) define communication as the transfer and exchange of information and understanding from one person to another through meaningful symbols. It is a way of exchanging and sharing ideas, attitudes, values, opinions, and facts. DuBrin (2009:409), however, argues that sending messages to other personnel, and having the messages interpreted as intended, generally proves to be

complex and difficult. The difficulty arises because communication depends on perception. People perceive words, symbols, actions, and even colours differently, depending on their background and interests. Brevis (2008:71) highlights that organisational communication flows in four directions: downwards, upwards, horizontally and laterally.

Downward communication starts with top management and flows down through the management levels to employees. The major purpose of downward communication is to provide subordinates with information on organisational goals, objectives, strategies and policies. When employees send a message to their superiors they are using upward communication. The main function of upward communication is to supply information to the upper levels about what is happening at the lower levels. Middle management plays an important role in upward communication, as these managers usually filter information before it reaches top management. Horizontal communication occurs between employees on the same level of the hierarchy and it is intended to improve co-ordination of the work effort. As a hierarchical structure, communication about school infrastructure in the provincial department of education originally flows downwards from top management via districts to school principals and SGBs. Conversely, should the schools have concerns or requests about additional support on infrastructure, communication flows upward from school principals and SGBs to the district officials, who might filter that information before it reaches top management at provincial Head Office. Horizontal communication occurs when, for example, the infrastructure section consults with finance or procurement sections at the same level of the hierarchy, be it at provincial or district level.

Brevis (2008:72) argues that when the receiver understands the communication, the communication cycle is complete. Robbins, DeCenzo and Coulter (2015:387) contend that the importance of effective communication cannot be overemphasised, as everything the manager does involves communicating. A manager cannot formulate strategy or make a decision, for example, without information, and that information has to be communicated. At a school level, in taking decisions about infrastructure projects, the principal and the SGB have to be informed about the current financial situation and organisational needs as prioritised by top management. The amount of budget available, for example, becomes a determining

factor in any decision to be taken, and thus communicated by the school principal and the SGB chairperson to the rest of the school community.

3.2.3.2.1 Organisational communication networks

Brevis (2008:70) asserts that there are two primary communication networks: the formal communication network and the informal communication network. The formal network is communication that follows the hierarchical structure of the organisation, or the “chain of command”. It follows the formal, established, official lines of contact. In other words, it follows the prescribed path of the hierarchical chart and tends to be explicit in terms of “who should be talking to whom about what”. The informal network involves communication that does not follow hierarchical path or chain of command. It refers to links that have grown out of relationships between employees and management and that have little or no correlation with the formal organisational chart.

Botha, De Beer, Ferreira, Maritz, Steffens and Hewett (2007:158) distinguish between external communication and internal communication. External communication refers to the flow of information from the organisation to its external stakeholders, such as clients, government, labour unions or suppliers. Internal communication is the flow of communication within the organisation itself. Internal communication takes place within each function and also between the different functions. The organisational communication that is planned and organised and aims to serve the objectives of the organisation is called formal communication. The organisation may use a system of weekly meetings, daily e-mails and memos, or a monthly report, for example, to effect formal communication (Botha et al., 2007:67). Hellriegel et al. (2008:323) contend that in an organisation, managers use the communication process to carry out their four tasks, namely; planning, organising, leading, and controlling. To do so, they gather information from both inside and outside the organisation. The manager’s communication role is purpose-directed and includes strategic conversations, and use is made of different communication methods such as upward, downward and horizontal channels, personal networks, and non-verbal communication.

3.2.4 Control

Controlling, in the final analysis, constitutes a link between the four basic management tasks. Ferreira et al. (2015:297), Wagner III and Hollenbeck (2002:20), Robbins and Decenzo (2009:7) and Smit et al. (2011:9) concur that controlling is the process of developing performance standards according to set objectives as developed during the planning process, and measuring the actual performance of employees and teams in order to establish whether they are performing according to the standards set. In South Africa, the management of infrastructure in schools has to adhere to National Minimum Norms and Standards for School Infrastructure. According to the DBE (2009:7), one of the key challenges that prompted the development of the National Norms and Standards is that current provision does not provide a physical teaching and learning environment required to sufficiently support the implementation of core sector policies.

The National Norms and Standards are therefore meant to better facilitate the implementation of core sector policies whose success depends on the adequacy of the physical teaching and learning environment. They are also meant to facilitate the actualisation of key sector policy tenets — such as equity, quality, relevance, efficiency and values. All other departments that are responsible for National Norms and Standards for the provision of basic services (water, electricity, sanitation, transport, etc.) as well as for construction standards would have to support the implementation of these norms through integrated planning. Regarding responsiveness to curricula and pedagogy, the current physical teaching and learning environment has been found to be inadequate to facilitate effective delivery of curricula, co-curricular activities, progressive pedagogy implied in National Curriculum Statement (NCS), effective learning, and community needs. Learners and teachers are therefore prime clients, while communities are secondary clients whose needs are to be responded to through these National Norms and Standards (DBE, 2009:7).

The DBE (2009:7) articulates that in order to ensure equity of provision and to aid the setting of priorities, the National Norms and Standards provides for a gradation of basic safety, minimum functional, optimum functional and enrichment norms and standards. This gradation of a functional level of provision of resource inputs would

be used as benchmarks for adequacy of provision further down the line during the planning stage for the intended levels of provision. According to this gradation, schools would be classified as meeting norms and standards of different levels of functionality during their strategic planning, the DBE would determine a target date by which schools will have to meet each level of provision with an aim of having all schools reach an optimum level of provision for the physical teaching and learning environment by 2030, or earlier. Schools that do not meet basic safety norms would not be tolerated and would need to be prioritised for immediate attention failing which they could be subjected to closure in accordance with Section 33 of the South African Schools Act.

Basic Safety Norms and Standards are therefore regarded as emergency norms and all efforts would be made not to have any school at this level beyond 2012-2013 financial year. A review of literature, however, confirms that this deadline has not been met yet. Mestry and Ndhlovu (2014:1), for example, contend that while the intentions of the state to address equity of provision are laudable, there is a long way to go in achieving good quality education, particularly for marginalised and disadvantaged schools. A number of schools in poor rural and urban working-class communities still suffer the legacy of large classes, deplorable physical conditions and the absence of learning resources. The DBE (2009:9) asserts that the previous lack of National Norms and Standards has been found to make it difficult for the DBE and provincial education departments (PEDs) to effectively control and manage the costs of provision and to facilitate efficient use of resources. The National Norms and Standards would therefore enhance cost management and resource efficiency as elaborated under Policy Statement No 4 of the Basic Safety Norms and Standards. They would guide the development of standardised designs, which in turn would guide the development of cost maps across the diverse contexts of South Africa.

Van der Walddt and Du Toit (2011:201) and DuBris (2009:8) define control as the process that ensures that actual activities correspond with planned activities. This is an ongoing process that follows the planning and organising phases. The actual results obtained are compared with the planned results and corrective action is taken where necessary. Nieman and Bennet (2007:103) state that control as the final primary management task links up directly with planning and allows for effective leadership within the set organisational structure. Control is a management task that

ensures the co-ordination and effective functioning of all the organisational activities, so that formulated organisational objectives are implemented and pursued according to plan. Oosthuizen (2011:159) regards control as part of an active management process that is used to monitor planning and support leadership. It is the process of establishing and implementing mechanisms to ensure that organisational goals are reached. Controlling ensures that the performance and behaviour of individual employees, groups and teams, as well as the rules and procedures of the organisation, meet the set standards.

Smit et al. (2011:439) affirm that control is a continuous process and is interwoven with planning, organising, and leading. It is probably the most important link in the management cycle. It is the final stage in the process because it assesses the management effort; the knowledge, experience, information; and facts acquired and collected during the control process become the most important inputs in the next round of planning to keep the management process on course. Control also complements planning because it shows, when deviations are encountered, that plans and even goals need to be revised. Smit et al. (2011:439) maintain that control is therefore the regulatory task of management in that it correlates action with plans. It supervises and measures the progress made towards achieving a particular goal. Jones, George and Hill (2008:313) define controlling as the process whereby managers monitor and regulate how efficiently and effectively an organisation and its members are performing the activities necessary to achieve organisational goals. In controlling, managers monitor and evaluate whether their organisation's strategy and structure are working as managers intended, how they could be improved, and how they might be changed if they are not working. Control means keeping an organisation on track and anticipating events that might occur.

3.2.4.1 The importance of control

Van der Waldt and Du Toit (2011:201) assert that the reasons for the implementation of effective control systems include the following:

- “They lead to standardised actions to increase efficiency;
- Control systems evaluate top management's efficiency in planning;
- They help to prevent malpractices and waste;

- They encourage delegation, as subordinates to whom authority is delegated can be monitored better; and
- They lead to performance appraisal of all employees”.

In addition, Smit et al. (2011:439) provide the following reasons for the importance of control:

- “Control is exercised to ensure that all activities at all levels of the organisation are in accordance with the organisation’s mission and goals;
- Control is applied to ensure that the organisation’s resources are deployed in such a way that it achieves its goals;
- Tight control is likely to result in better quality;
- Control enables the management to cope with environmental change and uncertainty; and
- Control can help to minimise costs and limit the accumulation of errors”.

Based on the preceding management analysis, this study undertook to determine if the basic functions of management were honoured in managing infrastructure in South African non-fee-paying schools.

3.3 PARTICIPATORY GOVERNANCE THEORY: A RATIONALE FOR THE PARTICIPATION OF A SCHOOL GOVERNING BODY IN MANAGEMENT OF SCHOOL INFRASTRUCTURE

As this study was also anchored on participatory governance theory as its theoretical framework, the following discussion had to ensue. In terms of Section 20(g) of the Schools Act, the school governing body (SGB) is required to administer and control the school’s property, and buildings and grounds occupied by the school, including school hostels, but the exercise of this power must not in any manner interfere with or otherwise hamper the implementation of a decision made by the Member of the Executive Council (MEC) or provincial Head of Department (HOD) in terms of any law or policy. It is against the backdrop of this policy provision that the following discussion on participatory governance theory is provided.

The rightful place of SGB in school management matters is underpinned by the participatory governance theory. The participatory governance theory links to the Preamble of the Schools Act which inter alia states that the aim of the Schools Act is

to “uphold the rights of all learners, parents and educators, and to promote their acceptance of responsibility for the organisation, governance and funding of schools in partnership with the State”. Participatory governance theory also links to the directive principles of the National Education Policy Act, 27 of 1996, according to which independent and critical thought shall be encouraged (Section 4(i)) and broad public participation in the development of education policy and the representation of stakeholders in the governance of all aspects of the education system shall be ensured (Section 4(m)). This notion of ‘shared responsibility’ is manifested in the Schools Act in that it provides for the provisioning of ‘public schools’ rather than ‘state schools’ (Du Plessis, 2020:166). Furthermore, Sub-Sections 195(1)(e) and (g) of the Constitution of the Republic of South Africa, 1996 stipulate that in public administration, people’s needs must be provided for, and the public must be encouraged to participate in policy-making; and public administration must be accountable.

According to Fischer (2012:1), participatory governance is a variant or subset of governance theory that puts emphasis on democratic engagement, in particular through deliberative practices. Participatory governance seeks to deepen citizen participation in the governmental process by examining the assumptions and practices of the traditional view that generally hinders the realisation of a genuine participatory democracy. Hollard (2013:2) describes participatory governance as a means to progressive realignment of institutions in favour of the poorest. Socially excluded groups’ access to entitlements within the policy process is mediated by governance systems. Speer (2012:2379) characterises participatory governance mechanisms as follows: “They involve citizens in decision-making over the distribution of public funds between communities and the design of public policies, as well as in monitoring and evaluating government spending”.

Beckmann and Prinsloo (2009:1) posit that the establishment of school governing bodies represents a significant decentralisation of power in the South African school system. The South African Schools Act, 84 of 1996 plays an important role in encouraging the principle of partnership in and mutual responsibility for education. With the introduction of school governing bodies (SGBs), the Schools Act aimed to give effect to the principle of the democratisation of schooling by affording meaningful

power over their schools to the school-level stakeholders, including the governors serving on SGBs.

Wampler (2012:669) contends that participatory governance can be viewed as the formal extension of public voice into political decision-making beyond the ballot box, “the devolution of decision-making authority to local-sanctioned policy-making venues jointly controlled by citizens and government officials”. Skyline College (2020:1) confirms that participatory governance is based upon individuals having a voice in decisions that affect them. It is designed to lead to effective participation in decision making that unites constituencies, produces an improved work environment, and draws upon the strength of diversity. Wampler and McNulty (2011:3) maintain that participatory governance brings new actors into incremental decision-making processes; citizens deliberate over and vote on the allocation of public resources and the use of state authority. The adoption of participatory governance is often based on the perception that representative democracy is able to improve the quality of state performance, educate and empower citizens, and make reasonably good use of scarce public resources. The adoption of participatory governance is not a rejection of representative democracy, rather it represents an effort to redesign institutions and improve the quality of democracy, social well-being, and the state.

3.3.1 Decentralisation as an indispensable feature of participatory governance

Decentralisation is a worldwide trend that has featured prominently since the latter part of the twentieth century and has become an accepted component of modernisation. It has become a prominent strategy by governments in the different sectors of society, also for education and large-scale education reforms (Du Plessis, 2019:47). Conyers (2007:19) explains that in order to achieve rapid economic and social transformation, most countries in Sub-Saharan Africa resorted to centralisation during the period immediately after independence. This initial period of centralisation was, however, followed by a movement towards greater decentralisation “as a means of enhancing democracy and citizen participation by governments as a way of reducing the role, and in particular the expenditure, of the central government” (Conyers, 2007:19). In South Africa the worldwide trend of decentralisation has coincided with political and social reforms which have intensified the notion that the education system should be democratised and should allow for greater participation,

contrary to the general trend in most Sub-Saharan countries immediately after independence (Du Plessis, 2019:47).

According to Tabatadze (2020:1), decentralisation of the management system is a key feature of country's degree of democratization. It implies delegation of rights, institutionalisation of local self-government, access to public service, and involvement of the population in the decision-making process. All this requires the separation of powers between levels of government, the liberalisation of these processes, and the expansion of local self-government functions. Besides being one of the methods of society's democratic organisation, decentralisation should be understood as the basis of power delegation norms from government to society. For Sayed (2002:37), decentralisation "redistributes, shares and extends power and enhances participation by removing centralised control over educational decision making".

Cishe and Jadezweni (2002:41) argue that while decentralisation is not a panacea for all the challenges facing education, it is only through it that people can enjoy opportunities to participate more directly in and be accountable for their decisions. Decentralisation is geared towards promoting participatory local governance, and some of the democratic principles enshrined in South African constitution transform theory to practice. These principles include equity, equality, and mass participation, to mention but a few. Decentralisation in education promises to be the best option to realise these noble principles. Furthermore, decentralisation in education has become a key aspect of educational restructuring in the international arena. It is at the centre of the current wave of education reform everywhere and has become a means to allow for maximum participation and more effective policy implementation.

According to Du Plessis (2020:167), the main motivation for decentralisation in education is that local decision-making takes local characteristics into consideration. This resonates with the preamble of the National Education Policy Act, where it is envisaged that the national education system must be transformed into one that serves the needs and interests and upholds the fundamental rights of all the people in South Africa. In a similar vein, the preamble of the Schools Act envisages the protection and advancement of South Africa's diverse cultures and languages. Robinson (2015: 471) explains that in education, decentralisation has been touted as a means to empower schools by granting them more autonomy. It is thus a way or

response to the problems faced by the public in educational systems. South Africa is no exception to this move. The process of educational reform in South Africa is characterised by educational decentralisation. For Cishe and Jadezweni (2002:41), decentralisation shifts decision-making from the central administration to a smaller decision-making arena like the school.

Naidoo (2002:46) and Dyer and Rose (2005:105) argue that educational decentralisation is often a manifestation of wider administrative and political decentralisation. It is a complex process that can result in major changes in the way school systems are organised, make policy, generate revenues and spend funds, manage schools, develop and deliver the curriculum among other functions. It often involves an explicit challenge to the role of the State in education, precipitating dynamic tensions in different contexts. Educational decentralisation may range from moderate, where the centre turns authority for delivery of education to local governments (provinces), to radical decentralisation in which the centre turns authority for delivery of education to local schools. The decentralisation of education in South Africa tends to align with the latter, radical model, which does not necessarily leave management of education strictly in the hands of local governments but of the local communities through SGBs.

According to Cishe and Jadezweni (2002:41), the role played by decentralisation of education cannot be undermined. It is understood worldwide that decentralisation strengthens democracy as it transfers power from central to local bodies. It brings the decision-making process closer to people. Doing so is beneficial as implementation of any innovation is possible if those at the grass-roots level support it. Decentralisation also serves as a strategy to strengthen the local culture and the community as a whole. For Dyer and Rose (2005:105), decentralisation signifies a shift in location of those who govern and the devolution of some authority and institutional autonomy to the local school and community level (Fullan and Watson, 2000:453). According to Makara (2018:23), “meaningful decentralisation involves organised dispersal of power in society in the political, social and the economic sense”. The implication is that the various actors in society must be afforded the authority and freedom to participate meaningfully in governance (Makara, 2018:23).

Buys, Du Plessis and Mestry (2020:1) contend that with the promulgation of the South African Schools Act of 1996, public education in South Africa was decentralised and communities were made responsible for school governance. This placed the responsibility on school governing bodies (SGBs) to take all measures within their means to supplement state funding for the acquisition of adequate human and physical resources. School communities were given the responsibility for public school governance. Parents, teachers, non-teaching staff and learners (in secondary schools) are democratically elected onto the SGB. The principal, by virtue of his/her position, also serves on the SGB. The SGB's functions include designing and implementing policies, managing the school's finances and giving the necessary support to the school in their quest to provide effective teaching and learning.

In many countries decentralisation has served to be a result of a call for community control of schools. The recognition of decentralisation plays a role in improving the relations with the community. Decentralisation is a way to encourage greater awareness among learners, thereby adapting education to the characteristics of the population being catered for. It promotes partnerships between schools, parents and learners. Two key dimensions of a decentralised education system are policy control and policy implementation. The central government may delegate the powers of implementation to schools while it retains policy control, which involves curriculum and financing. In the case of South Africa, the national department is responsible for policy formulation whereas provinces are responsible for implementation at school level (Cishe and Jadezweni, 2002:42).

3.3.1.1 Effects of decentralisation

Cishe and Jadezweni (2002:42) assert that the process of decentralisation has an impact on the system of education in many ways. It can be proved beyond doubt that decentralising education improves the quality of teaching and learning as decisions are made at the point of implementation. This empowering of authorities results in a more efficient system because it reduces overlays of bureaucratic procedures and motivates education officials to be more productive. The shifting of financial responsibility away from the central government to provinces, districts and schools, as is the case in South Africa gives provinces more autonomy. Although it is maintained that decentralisation could address the principle of equity, it cannot be

denied that in many cases it exacerbates rich - poor gaps. Where there is an abundance of financial and human resources, it is possible to make greater use of decentralisation than where resources are few. To mitigate the identified gaps, Du Plessis (2020:168) asserts that decentralisation “redistributes, shares and extends power and enhances participation by removing centralised control over educational decision making”. It involves a redistribution of political authority, resources, administrative responsibilities and functions. With the redistribution and sharing of resources at local communities, the rich-poor gaps can thus be narrowed. Naidoo (2002:47) further explains that decentralisation brings government closer to the people allowing poorer groups to get a bigger share of government services, and involving beneficiaries in planning and decision-making at the local level. This rationale also assumes that decentralisation may diffuse conflict, and ensure political stability by providing layers of insulation between the centre and the rest of the system. To avoid inequities, plans should be made to minimise negative consequences that may result.

3.3.1.2 Merits and demerits of decentralisation

According to Cishe and Jadezweni (2002:43), the merits of decentralisation outnumber its demerits. One of the advantages is that decentralisation improves the internal functioning of educational establishments. This is achieved by increasing the responsibility and initiative of the stakeholders at all levels. A number of strategies can be used in doing this. For example, one strategy is to provide opportunity to make real choices within the broader framework. This helps principals, teachers and parents to exercise more influence on teaching methods, curricula and the decision-making. They also have a say in developing new options. It is understood that the system of education in South Africa has been characterised by the hierarchical control of administrative and educational activities. Decentralisation tends to make an end to this, thereby simplifying the administrative procedures. In Norway, for example, decentralisation strengthens democracy by transferring power from central to local bodies and by bringing the decision-making process closer to people (Cishe and Jadezweni (2002:43).

Naidoo (2002:47) argues that the motives for decentralisation include increasing efficiency and accountability, increasing democratisation and community

participation, limiting the power of some groups, becoming more responsive to local needs, mobilising resources, and devolving financial responsibility. Du Plessis (2019:51) distinguishes among three main values which are called upon in justifying decentralisation, namely political legitimacy, the quality of services rendered and the efficient use of resources. The form of decentralisation which is applied tends to be determined by which of these values is deemed to be the value of primary importance. Naidoo (2002:47) contends that in some countries it may be a political strategy of ruling elites to retain most of their power by relinquishing some of it. For example, leaders of some regimes particularly in Asia and Africa, view decentralisation as a substitute for democratisation at the national level, and a safe way to acquire legitimacy and grass roots support.

Cishe and Jadezweni (2002:43), however, argue that although decentralisation seems to be advantageous, it has disadvantages as well. Decentralisation becomes problematic as schools lack the capacity to manage themselves. It is also common that decentralisation does not always lead to genuine participation as only a few or particular groups benefit. This study agrees with the preceding contention as the communities where non-fee-paying schools are located are predominantly characterised by low levels of education, thus diffident to participate fully on local school management affairs. Du Plessis (2020:166) explains that although it seems that, on the surface, the State is encouraging local participation in school governance, the amendments to education legislation point to a move to limit the involvement and powers of stakeholders, especially in the appointment of teachers. Although many of the 46 clauses in the recently published draft Basic Education Laws Amendment Bill are of a technical nature, it contains proposed amendments to sections of the Schools Act and the Employment of Educators Act, 76 of 1998, that will result in a further reduction of the powers of SGBs.

3.3.2 Citizen competence, empowerment, and capacity-building

Dryzek (2008:459) contends that democratic participation is generally a political virtue unto itself. Participatory governance contributes to the development of communicative skills, citizen empowerment, and community capacity-building. With regard to citizen competence and empowerment, the practices of participatory governance are put forth as a specific case of the broader view that participation

contributes to human development generally, both intellectual and emotional. Empowerment through participation has, as such, been part of the progressive educational curriculum and numerous citizen-based deliberative projects bear out its influence on personal development. Fischer (2012:4) highlights that much more challenging is the situation for marginalised members of society, those who ought to benefit from participatory governance the most. This scholar indicates that experiences in developing and underdeveloped countries, show that citizens with less formal education can also, under the right conditions, participate with surprisingly high levels of competence.

Williams (2007:30) argues that public participation in institutions of local governance allows for the possibility of revitalising democracy. Such participation imparts to the individual participant a belief in agency and a conscious capacity, thereby investing the concept of 'citizen' with existential significance. This ontological refinement of citizenship is linked to the idea of performing one's duties as a citizen and also serves as an instantiation of the individual as an integral member of a specific community and society at large. Williams (2007:31) points out that participation *per se* does not necessarily result in visible or desirable results, as it so often can be reduced to a mere ceremonial presence of participants in local institutions. It is only when people claim or demand power to achieve concrete goals (such as implementing a specific plan, project or programme) that presence, participation and voice assume experiential significance at local level, e.g., school. This means that participants must be aware of their abilities to make judgements and know how to effect meaningful change and play educational roles as citizens. For such a change-inducing scenario to come to pass, citizens must act in a well-structured organ, e.g., SGB and such joint cooperation improves collective administrative efficacy.

3.3.2.1 Non-participation in local institutions of governance

According to Osmani (2007:460), participation is more than a matter of competence. Competent people may not perceive an incentive to participate. Thus, getting them to do so is another important issue. Engagement in the public realm is not without its costs, and most people have little interest in participating unless the costs of engagement are outweighed by the possibility of benefits from it. Local people, including competent citizens, may themselves be highly sceptical about the worth of

investing their time and energy in participatory activities. In some situations, participation will lack immediate relevance; it may carry more significance for outsiders than it does for those in the relevant communities. Moreover, not everyone within the communities will be able or motivated to participate, even when there is sufficient interest in participation there may be time barriers (Osmani, 2007:460). On the same note, Williams (2007:31) explains that there are also people who do not participate in local institutions of governance (LIGs) mostly as a result of negative perceptions or experiences such as language barriers, lack of funding, fear of government and its agents, feelings of betrayal and the idea that participation will not produce any meaningful results. Williams (2007:35) further argues that non-participation in community-representative structures does not necessarily mean apathy to the democratic process. On the contrary, entering a structure as a subordinate, unfamiliar with the forms and meanings of deliberative discourse and hidden transcripts, undermines participation as a rational, open and empowering democratic practice with government and its institutions. However, experiential relations between the represented and representatives serve to improve trust in the process of public participation and government.

Skyline College (2020:1) states that in order for participatory governance to work, a covenant of mutual trust, honesty, open agendas, equity, and respect for differing views must exist. Essential to maintaining this covenant are open communications and feedback from all constituencies. All parties must commit to and take responsibility for fostering and maintaining an environment in which participatory governance can occur, as well as being well informed regarding relevant issues. Du Plessis (2020:168) explains that a genuine devolution of power to communities and schools would give considerable latitude in the hiring of staff, adopting curricular programmes and making financial decisions. Local communities are likely to benefit from autonomy over school decisions only “if there is already an active desire for autonomy within the community” (Du Plessis (2020:169). Williams (2007:32) contends that participation often gives ordinary people access to vital information about the methods used to compile, verify and audit expenditure data at local level. Exposure to this information serves to generate a radical consciousness amongst ordinary people with regard to the possibilities for transformative budgetary allocations at grassroots level. At the same time, though, active participation in LIGs

makes ordinary people conscious of the possibility of co-option by status-oriented officials and politicians.

3.3.3 Service delivery and equity

Fischer (2012:5) argues that, for many, the underlying goal of building capacity for action is to increase the efficiency and effectiveness of the provision and management of public services. For others concerned with participatory governance, the primary goal of capacity-building “is to provide citizens with the tools that are needed to reflect on the normative principles that underlie the provision of public services” (Fischer, 2012:5). That is, the goal is to provide citizens with opportunities to critically reflect on the norms and values justifying the equity of the outcomes. Williams (2007:32) asserts that there is a need for participants to develop negotiating skills that advance the interests of the marginalised in society. Such negotiating skills should be accompanied by the development of practical mechanisms to promote the interests of ordinary people. Specific interests are usually only safeguarded through active participation in specific spaces of opportunity. It is only where a sense of dignity, vision and independence characterises participation that the notion of ‘citizenship’ assumes experiential substance and significance in the lives of ordinary people.

Ojha (2006:461) asserts that a range of experiences shows that community participation can improve the efficiency of programmes (in terms of uses of resources) and effective projects in the provision and delivery of services, in both the developed and developing worlds. In fields such as education, health care, environmental protection, forestry, and irrigation, it is seen to lead to quicker responses to emerging issues and problems, more effective development and design of solutions appropriate to local resources, higher levels of commitment and motivation in programme implementation, and greater overall satisfaction with policies and programs. Furthermore, an emphasis on efficiency generally leads to improved monitoring processes and verification of results. Fischer (2012:6) maintains that participation also has the potential to combine efficiency with equity. This scholar proclaims that decisions made through the participation of community members rather than by traditional elites or unaccountable administrators offer less powerful groups in the community better chances of influencing the distribution of resources.

3.3.4 The conditions that impede the autonomy of school governing bodies

The autonomy of SGBs in executing their functions in public schools is not without inhibiting challenges. The virtues of decentralisation in school governance are being threatened by centrally inclined interferences. To this end, Du Plessis (2020:3) argues that the proposed amendment in the draft Basic Education Laws Amendment Bill (RSA, 2017a) that the provincial HOD be empowered to centrally procure identified learning support material for public schools and that school governing bodies must seek the approval of the Member of the Executive Council (MEC) for Education in the province to enter into lease agreements of any purpose, may not only limit the decision-making powers of capable school governing bodies, but that is contrary to the recommendations of the National Development Plan (RSA, 2012) in that it will place an “unnecessary burden” on well-functioning school governing bodies. Consequently, instead of building on the differentiated school governance approach as provided for in Sections 20 and 21 of the Schools Act, the Department of Basic Education is following an approach of curtailing the powers of well performing governing bodies which, according to the National Development Plan, should be “recognized as national assets” (RSA, 2012:311). In addition, the National Development Plan has as an objective to “develop a strong sense of community ownership” and acknowledges the need to provide additional support to school governing bodies (RSA, 2012:311). This sense of community ownership encourages community members to assist with a range of tasks, such as helping to deliver the school nutrition programme, growing and supplying the school with vegetables and preparing meals, monitoring learner safety, and preventing vandalism and theft. School management will have to work with communities on an on-going basis to develop and maintain such a sense of ownership (RSA, 2012:311). Thus, instead of curtailing local governance autonomy, means of incentivising, rewarding and supporting school governing bodies to strive towards substantial and durable improvement must be sought. In this way the constitutional principle of co-operative governance could be strengthened.

Du Plessis (2020:4) contends that compared to school governance autonomy, there is even less room for autonomy in terms of school management and leadership. Although public school principals are in terms of Section 16 of the Schools Act (RSA,

1996a) responsible for the professional management of their schools, Section 16A stipulates that the principal of a public school represents the provincial Head of Department on the school governing body. Therefore, discretionary powers of public school principals are limited in that they may not act in conflict with the instructions of the provincial Head of Department, legislation or policy and that the potential for a conflict of interests between the principal and the school governing body on the one hand, and between the principal and the education authorities on the other, is very real. Furthermore, the strong emphasis on school principals being the representatives of and accountable to the provincial Head of Department is not conducive to principals creating conditions in their schools for shared and collaborative leadership practices. The school principal therefore has limited discretionary powers in terms of spearheading and exercising full participatory governance with the SGB in the school.

3.4 CONCLUSION

This chapter presented a discussion on the theoretical framework upon which this study was advanced. The chapter focused on management functions theory and participatory governance theory as chosen theoretical frameworks that underpin the management of infrastructure in no-fee-paying schools in a selected South African province. Decentralisation as an inherent feature of participatory governance was discussed. The challenges that impede the successful application of these theories in management of school infrastructure were highlighted in the chapter. In the next chapter, I presented the research methodology, approach and design used in this study. Sampling and the participants in the study, semi-structured interviews and document analysis as data collection strategies were discussed. A qualitative thematic data analysis was presented, as well as ethical consideration issues.

CHAPTER FOUR

RESEARCH METHODOLOGY

4.1 INTRODUCTION

This chapter aimed at explaining and justifying the philosophical foundations, research approach, research design and methodological approach to this study, highlighting their advantages and disadvantages. The chapter also explained the sampling method, sample size, sample sites and the rationale for the research sites and participants. This was followed by a discussion on how I collected data, including the application of semi-structured interviews and an overview on how I conducted document analysis. An explanatory discussion of how the data was analysed was provided. Lastly, the ethical principles considered in conducting this study were discussed.

4.2 PHILOSOPHICAL ASSUMPTIONS UNDERLYING THE STUDY

When conducting research, people's worldviews are referred to as paradigms and researchers normally align themselves with a particular paradigm (Mhlanga, 2019:57). A paradigm is "a cluster of beliefs and dictates which for scientists in a particular discipline influence what should be studied, how research should be done, and how results should be interpreted" (Bryman, 2012:630). A paradigm is a set of beliefs that guide the action that is taken and the decisions that are made in the process of doing research (Denzil and Lincoln, 2011: 245). In the social sciences, paradigms are referred to as research traditions or worldviews. However, what is important is that, by following a particular paradigm or research tradition, researchers adopt a specific way of studying phenomena relevant to their field. Knowing what paradigm I ascribe to is important, because it determines what questions are considered worthy of investigating and what processes are required for the answers to these questions to be acceptable (Davis, 2014:19).

In this context, De Vos, Strydom, Fouche and Delport (2011:12) argue that every study should be conducted within a certain research paradigm. According to Scotland (2012:87), the research paradigm consists of three components, namely; ontology, epistemology, methodology and methods. Each paradigm is based on certain ontological and epistemological assumptions. Mhlanga (2019:58) posits that there

are three major educational research paradigms: scientific, critical and interpretive paradigms. A scientific paradigm is rooted in positivism, which assumes that the researcher and the research participant are independent entities (Scotland, 2012:88). Positivist researchers maintain that reality is out there to be studied, captured and understood. A positivist paradigm thus embodies an objectivist epistemology.

Tuli (2010:154) explains that the research paradigm I preferred depended on my perceptions of what real-world truth was (ontology) and how I knew it to be the real truth (epistemology). This study was anchored on the interpretive paradigm because I was of the conviction that school principals, SGB chairpersons and infrastructure-attached district officials were the relevant participants who could share their own realities in managing infrastructure in the schools of which they were required to manage. As the ontological assumption in an interpretive paradigm maintains that there are multiple realities of a phenomenon under study, I did not subscribe to the belief of one objectivist reality (Flick, 2009:119). Interpretivism is directed at understanding the phenomenon from a subject's perspective in their own context (Creswell and Creswell, 2018:8). This accounted for my adoption of an interpretive paradigm to understand and make sense of the school principals', SGB chairpersons' and infrastructure-attached district officials' management of infrastructure in non-fee-paying schools.

Interpretivism developed as a reaction to the shortcomings and limitations of positivism, specifically in its application to the social sciences. The main idea on which interpretive paradigm rests is that people are fundamentally different from objects. Consequently, I could not study human beings in the same way I could study objects in the natural sciences, because, unlike objects, human beings change all the time and the environment in which they find themselves constantly influences them. Interpretivists, for example, argue that it does not make sense to study people in laboratory settings, as people do not live in laboratories, and as they are always influenced by the things that are happening in their environment (Du Plooy-Cilliers, 2014:27). The epistemological position of interpretivism objects to the positivists in seeing scientific knowledge as the only valid form of knowledge, and totally disregarding common sense as a form of knowledge. Interpretivists challenge this view and argue that common sense guides people in daily life. Therefore, if I wanted to understand human behaviour, I grasped what people viewed as common sense.

For interpretivists, this is an essential source of information for understanding people (Du Plooy-Cilliers, 2014:28).

The ontological position of interpretivism is that the interpretivists do not believe in an objective, external reality that is experienced in the same way by everyone. Interpretivists believe that reality is a social construction and that it is dependent on the meanings that people ascribe to their own experiences and interactions with others. According to interpretivists, the social world is what people perceive it to be. It is fluid and fragile and changes as people's perceptions change (Du Plooy-Cilliers, 2014:29). The interpretive paradigm involves taking people's subjective experiences seriously as the essence of what is real for them (ontology), making sense of people's experiences by interacting with them and listening to what they told me (epistemology), and making use of qualitative research techniques to collect and analyse information (methodology). Thus the interpretive approach does not focus on isolating and controlling variables, but on harnessing and extending the powers of ordinary language and expression to help me understand the social world I live in (Blanche, Kelly and Durrheim, 2006:274). The interpretive paradigm further recognises the context in which people live and work, in order to understand the participants' cultural and historical settings (Creswell and Creswell, 2018:8). An interpretive research paradigm is also characterised by the need to understand the world as it is from a subjective point of view and seeks an explanation from the participant's point of view rather than the observer's point of view (Ponelis, 2015:135). As an interpretive researcher, I discovered reality through participants' views, their background and experiences (Creswell, 2009:67; Yanow and Shwartz-Shea, 2011:112).

4.3 RESEARCH APPROACH

Research approaches denote the plans and the processes for research that explain the steps from a broad research question to comprehensive information from data collection, analysis and interpretation (Creswell, 2014:70). Research approach therefore focuses on the process of research and the decisions that I took to execute the research project (Brynard and Hanekom, 2006:36). There are three research approaches that are often used in research studies, namely, the quantitative approach, the qualitative approach and mixed methods (Creswell, 2014:94). The

difference between the three approaches is that a quantitative approach uses numbers while qualitative approach uses words, and a mixed method is a conglomeration of both quantitative and qualitative approaches (Creswell, 2014:94). This study applied a qualitative research approach because the aim of the study was to come into terms with and represent the views, experiences and perspectives of the participants regarding the management of infrastructure in non-fee-paying schools in a selected South African province.

4.3.1 Qualitative research approach

My choice of the qualitative research approach was influenced by a number of factors. The concept of qualitative research encompasses several approaches to research that are in some respects quite different from one another. All qualitative approaches have two things in common. First, they focus on phenomena that occur in natural settings – that is, in the ‘real world’ (Leedy and Ormrod, 2014:141). And second, they involve capturing and studying the complexity of those phenomena (Leedy and Ormrod, 2014:141). As a research approach, qualitative research is concerned with understanding the processes and the social and cultural contexts which underlie various behavioural patterns (Nieuwenhuis, 2007:51). Qualitative research approach is useful for understanding small groups and group dynamics, as well as cultures and sub-cultures, in large part because cultures are expressed with language and other symbolic systems (Remler and Van Ryzin, 2011:59). According to Bryman and Bell (2011:46), an underlying premise of qualitative research is that a methodology is required for studying people that reflects their ability to attribute meaning to events and their environment. As a result, I sought to view and interpret events and the social world from the perspective of the people that I studied. The indispensable condition for a qualitative research approach is a commitment to perceiving the world from the point of view of the participant. Because of this commitment to see through the eyes of my participants, close involvement with my participants was necessary (Brynard and Hanekom, 2006:37).

In terms of data, qualitative research involves various kinds of non-numerical data, such as interviews, written texts or documents, visual images, observations of behaviour, case studies, and so on (Remler and Van Ryzin, 2011:57). A qualitative research approach is a naturalistic interpretative approach concerned with exploring

phenomena from the interior (Flick, 2009:44). Qualitative research focuses on cases – individuals, groups, or institutions. For that matter, a basic motivation for this approach was that by examining cases in their full complexity, the relevant variables could be identified and confirmed. This is, therefore, a way to appreciate how qualitative research generates theory and helps build models. Qualitative methods helped me to uncover and understand the causal processes or perceived causation at work in a setting (Remler and Van Ryzin, 2011:59).

As Creswell (2014:72) defines a qualitative research approach as a plan and the process for research that explains the steps from broad assumptions to detailed methods of data collections, analysis and interpretations, a qualitative approach enabled me to move from philosophical assumptions to data collections and interpretation. A qualitative approach is meant to understand the constraints and realities of everyday life focusing on rich descriptive data as experienced by individuals in their natural context. Qualitative research brings about a holistic account of an issue under study. I developed a complex picture of the problem under investigation. This involved engaging multiple perspectives, identifying the many factors involved in a situation, and generally sketching the larger picture that emerged into a visual model of many facets of the process of the phenomenon I investigated (Creswell, 2009:176).

According to Greetham (2008:64), qualitative research approach involves responses which are expressed in words, describing attitudes, feelings, opinions, customs and beliefs. Unlike the quantitative genre which aims at testing objective theories that examine relationships between variables, qualitative research is meant to harness rich in-depth data regarding a phenomenon: values, behaviour in the natural context, and the meaning people attach to it (Creswell and Creswell, 2018:181). Qualitative research methods try to describe and interpret people's feelings and experiences in human terms rather than through quantification and measurement (Blanche, Kelly and Durrheim, 2006:272). Creswell (2009:175) contends that the key idea behind qualitative research is to learn about the problem or issue from participants and to address the research to obtain that information. I undertook a study of a qualitative nature in order to gather new insights and explore new phenomena in the field of educational management (Blumberg, Cooper and Schindler, 2008:74). Bryman and Bell (2011:47) argue that qualitative research tends to view social life in terms of

processes, and there is a tendency to show how events, activities and patterns unfold over time in context. This includes understanding how the history of an organisation shapes the present reality and how the “interchange between agents and contexts occurs over time and is cumulative” (Bryman and Bell, 2011:47). As a result, qualitative evidence often conveys a strong sense of change and flux. Furthermore, qualitative research is more prone than quantitative research to provide a great deal of descriptive detail when reporting the research results. One of the main reason is that it typically emphasises that I should understand the behaviour of members of a social group in terms of their specific environment (Bryman and Bell, 2011:47).

Creswell (2014:240) explains that, rather than as in the cases of quantitative studies which use experiments in studying phenomena, qualitative research methods are used in research to enable me to provide in-depth and rich data sets derived from people in their natural setting by for example using the one-on-one interviewing technique. It was therefore possible for me to view the object of my study through interacting with school principals, SGB chairpersons and district officials with whom I conducted interviews (Bryman, 2012:399). A qualitative research approach therefore enabled me to directly communicate with the people I studied in order to understand how they perceive the management of school infrastructure (White, 2005:86). Creswell (2009:195) explains that during the entire qualitative research process, I kept focus on learning the meaning that the participants held about the problem or issue, not the meaning that I brought to the research or writers expressed in the literature. Most organisational research projects seek information from people; their understandings could give insights that quantitative data alone could not possibly reveal. Qualitative data can be gathered using interviews, focus groups and/or secondary sources such as organisational reports, minutes of meetings or internal communication (Cameron and Price, 2009:426). The use of quantitative research strategies was ruled out in this study as I needed in-depth data to answer the research questions. Such data could only be obtained by having close interaction with the participants regarding the phenomenon under investigation in this study.

4.3.2 The advantages of the qualitative approach

Bryman and Bell (2011:46) and Bryman (2012:399) explain that the qualitative approach makes it possible to view events and the social world through the eyes of

the people whom I studied. The social world is interpreted from the perspective of the people being studied, rather than as though those subjects were incapable of their own reflections on the social world. As a qualitative researcher, I collected data in the field and, in particular, at the sites where the participants were experiencing the issue or problem under study. I did not bring individuals into a laboratory nor did I send out instruments for individuals to complete. This “up close” information which I gathered by actually talking directly to people and observing them behave and act within their context was of major value to this qualitative research project (Creswell, 2009:175). Using a qualitative approach, I was able to gather multiple forms of data through, for example, interviews and document analysis, rather than relying on a single data source. I was therefore a key instrument in the data collection process through examining documents or interviewing participants. Although I used an interview protocol – as an instrument for collecting data – but I was the one who actually gathered the information. I did not use or rely on questionnaires or instruments developed by other researchers (Creswell, 2009:175).

Bryman (2012:404) maintains that the main advantage of the unstructured nature of most qualitative enquiry is that it offers the prospect of flexibility. I was therefore able to change direction during the course of my investigation far more easily than is the case in quantitative research which tends to have a built-in momentum once the data collection is underway. White (2005:86) asserts that with qualitative approach, I could empathise and identify with the people I studied in order to understand how they perceived things. One of the strengths of qualitative research is its ability to access directly what happens in the world, that is, to examine what people actually do in real life rather than asking them to comment upon it (Silverman, 2006:113).

4.3.3 The disadvantages of the qualitative approach

The qualitative approach is not without certain weaknesses. Sallee and Flood (2012:122) explain that one of the weaknesses of the qualitative approach revolves around credibility issues. To ensure the credibility of the findings of this study, I triangulated the data by using different data collection methods, namely; interviews as well as document analysis. I also compared data from the different participants to identify common themes as well as unique findings (Mhlanga, 2019:61). Bryman (2012:405) points out that one of the disadvantages of the qualitative research

approach is that it is too subjective. Because I was the main instrument of data collection and thus what I witnessed and heard and also what I decided to concentrate on were often the products of my predilections. I therefore strove to be as objective as possible by accepting the participants' responses as they were, without prejudice or alteration.

Bryman (2012:405) asserts that, because the qualitative research approach is unstructured and often relies on my ingenuity, it is almost impossible to conduct a true replication of the research as there is scarcity of any standard procedures to follow. To mitigate this challenge, I adhered to the analysis criteria such as trustworthiness, transferability, dependability triangulation and credibility during data analysis. Furthermore, the process of qualitative data analysis is frequently unclear. It is often not obvious how the data analysis was conducted, that is, what I was actually doing during the data analysis and, therefore, how the study's conclusions were arrived at (Bryman, 2012:406). In addition, the most serious and central difficulty in the use of qualitative data is that methods of analysis are not well formulated (Punch, 2005:195). Once again, I counteracted this challenge by strictly adhering to data analysis elements of trustworthiness, transferability, dependability, triangulation and credibility.

4.4 RESEARCH DESIGN

Every type of empirical research study has an implicit, if not explicit, research design. In the most elementary sense, the design is the logical sequence that connects the empirical data to a study's initial research questions and, ultimately, to its conclusions. Colloquially, a research design is "a logical plan for getting from here to there", where 'here' refers to the set of questions to be addressed, and 'there' is some sort of conclusions about these questions (Yin, 2018:26). A research design is a strategic framework for action that serves as a bridge between research questions and the execution or implementation of the research. A research design is therefore a plan that guides the arrangement of conditions for collection and analysing data in a manner that aims to combine relevance to the research purpose with economy in procedure (Durrheim, 2006:34). Similarly, Kumar (2011:94), describes a research design as a plan, structure or strategy of investigation which is conceived so as to ensure that answers to the research questions or solutions to the research problems

are found. Wagenaar and Babbie (2004:58) explain that research design involves developing strategies for executing scientific inquiry. It involves specifying precisely what I wanted to find out and determined the most efficient and effective strategies for doing so. Flick (2011:65) describes research design as a plan for collecting and analysing evidence that made possible for me to answer whatever questions I posed. The design of an investigation touches almost all aspects of the research, from the minute details of data collection to the selection of the techniques of data analysis.

4.4.1 A case study design

A case study design was selected in order to assist me to gain a clearer understanding and to acquire knowledge regarding the management of infrastructure in non-fee-paying schools. Maree (2007:292) asserts that a case study design involves comprehensive and systematic investigation of a case. Maruster and Gijzenberg (2013:32) and Creswell (2013:98) explain that the case study design involves the study of a single case in a real-life context and setting. Similarly, Lapan and Armfield (2009:165) assert that case studies seek rich descriptions about people, events, topics, or programme by researching them in their natural environment. In contrast to the broad surface data collected through survey research, case studies produce details about local phenomena.

A case is a “specific, complex, functioning thing”, that is, a bounded system. A case is an integrated system (Kumar, 2011:126). The parts do not have to be working well, the purpose may be irrational, but it is a system. Thus people and programmes are prospective cases. Examples of systems may include an organisation, like a school, a support group, a sub-group of a population, a group of school learners, an event or a community (Kumar, 2011:126; Vanderstoep and Johnson, 2009:209). The purpose of a case study is to understand the characteristics that define a particular bounded system, and perhaps to describe an event or process occurring within that system (Vanderstoep and Johnson (2009:209). The case study aims to understand the case in depth, and in its natural setting, recognising its complexity and its context. It also has a holistic focus, aiming to preserve and understand the wholeness and unity of the case (Punch, 2005:144). The case investigated in this study encompassed the non-fee-paying schools in the selected South African province, in relation to management of school infrastructure.

A distinctive feature of case study research is that the process of the research is not detached from the context within which that research is taking place (Cameron and Price, 2009:306). This makes case study a particularly useful approach where the problem that I was addressing was enmeshed within the fabric of the organisation, namely; the Department of Basic Education. A case study approach was also useful because my research required that I gathered data from different sources all of which contributed to a specific point in the contexts in which the phenomenon under investigation played itself out (Cameron and Price, 2009:306).

According to Bryman and Bell (2011:110), a case study design involves a detailed and intensive analysis of one or more cases which I aimed to study in depth. What distinguishes case studies from other designs is the focus on understanding a bounded situation or system. In case studies, there is not always a clear boundary between the case's functioning parts and the context(s) in which it operates. Exponents of case study designs often favour qualitative methods, such as participant observation and semi-structured interviewing, because these methods help to generate an intensive, detailed examination of a case or cases. The term "case study" refers to the fact that a number of units of analysis, such as an individual, a group or an institution, are studied extensively (Welman et al., 2005:193).

In case studies, relationships and processes within social settings tend to be interconnected and interrelated. To understand one thing, it is necessary to understand many others and how the various parts are linked. The case study approach worked well for this study because it offered more chance than the survey approach of going into sufficient detail to unravel the complexities of a given situation. I could deal with each case in its entirety and thus be more likely to discover how the many parts affected one another. In this respect, a case study design enabled me to view the phenomenon under investigation holistically rather than having to deal with isolated factors. One of the strengths of the case study approach is that it allowed me to use a variety of sources, different types of data and a variety of research methods as part of the investigation (Descombe, 2004:31). Unlike the experimenter who manipulates variables to determine their causal significance or the surveyor who asks standardised questions of large, representative samples of individuals, as a case study researcher, I focused on the characteristics of an individual unit – a school. The purpose of such attention was to probe deeply and to analyse intensively the multi-

dimensional phenomena that constitute the life cycle of the unit with a view to establishing generalisations about the wider population to which that unit belongs (Baxter, Hughes and Tight, 2010:72).

Nieuwenhuis (2007:75) argues that case studies offer a multi-perspective analysis in which I considered not just the voice and perspective of one or two participants in a situation, but also the views of other relevant groups of actors and the interaction between them. A case study design opened the possibility of giving a voice to participants. This was essential so that I could develop a deeper understanding of the dynamics of the situation, which is a salient feature of many case studies. From an interpretive perspective, Nieuwenhuis (2007:75) highlights that case studies strive towards a comprehensive understanding of how participants relate and interact with one another in a specific situation and how they make meaning of the phenomenon under study.

4.4.2 Advantages of a case study design

The use of case studies offers a means of making wider comparisons of the relationships between research and context. Bryman and Bell (2011:113) assert that case study designs are undertaken largely for the purpose of comparing and contrasting the findings from each of the cases. This allowed me to consider what was unique and what was common across cases, and to reflect on the theory emerging from the findings.

There are various advantages that are inherent in the use of case studies (Baxter et al., 2010:74):

- “Case study data is drawn from people’s experiences and practices and it is therefore seen to be strong in reality;
- Case studies allow generalisations from a specific instance to a more general issue;
- Case studies allowed me to show the complexity of social life. Good studies build on this to explore alternative meanings and interpretations.
- Case studies could potentially provide a data source from which further analysis could be made. They can, therefore, be archived for further research work;

- Since case studies build on actual practices and experiences, they can be linked to action and their insights contribute to changing practice; and
- Because the data contained in case studies are close to people's experiences, they can be more persuasive and more accessible”.

The case study design embraces the idea of multiple realities which allowed me to become as close as possible to the participants through in-depth interviews (Briggs, Coleman and Morrison, 2012:140; Maruster and Gijzenberg, 2013:135; Flick, 2014:79). A case study enabled me to explore differences within and between cases. The goal was therefore to replicate findings across cases. A case study allowed me to analyse the data within each setting, but also across settings (Niewenhuis, 2019:90). A case study design also provided me with multiple sources of information and facilitated the process of exploring and describing the processes and practices the principals, the SGBs and infrastructure-attached district officials followed in managing infrastructure in schools (Fouche, 2002:293).

Case study reports are more trustworthy when the case is clearly defined, evidence of validity is present, voices within the case are well represented, alternative views are incorporated, and my interpretations are supported by concrete examples (Lapan and Armfield, 2009:166). It is in the light of the preceding strengths of case studies that this study found the case study design to be a viable research design to employ. The main argument in favour of a case study was that it improved theory building as I would be in a better position to establish the circumstances in which a theory would or would not hold (Yin, 2009:125). Moreover, the comparisons could suggest concepts that were relevant to an emerging theory.

Leedy and Ormrod (2010:87) proclaim that the strength of a case study is that it is useful for learning about situations which need to be addressed, as in the case of management of infrastructure in non-fee-paying schools. Yin (2018:54) substantiates that evidence from multiple-sites is often considered more compelling and robust compared to data obtained from a single site, therefore, such studies are regarded as more plausible.

4.4.3 Disadvantages of a case study design

In spite of identifiable advantages, case studies do also have disadvantages (Baxter, 2010:74). The very complexity of a case study could render data analysis difficult to execute. This is particularly like that because the holistic nature of case study means that I was often made aware of the connections between various events, variables and outcomes, which I could not take for granted. Although the contextualisation of aspects of the case could strengthen case study research, it is often difficult to know where “context” begins and ends. Bryman and Bell (2011:115) explain that case studies are sometimes criticised because they tend to pay less attention to the specific context and more attention to the ways in which the cases can be contrasted. Nevertheless, the key to a case design is its ability to allow the distinguishing characteristics of two or more cases to act as a springboard for theoretical reflections about contrasting findings. However, because a case study design had the potential to generate large quantities of data that I found hard to analyse (Maree, 2007: 294), I consequently strove to manage biased views and monitored all my interpretations in order to provide a concise study.

4.5. SAMPLING

The discussion on sampling cannot be complete without relating what the population in research terms is about. The total group to be researched, and generalised about is the population or universe. The small group is the sample, and selecting the sample is called sampling (Guthrie, 2010:53).

4.5.1 The population

A population is the total group of people or entities (social artefacts) from whom information is required. The population is the mass of individuals, cases, events to which the statements of the study will refer and which has to be delimited beforehand with regard to the research question and the operationalisation (Flick, 2011:71). The population is the object of research and consists, among others, of individuals, groups, organisations, human products and events or the conditions to which they are exposed. Maree and Pietersen (2007:172) argue that since the goal of a research is to use the sample to learn about the population, it is important for the sample to be drawn in such a way that it would be valid to generalise its results to the population.

In this light, if I wanted to draw wider conclusions, the data had to be representative. It was important therefore that the sample from which I obtained data was representative of the wider population in which I was interested (Cameron and Price, 2009:224). Another important aspect I kept in mind was that all the people or social artefacts in the population shared one specific characteristic that related to the research question (Pascoe, 2014:132). In this study, the people in the population were all involved in one way or another in the management of infrastructure in non-fee-paying schools in a selected South African province. These people included school principals, SGB chairpersons and infrastructure-attached district officials in the selected South African province.

4.5.2 Sampling

A sample is a subset of a population that is considered to be representative of the population. Bryman and Bell (2011:170) and Bryman (2012:187) define the sample as the segment of the population that is selected for investigation. Gentles, Charles, Ploeg and MacKibbon (2015:53) define sampling as “the act, process, or technique of selecting the representative part of the population for the purpose of determining parameters on the characteristics of the whole population”.

The key concept in sampling is representativeness. Unless the sample “truthfully” or “faithfully” represented the population from which it was drawn, I had no reason to believe that the population had the same properties as those of the sample (White, 2005:114). The selection of a sample in qualitative research was therefore guided by my judgement as to who was likely to provide me with complete and diverse information. In this context, sampling was a non-random process. Sample size does not occupy a significant place in qualitative research and is determined by the data saturation point while collecting data instead of being fixed in advance (Kumar, 2011:213).

4.5.2.1 Sampling strategy

The strategy chosen for selecting a sample varies based on the logistics, ethics and a researcher’s paradigm. An important strategy for choosing a sample is to determine the dimensions of diversity that are important to the study under investigation (Mertens, 2015:327). There are two main sampling methods that are used in research

(Creswell, 2014:31), namely; probability and non-probability sampling. Probability sampling is commonly used in quantitative studies and the sample for representation of the population is drawn randomly to ensure that each member of the population has an equal chance of being selected as a respondent. On the other hand, non-probability sampling is often used in qualitative studies because it allows for the selection of a particular group of people to represent the population (Cohen, et al., 2011:64). According to Nieuwenhuis (2007:79), qualitative research is generally based on non-probability and purposive sampling rather than probability or random sampling approaches. Thus, non-probability sampling was chosen as a sampling method for this study. Within the non-probability sampling method, I identified the purposive sampling strategy to be utilised in this study. What follows is a discussion about how the purposive sampling strategy was applied in this study.

4.5.2.1.1 Purposive sampling and sample size

White (2005:120) argues that purposive sampling is based entirely on my judgement as a researcher, in that a sample is composed of elements that contain the most characteristic, representative or typical attributes of the population. Likewise, Babbie (2010:193) asserts that purposive sampling is a type of non-probability sampling in which the units to be observed are selected on the basis of my judgement about which ones will be the most useful or representative. This sampling technique is premised on the notion that it is appropriate to select a sample on the basis of knowledge of a population, its elements, and the purpose of the study. Sampling for qualitative research often involves some form of purposive sampling – choosing people who have a unique perspective or occupy critical roles, or selecting individuals to represent theoretical considerations (Remler and Van Ryzin, 2010:156).

Given that the purpose of this study was to explore how school infrastructure is managed in non-fee-paying schools, I selected a group of participants who are directly involved in management of infrastructure in non-fee-paying schools from within the population of school principals, SGB chairpersons and infrastructure-attached district officials in the selected South African province. As White (2005:85) rightly puts it, qualitative research approach propelled me to go to the participants, setting, site or institution (the field) in order to observe reality in the schools where

the study is based. In purposive sampling, I intentionally selected individuals and sites to learn or understand the central phenomenon.

The standard used in choosing participants and sites is whether they are “information rich” (Creswell, 2014:228). The sites for this study consisted of the following: six (6) primary and six (6) secondary non-fee-paying schools, and four (4) district offices, in a selected South African province. Put differently, this translated into three (3) schools per district and one (1) infrastructure-attached section per district. The selection of both primary and secondary schools was informed by the fact that although primary and secondary schools experience common infrastructural management challenges, they also experience unique challenges relating to their contexts. So, it would be fair to assume that the contextual differences of primary and secondary schools could result in differences in experiences. The infrastructure-attached offices at the relevant districts are responsible for infrastructure management matters that affect the schools, hence the significance of the inputs from their side.

The total number of study sites was sixteen (16) and was deemed to be an adequate sample for qualitative research study. The participants in this study included the school principal and the SGB chairperson from each of the twelve (12) participating non-fee-paying schools, and eight (8) infrastructure-attached officials in each participating district, two (2) in each district office. This amounted to the total of thirty-two (32) participants for the study. The selected participants were, according to the Schools Act, entitled to manage infrastructure in schools, and were therefore considered to be an eligible and relevant sample for the study. The participants in this study could diagrammatically be depicted as in the following table:

Participants per district	District 1	District 2	District 3	District 4	Total
School principals	3	3	3	3	12
SGB chairpersons	3	3	3	3	12
Infrastructure-attached district officials	2	2	2	2	8
Total	8	8	8	8	32

Table 4.1 *Distribution of participants per district*

4.5.2.1.2 Recruitment process

I selected interviewees who were knowledgeable about the subject of the interview, who were open to talking, and who represented the range of perspectives (Nestor and Schutt, 2019:395). To sample (to obtain study participants), I intentionally selected participants that were from schools that belonged to quintiles 1 to 3, of which most were in township and rural areas. There were schools in these quintile rankings which were in urban areas, but characteristically catering for learners with poor economic backgrounds. The recruitment process commenced by telephonically making appointments with school principals. During the meetings with school principals, I explained the purpose of my research and the relevance of having the school principals and SGB chairpersons as my participants in the study. I obtained verbal, followed by written, informed consent from the participants before conducting the interviews. It was essential that I followed and abided by ethical guidelines throughout the research process (Maree, 2007:300).

All ethical considerations were explained to the school principals and SGB chairpersons on the first day of meeting. When SGB chairpersons could not attend the first meeting, school principals willingly offered to relay information to chairpersons for their availability on the interview day, which subsequently happened. Upon reaching agreement with participants to participate in the study, we would agree to hold interviews a week or two later, depending on the schedule of the potential participants. Upon finishing interviews with school-based participants, I embarked on a similar engagement process with the infrastructure-attached district officials, first securing discussion meetings through a phone, followed by my physical presence for explanations and interviews at least a week or two later.

4.6 DATA COLLECTION STRATEGIES

According to Baxter, Hughes and Tight (2010:183), all research involves the collection of data, whether through reading, observation, measurement, asking questions, or a combination of these or other strategies. According to Hamilton and Corbett-Whittier (2013:78), I employed meticulous and systematic methods which answered the research questions. It was for these reasons that I used more than one data gathering method to explore how school infrastructure was managed in non-fee-paying schools in the selected South African province. As Yin (2018:111) supports the use of multiple data gathering methods, I used semi-structured interviews and document analysis to strengthen my study, as it allowed me to triangulate the data. In order to facilitate data analysis, all interviews were audio-recorded with the consent of the participants. The relevant policies and legislation on school infrastructure were analysed.

4.6.1 Semi-structured interviews

Interviews are a common method of qualitative data collection (Gibson and Riley, 2019:99) and are a very good way of accessing people's perceptions, meanings, definitions of situations and construction of reality. They are also one of the most powerful ways of understanding others (Punch, 2005:168). An interview is a two-way conversation in which I, as an interviewer, ask individual participants questions to collect data and to learn about the ideas, views, beliefs, opinions, experiences and behaviours of the participant. The aim of qualitative interviews is to see the world through the eyes of the participant and to obtain rich descriptive data to help me to understand the participant's construction of knowledge and social reality (Niewenhuis, 2007:87).

Semi-structured interviews are particularly useful as a research method for accessing individuals' attitudes and values – things that cannot necessarily be observed or accommodated in a formal questionnaire. Open-ended and flexible questions are likely to get a more considered response than closed questions and therefore provide better access to interviewees' views, interpretations of events, understandings, experiences and opinions (Silverman, 2006:114). A semi-structured interview guide is a set of open-ended questions, sometimes accompanied by probes, that help guide or structure the discussion. It helps ensure that each interview covers substantially

the same topics, although the guide is meant to be a flexible tool and not a standard script. Some respondents may have a lot to say about certain topics and less about others, and the order in which topics come up during the course of the interview may vary (Remler and Ryzin, 2011:64). An important role of semi-structured interviews is to cross-check viewpoints from different participants who might have very different perceptions (Guthrie, 2010:121). In a semi-structured interview, there is enough structure to ensure that the content of answers sticks to the same broad issues, and the personality of the interviewer does not play a major role (Firth, 2020:174).

Since the data collection strategy for this study was qualitative in nature, the flexibility of semi-structured interviews allowed me to do in-depth probing to expand the participants' responses. Probing was critical to gain in-depth data that was needed to answer research questions. Therefore, the flexibility of semi-structured interviews helped to improve the trustworthiness of the study (Cohen et al., 2011:270).

The use of semi-structured interviews in research has its own shortcomings as well. For example, I could have become side-tracked by trivial aspects that were not related to the study (Maree, 2007:87). I therefore ensured that my participants remained focused on the purpose of the interview. The influence of the interviewer can be considerable (Bless, Higson-Smith and Kagee, 2006:116). I concentrated and refrained from influencing the participants by the way I asked questions. I therefore could not ask leading or suggestive questions. Interviewing and analysing interview data require a high level of skill. Without these skills my conclusions would not be trustworthy. Necessary skills included establishing and sustaining rapport with the participants, asking questions clearly and without influencing answers, steering the interviews, listening and analysing qualitative information (Cameron and Price, 2009:369). Interviews are also extremely time-consuming for both the interviewer and interviewee. It can take a long time to arrange interviews, travel to conduct them and reschedule if interviewees cannot make appointments. Transcription of the interview records was also very time-consuming. Analysing qualitative data put additional demands on time (Cameron and Price, 2009:369; Costly et al., 2010:93).

Another challenge lied with the susceptibility to mishearing and misinterpreting the participants. Because of the potential richness of information, it was all too easy for confirmatory bias to exist. I could have selectively heard and/or selectively focused

on what was consistent with what I wanted to hear. Costly et al. (2010:93) contend that with semi-structured interviews, the interviewee's identity could not be hidden from me unless third-party interviewers were used. Although semi-structured interviews allowed me to have control over the line of questioning, they had a disadvantage of probing indirect information filtered through my own views (Creswell, 2014:88). To overcome this challenge, a common interview guide for all the participants was prepared to ensure consistency in the research questions. This undertaking helped me to ensure consistency of the interview questions and assisted me obtain specific information, which could be compared and contrasted with information gained from other participants (Mhlana, 2019:68).

4.6.2 Document analysis

Documentary analysis is the methodology designed to facilitate research on documents. Documentary analysis involves the systematic analysis of data in the form of documents or data drawn from documents (Quinlan, 2011:186). Documents can be a valuable source of information in qualitative research. Documents are texts that can be published or unpublished, written, oral and virtual and may reside in either the public, private or virtual domains (Fitzgerald, 2007:12). A document is simply any written, printed, photographed, painted or recorded material that can be used to provide information or evidence. A document may be defined briefly as a record of an event or process (Dolowitz, Buckler and Sweeney, 2008:39).

Baxter, Hughes and Tight (2010:186) assert that virtually all research projects involve, to a greater or lesser extent, the use and analysis of documents. Baxter et al. (2010:192) contend that the study of documents is popular because it is not possible to conduct a research study in isolation from what has already been done. In other words, it made sense for me to use documents if the data I required already existed in some form. Nieuwenhuis (2011:82) argues that in using documents as a data gathering technique, I focused on different types of written communications that could shed light on the subject that I was investigating. For this study, unpublished documents from the provincial department of education such as the annual report, guidelines and memoranda on school infrastructure maintenance were analysed with a view to attaining an informed perspective into the management of school infrastructure. This is because in terms of the Schools Act, the management of school

infrastructure is delegated by the national Department of Basic Education to be handled at provincial level. These sources were selected because they contained information that informed and reported on the management of school infrastructure, thus enhancing the understanding of my central object of study (Punch, 2005:184; Creswell, 2014:245; Yin, 2018:115).

Documents revealed something about what transpired in the organisation and helped me to have an idea about the trends and procedures that were being followed in management of school infrastructure (Bryman, 2012:554). In the interests of the crystallisation of data, documents served to corroborate the evidence from other sources, namely; interview data. One of the most important uses of documentation is to corroborate and augment evidence from other sources. If the documentary evidence was contradictory rather than corroboratory, I had to pursue the problem by inquiring further into the topic (Yin, 2018:115). Nieuwenhuis (2007:83) warns that I should guard against selectivity, misinterpretation of authors' ideas, selective interpretation to suit my own argument, poor organisation of the information and poor integration.

4.6.2.1 The advantages of document analysis

There were numerous advantages for employing document analysis as a data collection method. Document analysis was used in combination with other qualitative research methods; semi-structured interviews, as an expression of triangulation, in the study of the same phenomenon (Punch, 2005:184; Maruster and Gijsenberg, 2013:156). Document analysis enabled me to obtain the language and words of participants. Documents could be accessed at a time convenient to me – an unobtrusive source of information. Documents represented data which were thoughtful in that participants had given attention to compiling them. As written evidence, documents saved me the time and cost of transcribing obtained data (Creswell, 2009:180). Secondary data could also be used to compare with primary data I had collected, in order to triangulate the findings and put my data into a larger context. Data in the public domain are also open to scrutiny by others and is a permanent resource on which to base my research (Walliman, 2011:177).

4.6.2.2 The disadvantages of document analysis

Creswell (2009:180) argues that not all people are equally articulate and perceptive. Document analysis method required me to search out the information in hard-to-find places. Walliman (2011:177) contends that though many sources of data are free, others might be difficult to access. It is possible that the documents may not be authentic or accurate (Creswell, 2009:180).

4.7 DATA ANALYSIS PROCEDURES

Data analysis is a systematic presentation of the collected data to make sense of its meaning (Yin, 2014:132). For Cohen et al. (2011:98), data analysis is a process of making sense of the data from the participant's perspective through themes, groups and uniformities. It is the method for examining social research data without converting them to a numerical format (Barbie, 2010:394; Barbie, 2017:391). Sanders, Phillip and Thornhill (2009:102) assert that data analysis is the examination and breakdown of interview transcripts into logical and structured themes to uncover insights and clarify new understanding of the area of focus. The purpose of data analysis is to reduce data into smaller themes (Creswell, 2014:260). One of the main functions of qualitative data analysis is to develop as thick and rich and as complete an account of the phenomenon under investigation as possible (Quinlan, 2011:420). Analysing qualitative data enabled me to find patterns and meanings in the transcribed texts (Quartaroli, 2009:259). Data analysis in this study was conducted by means of a thematic analysis method.

4.7.1 The thematic analysis method

Thematic analysis is one of the most used methods of qualitative analysis (Howitt and Cramer, 2005:396). Braun and Clarke (2006:6) and Bryman and Bell (2011:350) assert that thematic analysis is a method for identifying, analysing and reporting patterns (themes) within data. It minimally organises and describes data in detail. Thematic analysis involved me searching across data to find repeated patterns of meaning. I used a six-phase process of thematic analysis as suggested by Braun and Clarke (2006:16), as outlined below.

4.7.1.1 Familiarising myself with data

Data familiarisation is a key to thematic analysis. It was vitally important that I was extremely familiar with my data if the analysis was to be expedited and insightful. For this reason, it was important that I carried out the data collection myself and also transcribed the data, otherwise I would have been quite at a disadvantage (Howitt and Cramer, 2005:396). Transcription is a process of converting the voice-recorded data into text data (Creswell, 2014:263). I transcribed data into written form in order to conduct thematic analysis. Although the process of transcription was time-consuming and frustrating, it was an excellent way to start familiarising myself with data (Braun and Clarke, 2006:17). After familiarising myself with transcribed data, I started with the coding process.

4.7.1.2 Generating initial codes

This phase involves the production of initial codes from the data. Codes are the “building blocks of analysis” (Braun and Clarke, 2013:207). Codes are labels used to describe a segment of a text or an image (Punch, 2005:199; Creswell, 2014:268). I developed and applied codes as a way to summarise a large set of qualitative data (Quartaroli, 2009:264). With coding I systematically started to consider how the data related to the research question and phenomenon under investigation (Freeman and Sullivan, 2019:171). I coded my data by writing notes on the texts I was analysing, by using highlighters to indicate potential patterns (Braun and Clarke, 2006:18).

4.7.1.3 Searching for themes

The theme-searching phase began when I had coded and collated all data, and I had a long list of the different codes that had been identified across data set. This phase, which re-focused the analysis at the broader level of themes, rather than codes, involved me sorting the different codes into potential themes, and collating all the relevant coded data extracts within the identified themes. Essentially, I analysed my codes, and considered how different codes might combine to form an overarching theme (Braun and Clarke, 2006:19). I sorted different codes into potential themes and collated all relevant data within their identified themes (Mhlana, 2019:90). King and Horrocks (2010:149) contend that identifying themes involved me making

choices about what to include, what to discard and how to interpret participants' words.

4.7.1.4 Reviewing themes

In this phase I devised a set of themes. This phase also involved the refinement of such themes. Two separate themes could form one theme. Other themes were broken down into separate themes. I ascertained that data within themes cohered together meaningfully (Braun and Clarke, 2006:20).

4.7.1.5 Defining and naming themes

At this point, I defined and further refined the themes that I presented for my analysis and analysed the data within them. "Define and refine", in this particular context, meant identifying the "essence" of what each theme was about, and determining what aspect of the data each theme captured. It was vital that I should not just paraphrase the content of the data extracts presented, but identified what was interesting about them and why. For each individual theme, I conducted and typed a detailed analysis (Braun and Clarke, 2006:22).

4.7.1.6 Producing the report

This last phase began when I had a set of fully worked-out themes and involved the final analysis and the writing of the report. The purpose of the report of a thematic analysis for a thesis, is to tell the complicated story of my data in a way which convinces the reader of the merit and validity of my analysis. My report would have to provide sufficient evidence of the themes within the data – that is, enough data extracts to demonstrate the prevalence of the theme (Braun and Clarke, 2006:23). The interview data were also merged with documents which would make sense of the emerging findings. Data analysis culminated in my writing of the report.

4.8 QUALITY ASSURANCE STRATEGIES

For data analysis to be accepted beyond reasonable doubt, various quality assurance strategies must be adhered to. This involves subjecting data analysis to such key qualitative research measures such as trustworthiness, credibility, transferability, dependability, confirmability and triangulation.

4.8.1 Trustworthiness

According to Nieuwenhuis (2019:143), trustworthiness is of the utmost importance in qualitative research. Trustworthiness refers to the quality of an inquiry and is used as a means of evaluating qualitative research (Bryman, 2012:390). Nieuwenhuis (2007:80) contends that it is generally accepted that engaging multiple methods of data collection, such as interviews and document analysis, leads to trustworthiness. The case study method was used to ensure trustworthiness of this study. In this study, I collected data by talking directly to people and allowing them to tell their stories (Creswell, 2014:263) and assessed documents for accuracy or evidence (Briggs, Coleman and Morrison, 2012:122).

As a means of establishing trustworthiness, I made the process as transparent as possible (Shaw, 2019:189). This means that transcripts, field notes and other documentation relating to the research process can be made available to the reader. However, this may have to be done sensitively and ethically, to protect participant confidentiality and anonymity (Frost and Bailey-Rodriguez, 2019:70).

4.8.2 Credibility

As the goal of conducting research was to produce new knowledge, knowledge that others would come to trust and rely on, then the production of this knowledge needed to be credible (O' Leary, 2010:29). Bryman (2012:390) asserts that the establishment of the credibility of findings entailed both ensuring that research was carried out according to the canons of good practice and submitting research findings to the members of the social world who were studied for confirmation that the researcher had correctly understood that social world. Corbin and Strauss (2008:108) contend that credibility in a qualitative enquiry implies that the findings are believable and that they reflect my, participants' and readers' lived experiences with a phenomenon. I enhanced credibility of the study through the use of multiple data collection sites and by reflecting on and relating to the views as expressed by my participants in the interpretation of the study findings. Furthermore, I augmented the credibility of the study findings by ensuring that all research ethical protocols were observed and complied with during the conducting of the research.

4.8.3 Transferability

Transferability is the concept that enables readers of the research to make judgements based on similarities and differences when comparing the research situation to their own (Mertens, 2015:272). To increase transferability, I focused on how typical the participants were to the context being studied, and the context to which the findings would apply (Niewenhuis, 2019:144). The participants were intimately familiar with the phenomenon being studied, as they were directly involved in the context of the study focus in their practice (e.g. principals of non-fee-paying schools and the infrastructure-attached district officials). The other consideration was the success in providing a complete understanding of the context being studied. It was from this perspective that readers could explore the research report and determine if the findings could be transferred to their setting or environment.

4.8.4 Dependability

Dependability is demonstrated through the research design and its implementation; the operational detail of data gathering; and the reflective appraisal of my study. I kept the journal of my decisions during the research process, especially as far as the data collection and analysis process were concerned, so that others might be able to follow my reasoning (Niewenhuis, 2019:145). To attain dependability, I documented the category labels I created and any observations I noted concerning the data as I worked with the text. I documented the analysis process so that another person could see the decisions that I made, how I went about the analysis and how I arrived at the interpretations (Niewenhuis, 2019:145).

4.8.5 Confirmability

Confirmability is the degree of neutrality or the extent to which the findings of a study are shaped by the participants and not by my bias, motivation, or interest (Niewenhuis, 2019:145). The strategies to increase confirmability included triangulation and, therefore, acknowledging the effect of my bias. To manage my bias, I admitted my own predispositions. I was clear in my mind why I chose each quote and provided a contextualised understanding of why I included it (Niewenhuis, 2019:145). I also enhanced the confirmability by allowing the participants to check

the accuracy of the transcriptions of the interviews. The findings of a study was enhanced by interpreting the interview data from the point of view of the participants, and not involving my own predilection.

4.8.6 Triangulation

Triangulation is a process of bringing multiple types of data to bear on the one problem, using the different techniques to study the issue from different angles (Guthrie, 2010:46). White (2005:89) explains that triangulation entails the use of more than one source of data to support my conclusions. Triangulation involved me checking information that had been collected from different sources or methods for consistency of evidence across sources of data. For example, multiple methods such as semi-structured interviews and document review were used (Mertens, 2015:271). Yin (2009:86) contends that using different sources of evidence is a major strength of case study data collection and the findings become more convincing. I was therefore able to address a broad range of historical and systemic issues.

4.9 ETHICAL CONSIDERATIONS

Research ethics are the standards of professional conduct that I was expected to maintain in my dealings with colleagues, research participants, sponsors and funders, and the wider community. These include responsibilities to ensure the research project was designed and conducted safely, fairly and with integrity (Thomas and Hodges, 2010:83). Research ethics guided me so that I acted with integrity, especially towards participants in the research (Thomas, 2010:15). Hamilton and Corbett-Whittier (2013:110) define ethics as norms of conduct that determine acceptable behaviour. Research ethics address the question of which ethically relevant issues caused by my intervention could be expected to impact on the people with or about whom I researched. In addition, it is concerned with the steps to have been taken to protect those who participated in the research, if this was necessary (Flick, 2009:215). McMillian and Schumacher (2014:362) state that it is important for researchers to be fully aware of ethical and legal principles when conducting research to protect the rights and welfare of participants. Willig and Stainton-Rogers (2008:117) attest that ethical concerns are an intrinsic part of the research process. It was, therefore, paramount that I anticipated possible harm to the participants and planned to mitigate negative consequences to the participants (Flick, 2009:216). The

ethical considerations included: informed consent and voluntary participation, privacy, confidentiality and anonymity, protection from harm, and institutional ethical obligations.

4.9.1 Informed consent and voluntary participation

For applying the principle of informed consent in practical terms, some criteria have to be observed: the consent should be given by someone competent to do so; the person giving the consent should be adequately informed; and the consent should be given voluntarily (Flick, 2009:217; Nestor and Schutt, 2019:90). The language of the consent form should be clear and understandable to the research participants and yet sufficiently long and detailed enough to explain what would actually happen in the research (Nestor and Schutt, 2019:90). Participants should give informed consent to take part in the study. By being “informed”, participants should know what they were consenting to, including the fact that the activity (interview) would be part of a research project, what it was about, how long it would take, and what would be done with their data (Firth, 2020:114).

Potential participants had the right to receive clearly communicated information from me in advance. I therefore explained the research procedures in a letter written in simple language that was easily comprehensible by the potential research participant. The letter set out: the purpose of the investigation, the procedures, the risks, the benefits of participating in the study (absence of them), a statement that individuals might decline to participate and also would be free to withdraw at any time without giving a reason, and an invitation to ask questions (Berends and Zottola, 2009:97; Walliman, 2011:261; Thomas, 2011:69; Guthrie, 2010:17). To this end, all my participants were provided with the information sheet for understanding the core procedure of my research (see Annexure C). Prior to the commencement of interviews, I presented each participant with a letter, in which the research process was described (Maree, 2007:300), (see Annexure D). The prospective research participants were given as much information as might be needed to make an informed decision about whether or not they wished to participate in the study (Bryman, 2012:138). Because the participants could be willing to disclose personal information during research, I made sure that I treated both the participants and the information

they provided with honesty and respect (Dawson, 2009:149). I therefore strove to be honest and respectful towards all participants and the information they provided.

4.9.2 Privacy, confidentiality and anonymity

Maintaining privacy and confidentiality is another key ethical standard for protecting research participants and my commitments to that standard was included in the informed consent agreement (Nestor and Schutt, 2019:97). Privacy entitled participants to decide how much of their lives they were prepared to expose to me (Guthrie, 2010:23). In the design of some research studies, identifying information or other potential private information should be asked if absolutely necessary. For example, for many research purposes, there is no need to know participants' full names and addresses. If such identifying information is necessary for implementing research, then it should be used only for that purpose and kept separately from the substantive answers to the interview. It is often best to ask for age, income, level of education, and other personal information in broad categories than in detail (Remler and Van Ryzin, 2011:233).

Confidentiality is the key concern in any research undertaking. Giving participants the confidence that their answers would not be made public protects the participants and ensures validity. Participants are therefore more likely to provide honest, accurate answers if they trust that the data would not be disclosed (Lapan and Quartaroli, 2009:96). Maree (2007:301) explains that both the participants and myself should have a clear understanding regarding the confidentiality of the findings and the results of the study. Therefore, I made every effort to expunge possible identifying material from published information and to alter unimportant aspects of a description when necessary to prevent identity disclosure (Nestor and Schutt, 2019:419). Flick (2009:219) asserts that confidentiality and anonymity may be particularly relevant if the research involves participants in a specific, very small, setting. Because I interviewed participants in the same organisation, it was necessary to ensure confidentiality not only with respect to the public beyond that setting, but also within it.

As a researcher, I was obliged not to reveal information about participants in any way that might allow them to be identified (Guthrie, 2010:20). For example, the readers of the research report should not be able to identify the individuals who participated as

interviewees. Therefore, I changed personal data such as names, addresses, or workplaces so that inferences to persons would not be possible. Accordingly, I ensured that the other participants could not identify their colleagues in the presentation of their common organisation. For this purpose, a consistent anonymisation of the data and a parsimonious use of context information became necessary (Flick, 2009:220).

4.9.3 Protection from harm

According to Maree (2007:300), I ensured that participants were not exposed to any undue physical or psychological harm. No research should cause harm, and preferably it should benefit participants. Participants should not be endangered, harmed or distressed by any aspect of the investigation (Firth, 2020:114). Barbie (2017:64) asserts that participation should be completely voluntary and based on full understanding of what was involved. The ethical norms of voluntary participation and no harm to participants had been formalised in the concept of informed consent. This meant that participants should base their voluntary participation in the research project on full understanding of the possible risks involved (Barbie, 2017:65). I therefore made a judgement as to whether my conducting of research was likely to affect the well-being of participants and identified any potential risks to participants which might have arisen in the course of the research (Walliman, 2011:261). As the study was conducted in the midst of COVID-19 pandemic, the COVID-19 safety protocols were observed during the conducting of interviews. The issue of harm to participants was also addressed in ethical codes by advocating care over maintaining the confidentiality of records. The identities and records of individuals were therefore treated and maintained as confidential. This injunction also means that care should be taken when findings are being published to ensure that individuals are not identified or identifiable (Bryman, 2012:136).

4.9.4 Institutional ethical obligations

To fulfil other ethical and legal principles when conducting research, the following procedures were followed: ethical clearance from the Ethics Committee of the Faculty of Education of the University of Pretoria was applied for and granted (see Annexure A), and the Ethics Committee guidelines were adhered to. The permission to conduct

this research was requested and obtained from the provincial department of education (see Annexure B). Throughout the process of obtaining informed consent, it was imperative that I fostered a strong rapport, high level of trust, and mutual respect as I interacted with the participants (Lapan and Quartaroli, 2009:97). The informed consent to voluntarily participate in the research study was requested and granted by the infrastructure-attached district officials, the SGB chairpersons and principals of the sampled schools.

4.10 CONCLUSION

In this chapter, I provided an explanation and justification for the philosophical foundations that underlied this study. The research approach, research design and methodological approach were discussed in detail, highlighting their advantages and disadvantages. The chapter also explained the sampling strategy, sample size, sample sites and the rationale for the selection of research sites and individual participants. This was followed by a discussion on data collection procedures, including the application of semi-structured interviews and an exposition of document analysis. An explanatory discussion on how data would be analysed was provided. The ethical principles to be adhered to in the conducting of this study were also discussed. In the next chapter I presented and discussed the data.

CHAPTER FIVE

PRESENTATION AND DISCUSSION OF THE DATA

5.1 INTRODUCTION

In Chapter Four, I presented and discussed the research paradigm, research approach, research design, sampling procedures, data collection strategies, data analysis methods and ethical considerations applied in this study. Data was collected from twelve (12) schools and four districts in the selected South African province, with a total of thirty-two (32) participants. The methods used for data collections included semi-structured interviews and document analysis. This chapter presented the narrative descriptions of the major themes and sub-themes that emerged from the data generated from the semi-structured interviews which was integrated with the data generated from the document analysis. A discussion of the findings of the study, as supported by both document analysis and the theoretical frameworks for the study, was also provided in this chapter.

5.2 THE PROFILES OF THE SAMPLED SCHOOLS

The study investigated the management of school infrastructure in non-fee-paying schools. Therefore, the schools from which data was collected were purposively selected based on being non-fee-paying schools. The schools ranged from Quintile 1 to Quintile 3, which were in areas that were characterised by low socio-economic circumstances such as high unemployment rates and poverty levels, low educational attainments, non-perennial provisions of services and inadequate teaching and learning facilities. As highlighted in Chapter 1, this study focused on the “hardware” infrastructure of schools. Boissieri (2004:11) describes “hardware” as school buildings, classrooms, furniture and sanitation and “software” as curriculum, textbooks and writing materials. A demographic description of each participating school was provided in Table 5.1, in which “P” represented primary school and “S” secondary school.

Schools	Additional Sub-section 21 (1) functions	Teaching staff	Learners	Admin Block	Laboratory	Library	School Hall	Guard House
School A (P)	No	19	703	No	No	No	No	Yes
School B (S)	No	11	308	Yes	No	No	No	No
School C (S)	No	30	947	Yes	No	No	No	No
School D (S)	No	26	740	Yes	Yes	No	No	Yes
School E (S)	No	26	877	Yes	No	No	No	No
School F (P)	No	08	232	No	No	No	No	No
School G (S)	No	28	1056	Yes	No	No	No	Yes
School H (P)	No	20	721	No	No	No	No	No
School I (P)	No	26	901	Yes	No	No	No	No
School J (P)	No	32	1138	Yes	No	No	No	Yes
School K (P)	No	27	967	Yes	No	No	No	Yes
School L (S)	No	14	436	Yes	No	No	No	No

Table 5.1 Demographic description of participating schools

5.3 THE PROFILES OF THE PARTICIPANTS IN THIS STUDY

Data was collected from thirty-two (32) participants; namely, twelve (12) school principals and twelve (12) SGB chairpersons from six (6) secondary schools and six (6) primary schools respectively, and eight (8) infrastructure-attached officials from four (4) districts. In line with the objectives of this study, the participants were sampled because they were directly involved in the management of infrastructure in schools. One major feature of well-collected qualitative data is that it focuses on naturally occurring, ordinary events in natural settings, which enabled me to develop a good understanding on what 'real life' is like. Qualitative data on people's lived experiences is fundamentally well suited to locating the meanings people place on the events, processes, and structures of their lives and for connecting these meanings to the social world around them (Miles, Huberman and Saldana, 2020:7).

To ensure anonymity, both the study sites and participants were assigned code names, which were used in the interpretation of data. The schools involved in this study were referred to as School A, B, C, D, E, F, G, H, I, J, K and L, and the districts were referred to as Office M, N, O and P. The infrastructure-attached district participants were referred to as Official 1 and Official 2 as per each office.

5.3.1 The profiles of school principal participants

Table 5.2 presented the summary of the codes allocated to principal participants as well as brief biographic descriptions of each in terms of gender, work experience and qualifications. According to Aurini, Heath and Howells (2016:212), tables are a beneficial way to clearly and succinctly present information. In qualitative writing, tables are often used to convey descriptive information and characteristics of the subjects, such as information about the locations or demographic characteristics of participants.

Principal participants	Gender	Years of experience as a principal	Qualifications
School A principal	Male	6 years	Primary Teachers Diploma (PTD)
School B principal	Male	1 year, 6 months	B. Ed. Honours
School C principal	Female	2 years	B. Ed. degree
School D principal	Male	14 years	B.A. Honours
School E principal	Male	7 years	B. Ed. Honours
School F principal	Male	17 years	Further Diploma in Education (FDE)
School G principal	Female	2 years	B. Ed Honours
School H principal	Female	9 years	Master's degree
School I principal	Male	3 months	B. Tech (Education)
School J principal	Male	26 years	PTD, Advanced Certificate in Education (ACE)
School K principal	Male	1 year, 6 months	B. Ed Honours
School L principal	Female	2 months	B. Ed Honours

Table 5.2: Biographic profiles of school principal participants

5.3.2 The profiles of SGB chairperson participants

Table 5.3 presented the summary of the codes for SGB chairpersons as well as brief biographic descriptions in terms of gender, years of service and qualifications. All SGB chairpersons participated in this study during their final year in the office.

SGB chairperson participants	Gender	Years of service as SGB chairpersons	Qualifications
School A chairperson	Male	3 years	Grade 12
School B chairperson	Male	3 years	Grade 12
School C chairperson	Male	3 years	Grade 12
School D chairperson	Male	3 years	Grade 12
School E chairperson	Male	3 years	Grade 12
School F chairperson	Female	3 years	None
School G chairperson	Male	3 years	Secondary Teachers Diploma
School H chairperson	Female	3 years	B.Ed. degree
School I chairperson	Male	3 years	Diploma (Public Management)
School J chairperson	Male	3 years	Grade 12
School K chairperson	Male	3 years	B.A degree
School L chairperson	Female	3 years	STD

Table 5.3: *Biographic profiles of SGB chairperson participants*

5.3.3 The profiles of district official participants

Table 5.4 presented the summary of the codes for the infrastructure-attached district officials as well as brief biographic descriptions in terms of gender, years of experience in the office and qualifications.

District official participants	Gender	Position	Years of experience in the office	Qualifications
M1 official	Male	Acting Deputy Director	05 years	Postgraduate Diploma
M2 official	Male	Deputy Chief Education Specialist (DCES)	07 years	B.A degree
N1 official	Male	Acting Deputy Director	10 years	Doctoral degree
N2 official	Male	DCES	06 years	B.A degree
O1 official	Female	Acting Deputy Director	15 years	B.A Honours degree
O2 official	Female	Control Works Inspector	7 years	Diploma in Civil Engineering
P1 official	Male	Deputy Director	14 years	B.Ed. Honours
P2 official	Female	DCES	04 years	Master's Degree

Table 5.4: Biographic profiles of district official participants

5.4 DOCUMENT ANALYSIS

This section provided an overview of the document analysis which was used to support the interview data analysis for the sake of reinforcing triangulation in this study. As it would emerge in the following Section 5.5 of this study, document analysis was infused in the discussion of the data themes and findings. The input from document analysis was used to support the findings arrived at after the analysis of interview data. This section therefore provided a discussion of the data that was obtained from different documents with regard to the management of infrastructure in non-fee-paying schools in the selected South African province. A summary of the documents that were analysed was presented in Table 5.5 below.

Document title	The focus area for analysis
<i>Mpumalanga Department of Education Annual Report 2020/2021</i>	Achievements and challenges in managing school infrastructure
<i>Business process for the physical resource planning and facilities planning in the provision of school facilities.</i>	Steps followed in the provision of school facilities
<i>The National Development Plan 2030: Our Future - make it work.</i>	The proposals on school infrastructure
<i>National Norms and Standards for School Funding</i>	School allocations
<i>Infrastructure Maintenance Guidelines for School Facilities</i>	Operation and maintenance requirements for school infrastructure
<i>Guidelines Relating to Planning for Public School Infrastructure</i>	Basic services School safety and security
<i>Regulations Relating to Minimum Uniform Norms and Standards for Public School Infrastructure</i>	Implementation of regulations
<i>Regulations Relating to Norms and Standards for Education Facilities</i>	Basic services, utilities and operating systems
<i>South African Schools Act, no. 84 of 1996</i>	Sections 19, 20, 21, 36, 37, 39

Table 5.5: Summary of the documents used for data analysis

5.4.1 PRESENTATION OF DATA FROM DOCUMENTS

This section provided a discussion of the results of the document analysis, focusing on the key aspects pertaining to the management of infrastructure in non-fee-paying schools.

5.4.1.1 The backlog in structural infrastructure facilities

With regard to structural infrastructure facilities, the *Regulations Relating to Minimum Uniform Norms and Standards for Public School Infrastructure* (RSA, 2013:16) is clear that there is an expectation that all schools must have a school library or a media centre and a minimum, adequate and suitable school library collection. In addition, all schools that offer science subjects must have a laboratory and the necessary apparatus and consumables in accordance with the specific curriculum needs of a particular school to make it possible to conduct experiments and scientific

investigations. All schools must have areas where physical education, sporting and recreational activities can be practised (RSA, 2013:16). In addition, the *Regulations Relating to Norms and Standards for Education Facilities* document (RSA, 2019:70) requires that all the schools must be provided with adequate offices, staffrooms, and administration spaces of appropriate sizes with the requisite storage areas. *The National Development Plan 2030: Our Future - make it work* (RSA, 2012:303) contends that the provincial education departments should ensure that all schools meet minimum standards for infrastructure and commit to progressively upgrading each school's infrastructure to meet optimum standards. There should be well-equipped libraries, laboratories, computer and media centres to ensure that learners in non-fee-paying schools have access to similar learning resources to their counterparts in less poor communities.

In terms of the *Mpumalanga Department of Education Annual Report 2020/2021*, the province experienced huge backlogs in the provision of infrastructure in line with the Norms and Standards due to historic low investment in infrastructure and lack of maintenance in public school infrastructure. Currently as per the Framework for Effective Schools developed by the province, the estimated backlog is at R44.3 billion in terms of priority maintenance and this does not include the need for new schools. The global COVID-19 pandemic has placed enormous pressure on the compliance of education infrastructure, and this has exposed the inequalities that exist within the province with regard to availability of functional education facilities and accompanying basic services. It has also exposed the lack of commitment to infrastructure maintenance at particularly non-fee-paying schools and weaknesses in both information and communication technology (ICT) and physical security investments at schools. For example, despite the maintenance budget being increased to 30% of the total infrastructure budget in 2020/21, more than 175 schools were vandalised, and a number of schools were found to have neglected regular maintenance resulting in these schools being non-compliant to COVID-19 hygienic requirements. It was affected by the need to focus funding on continuous water supply and maintenance of sanitation facilities in response to COVID-19 hygiene requirements (Mpumalanga Department of Education, 2022:29).

5.4.1.2 School safety and security infrastructure

Pertaining to school safety and security, the *Guidelines Relating to Planning for Public School Infrastructure* document requires that every school site, including school outbuildings and sporting fields, should be surrounded by appropriate fencing to a height of at least 1.8 m. School buildings should be provided with some form of security measure, such as the following (RSA, 2012:11):

- “All ground-floor buildings and other areas built at ground level that are accessed by learners and teachers should at least be provided with burglar proofing.
- Every school should have an arrangement pertaining to a security guard.
- An alarm system, in addition to burglar proofing and a security guard arrangement is advisable and should exceed the minimum security requirements”.

School buildings and other school facilities should conform to all laws relating to fire protection. Safety and security provisions must be taken into consideration during the planning stage and incorporated in the designs, having the necessary risk assessment been carried out (RSA, 2019:85).

Fire extinguishers should be provided at a ratio of at least one extinguisher per every 150 m². Laboratories and other similar areas should at least have one fire extinguisher per every 50 m². The provisioning, maintenance and replacement of fire extinguishers must conform to national guidelines. Appropriate materials that are not harmful to learners must be used. Asbestos, mud, zinc, and wooden structures are not acceptable and shall render the school unsafe (RSA, 2012:11, RSA, 2013:18). School buildings and other school facilities must comply with fire regulations in terms of the National Building Regulations (RSA, 2013:18). The National Development Plan (NDP) proposes that communities should develop a strong sense of community ownership over schools. This encourages community members to assist with a range of tasks, such as monitoring learner safety and preventing vandalism and theft. School management teams must work with communities on an on-going basis to develop and maintain such a sense of ownership (RSA, 2012:311). It is on the basis of this data from document analysis, that the assurance of safety and security was perceived by SGB chairperson and school principal participants in this study as a necessity that must be provided by the provincial education department to non-fee-paying schools, as put in perspective in section 5.5.4.2.

5.4.1.3 Provision of basic services

With regard to basic services, the *Guidelines Relating to Planning for Public School Infrastructure and the Regulations Relating to Minimum Uniform Norms and Standards for Public School Infrastructure* document requires that all schools must have some form of power supply which complies with all relevant laws. The choice of an appropriate power supply must be sufficient to serve the power requirements of each school and must be based on the most appropriate source of power supply available for that particular school (RSA, 2012:10; RSA, 2013:14). All schools must be provided with a reliable and adequate power supply based on the overall school power demand as informed by the intended uses. The power supply to schools must conform to the provisions of the *South African National Standards (SANS) 10142-1:2012* (RSA, 2019:76). All schools should at the least be provided with a basic water supply that complies with all the relevant laws and which is always available for drinking, personal hygiene and, where appropriate, for food preparation. The choice of appropriate water technology may only be based on an assessment conducted on the most suitable water supply technology. No school is allowed to function without potable water.

In terms of the *Regulations Relating to Norms and Standards for Education Facilities*, all the schools must have access to potable, reliable and sufficient water supply of appropriate quality standards based on the overall projected school water demand and the intended uses. Sufficient water draw-off points such as water taps, standpipes and drinking fountains must be provided around the school at logical locations and as determined by the expected water demand. Water pipes must be buried underground and embedded into the wall to prevent vandalism and theft for scrap metal. Water leak detection systems with automatic shut off mechanism in case of leakage must be installed in all schools where water is obtained from municipal reticulation network and from the groundwater to eliminate any potential water wastage and to reduce the operating costs (RSA, 2019:74). Sources of water supply could include one or more of the following: a municipal reticulation network; rainwater harvesting and, when so required, tanker supply from municipalities, boreholes and local reservoirs and dams (RSA, 2012:11, RSA, 2013:14).

Regarding sanitation, *the Regulations Relating to Minimum Uniform Norms and Standards for Public School Infrastructure* document states that all schools must have enough sanitation facilities that: are accessible to all learners and teachers; provide privacy and security; promote health and hygiene standards; comply with all relevant laws; and are maintained in good working condition. The choice of an appropriate sanitation technology must be based on an assessment conducted on the most suitable sanitation technology for each school. Sanitation facilities could include one or more of the following: water borne sanitation; small bore sewer reticulation; septic or conservancy tank system; ventilated improved pit latrines; or composting toilets. Plain pit and bucket latrines are not allowed at schools (RSA, 2013:15). All the schools must be provided with adequate, safe, accessible, functional, and hygienic sanitation facilities. The sanitation facilities provided in schools must conform to the provisions of SANS 10400-Q:2011 and SANS 10400-P:2010 (RSA, 2019:78). The National Development Plan contends that in addition to suitable buildings, schools need access to services such as water, sanitation and electricity. The rollout of infrastructure for these services is bedevilled by poor coordination between different state agencies and local authorities, who are responsible for providing infrastructure services (RSA, 2012:312).

5.4.1.4 Capacity enhancement of school governing bodies

In terms of Section 19 of the South African Schools Act, the enhancement of capacity of governing bodies is a prerequisite by the provincial education department. Sub-section 19 (1) stipulates that “out of funds appropriated for this purpose by the provincial legislature, the provincial Head of Department must establish a programme to (a) provide introductory training for newly elected governing bodies to enable them to perform their functions; and (b) provide continuing training to governing bodies to promote the effective performance of their functions or to enable them to assume additional functions”. In addition, sub-section 19 (2) further stipulates that “the Head of Department must ensure that principals and other officers of the education department render all necessary assistance to governing bodies in the performance of their functions in terms of this Schools Act”. In terms of sub-section 19 (4) (a), “the Head of Department may request a recognised governing body association or other appropriate training authority to train members of a governing body of a particular school or group of schools and to build the capacity contemplated”.

According to the National Development Plan, all educational institutions should be provided with the capacity to implement policy. The provision of training for capacity building for school principals and SGB chairpersons on effective management of school infrastructure is no exception in this regard. Where capacity is lacking, this should be addressed as an urgent priority (RSA, 2012:302). The National Development Plan maintains that one of the factors affecting continued backlogs in school infrastructure is the lack of capacity in planning, procurement, project management, financial management and construction management (RSA, 2012:312).

The school governing bodies have a clear legal mandate to oversee the governance of schools. This includes extensive responsibility for finances and internal school policies. Many school governing bodies are significantly hampered by parents' lack of expertise and social status relative to school staff. Therefore, the provincial education department must give additional support to governing bodies (RSA, 2012:311).

As this study investigated the management of school infrastructure, the functions of SGBs in relation to school infrastructure were noted. Sub-section 20(g)(1) of the Schools Act outlines the functions of all governing bodies in terms of which "the governing body of a public school must administer and control the school's property, and buildings and grounds occupied by the school, including school hostels, but the exercise of this power must not in any manner interfere with or otherwise hamper the implementation of a decision made by the Member of the Executive Council or Head of Department in terms of any law or policy". Also, in terms of sub-section 21(1)(a), a governing body may apply to the Head of Department in writing to "maintain and improve the school's property, and buildings and grounds occupied by the school, including school hostels, if applicable". However, this additional function will place an added financial burden on a school governing body, particularly in non-fee-paying schools.

5.4.1.5 The selected Department of Education's business management plan

This chapter also incorporated the business management plan as developed by the selected provincial department of education as their management tool for school

infrastructure. This business management plan encompasses twenty (20) steps as indicated below (Mpumalanga Department of Education, 2014:3):

Step 1: The principal, SMT and SGB identify the needs of the school, in the beginning of July of the previous year. The SGB's plan priorities for maintenance and/or day-to-day maintenance.

Step 2: If the requested additional or new facilities meet the required norms and standards, the school prepares the list and sends to the circuit office, in the beginning of August the previous year. If the requirements do not meet the acceptable norms and standards, a list of maintenance and renovation needs to be prepared and sent to the circuit office.

Step 3: The circuit manager considers the submissions received from schools and populates a standard template, to include priorities and backlogs in services like water, electricity, and fencing, at the beginning of September, the previous year.

Step 4: The circuit managers must again identify schools for planned maintenance, renovations and refurbishment. If there are no new required facilities, then the circuit managers must consider including the outstanding facilities in the circuit project list.

Step 5: The circuit managers sign off their circuit priority lists and submit to their district offices at the beginning of October, the previous year.

Step 6: The District Resource Planners validate the lists in the Education Facilities Management System (EFMS) and collate the lists from circuits, for each project type, using the standard template provided by Head Office.

Step 7: The District Resource Planners attach the cost estimates to the list of projects at the end of November, the previous year.

Step 8: The District Directors sign off the list and submit to Head Office, excluding schools without sites, at the end of November, the previous year.

Step 9: Head Office receives the priority lists from all four (4) Districts, beginning of January, the current year.

Step 10: The provincial priority list is developed at Head Office.

Step 11: Head Office evaluates and physically verifies sampled projects from the priority list, verifies the cost estimates in the received list and confirms the list through the Facility Management and Property Register of the EFMS. If there are variances in the submitted lists, EFMS, provincial targets and political commitments, Head Office will refer the priority list back to the District concerned, for corrections. Otherwise, Head Office liaises with municipalities to acquire land or site.

Step 12: Head Office confirms availability of land or site for new projects.

Step 13: The HOD signs off the draft User Asset Management Plan (U-AMP) for submission to the DBE (beginning of June, the current year), Provincial Treasury (PT), Co-operative Governance and Traditional Affairs (COGTA) and provincial Department of Public Works, Roads and Transport (DPWR&T).

Step 14: Draft is made available to Districts for further refining, if necessary (mid-June, the current year).

Step 15: The province populates the draft Medium-Term Expenditure Framework (MTEF) budget (consultation period with relevant stakeholders in this process).

Step 16: The first draft U-AMP is presented to the Executive and Senior Management for approval (mid-July, the current year).

Step 17: Draft U-AMP is returned to Head Office after assessment. The draft U-AMP is updated as per inputs from the DBE (October, the current year).

Step 18: The HOD signs off the final draft U-AMP including Infrastructure Programme Management Implementation Plan (IPMP), Table B5 and Construction Procurement Strategy (CPS) for submission to DBE, COGTA and PT (end of October, the current year).

Step 19: DPWRT prepares the Infrastructure Programme Implementation Plan (IPIP) based on the IPMP and submit it to the Mpumalanga Department of Education (end of November, the current year).

Step 20: Planning evaluates and ensures IPIP aligns with Table B5 (January-February, the new year). Planning roles end and implementation starts (March-April, the new year).

It is detectable that this business management plan is time-consuming, tedious, and bureaucratic in nature. This management plan can therefore not be said to be appropriate for addressing the school infrastructure backlogs that exist in the province.

5.4.1.6 Allocation of funds to schools

This section commences with a brief background on the allocation of funds to public schools. Sub-section 29(1)(a) of the Constitution of the Republic of South Africa, 1996 establishes that "everyone has the right to a basic education, including adult basic education, which the state, through reasonable measures must make progressively available and accessible". To this end, Sub-section 34(1) of the South African Schools Act stipulates that: "the State must fund public schools from public revenue on an equitable basis in order to ensure the proper exercise of the rights of learners to education and the redress of past inequalities in educational provision". The annual amounts allocated to schools are determined by the *National Norms and Standards for School Funding* (NNSF). The allocation of funds to public schools for 2022, 2023 and 2024 financial years is indicated in Table 5.6. Non-fee-paying schools are to receive R1 536, R1 602 and R1 674 per learner for the respective years. The school allocation budget is a provincial budget used exclusively to finance the school allocations in the province (RSA, 2006:14).

	2022	2023	2024
NQ1-NQ3	R1 536	R1 602	R1 674
NQ4	R770	R803	R839
NQ5	R286	R277	R290
No fee threshold	R1 536	R1 602	R1 674
Small schools: National fixed amount	R35 598	R37 129	R38 800

Table 5.6: Allocation of funds to public schools per learner for the years 2022, 2023 and 2024 (Adapted from Amended National Norms and Standards for School Funding (RSA, 2022).

The monetary allocation to schools is intended to finance key inputs other than personnel and buildings. This means that these allocations are not for the

development of school infrastructure, although an amount of each school's allocation is ring-fenced for basic infrastructure maintenance. The key examples of inputs for which the school allocation is intended are textbooks, stationery and non-educational items such as cleaning materials and electricity. Such inputs are necessary if teachers and other personnel in schools are to perform their functions properly. The school allocation is therefore an important instrument for supporting the government's commitment to fulfilling the State's constitutional obligation to provide education. The government sees the school allocation as a key means of empowering school communities and realising democracy at the level of the school. It is important for the local level to participate in decision-making relating to what non-personnel inputs to purchase for schools. For this reason, the government supports the gradual transfer to the school level of decision-making powers relating to the school allocation. This must, however, occur in a controlled manner, in accordance with the Sections 19 to 22 of the Schools Act. School allocations must also be managed in such a way that public funds are not squandered and are spent in a manner that fully supports the national curriculum (RSA, 2006:25).

In general, the school allocations are intended to cover non-personnel recurrent items and small capital items required by the school as well as normal repairs and maintenance to all the physical infrastructure of the school. Examples of items that the school allocation may cover include learning support materials (LSMs), including textbooks, library books, charts, models, computer hardware and software, televisions, video recorders, video tapes, home economics equipment, science laboratory equipment, musical instruments, learner desks, chairs, services relating to repairs and maintenance, including building repair work, equipment repairs and maintenance, light bulbs, telephone calls, electricity, water, rates and taxes, security services, public or scholar transport (RSA, 2006:27). At schools, the school allocations are commonly referred to as Paper Budget. It is therefore within the context of the foregoing discussion that the maintenance of school infrastructure is allocated 13% of the total school allocations, technically referred to as the Paper Budget.

5.5 PRESENTATION OF INTERVIEW DATA

In this section, I presented the interview data obtained from the participating school principals, participating SGB chairpersons and participating infrastructure-attached district officials. The section was structured according to the themes and sub-themes which are indicated in Table 5.7. The themes and sub-themes were based on the participants' responses to the interview questions, which were developed from and related to the research questions that guided this study. A theme is an extended phrase or sentence that identifies what a unit of data is about and/or what it means. Themes are statements of ideas presented by participants during interviews that summarise what is going on, explain what is happening, or suggest why something is done the way it is (Miles, Huberman and Saldana, 2020:73). Padgett (2017:152) contends that one of the most common activities across qualitative approaches is the pursuit of themes, especially when I must go beyond scrutinising a single case or portion of narrative.

THEMES	SUB-THEMES
Theme 1: The infrastructure management processes.	• Management structures and processes • The needs analysis • Maintenance management plans and procedures • The involvement of external service providers
Theme 2: The challenges in the management of school infrastructure.	• The bureaucratic nature of the business management process • The insufficient day-to-day maintenance budget • Escalation of crime and vandalism in non-fee-paying schools • The incongruity of school infrastructure priority management plans between the districts and the non-fee-paying schools

Theme 3: The role of the provincial education department.	• Inability of the selected provincial department of education to meet the infrastructure needs of non-fee-paying schools • The training of school principals and SGBs on the management of school infrastructure • Support provided by the selected provincial department of education to schools • Overwhelming infrastructure problems at the participating schools • Insufficient financial support to the schools
Theme 4: The participating schools' perception of the role of the provincial education department	• Insufficient interaction between schools and the provincial education department • Assurance of safety and security

Table 5.7: Themes and sub-themes

Because themes are similar codes aggregated together to form a major idea in the data-base, they form a core element in qualitative data analysis (Creswell, 2014:272). Interview data can be systematically analysed through either an inductive or deductive approach. Through the inductive approach, I perused the transcripts of the interview to identify common themes or analytic categories in response to each research question (Brancati, 2018:149). Linked to the research questions, four (4) themes were identified in this study for interpretation purposes. Each theme has sub-themes and quoted responses to support the findings. The first theme was generated from participants' responses related to the first research question, namely: What processes do non-fee-paying schools engage in when managing school infrastructure? It should be noted that in this section the data generated from the document analysis was integrated into the discussion of the themes and sub-themes.

5.5.1 Theme 1: The infrastructure management process

I sought to better understand the management processes or functions which the selected provincial Department of Education and non-fee-paying public schools engaged in when managing infrastructure as expressed by the participating school principals, SGB chairpersons and infrastructure-attached district officials. The responses of the participants were subsequently analysed, and it became evident that schools followed varying management processes when managing school infrastructure. The management processes identified by participants included the establishment of the infrastructure committees, conducting a needs analysis and the drafting of management plans.

5.5.1.1 Sub-theme 1: Management structures and processes

The participating school principals and SGB chairpersons identified the existence of infrastructure or maintenance committees as the structures by means of which infrastructure is managed at their schools. By using my research participants' own words, I was able to impart depth into my writing, while giving a voice to my study population (Aurini, Heath and Howells, 2016:212). The following were the responses provided by participants on the processes used in managing infrastructure in their schools:

I have got different committees and then there is a committee for the infrastructure. If you are applying to fix something, or develop something, and then you suppose to start there at the committee. That committee is checking everything in the school, according to the systems or plans for the infrastructure (School C SGB chairperson).

Firstly, there is an infrastructure committee that is constituted by parents and SGB and teacher component and there are certain learners in the LRC that are constituting this infrastructure committee. And secondly, there are policies that we have crafted such that this committee will make use of in the management of the infrastructure (School D principal).

We have got structures like the School Governing Body which actually plays a vital role mostly in the maintenance of school

infrastructure, like when we have got broken windows, broken doors, falling ceilings, toilets that are not flushing. All that is actually the baby and the responsibility of the SGB because they need to know who should do what; getting people who would be responsible for the maintenance purposes and also at times, you will find that the SGB members have some expertise, they can voluntarily offer services to do this and that. And then we also have some committees like the infrastructure committee in the school that basically looks at everything, that reports to the SGB if there are areas that need attention (School E SGB chairperson).

Committees are formed and assigned functions to perform. These committees meet to give reports on their findings. These reports are then communicated to general SGB for implementation. If we have broken windows, for example, these committees will know so many windows have broken because these committees their chairpersons are the members of the SGB (School F principal).

We do have a committee in the school known as the Ground and Buildings Committee, which is having a policy. So, what we have is sort of a checklist whereby we look at our infrastructure, so the way we manage them, we categorise them into two (2): there are those that are on a short term, that need to be managed on a short term, the other one on a long term like if a window is broken it is a short term to fix it now. Regarding painting and changing of ceilings is a long term, so we use that checklist (School G SGB chairperson).

We do have an infrastructure development committee in the school. Then what we do everything that we receive in the school, we put it in the asset register, then we number or place a stamp on everyone. Then we know exactly where it is. If it is for the office, it must be in the office, if it is for the class, it must be in the class, if it must be in the library, it must be found in the library or the laboratory (School L principal).

The views shared by the school principal and SGB chairperson participants as captured under this sub-theme indicated that these represented schools applied their management processes on school infrastructure in line with the management functions theory as one of the underlying theoretical frameworks for this study. For example, the existence of infrastructure committees concurred with the application of organising management function. Smit et al. (2011:9) contend that once the goals and plans have been determined, managers must allocate the organisation's human and other resources to relevant sections. DuBrin (2009:8) explains that organising is the process of making sure the necessary human and physical resources are available to carry out a plan and achieve organisational goals. By organising effectively, managers can better co-ordinate human, material, and information resources. This task involves delegating (passing on) work to other employees so that they can carry out the necessary activities effectively, and act according to their set authority and responsibilities (Oosthuizen, 2011:61).

5.5.1.2 Sub-theme 2: The needs analysis

Participants identified the use of a needs analysis as a process by which they engaged themselves in management of infrastructure at their schools. The following quotations referred to the use of needs analysis by participants:

I think it is very much imperative to do needs analysis in addressing that process in management of infrastructure, maintenance of the existing structure, procurement where the need arises. I think those are some of the things that you must look at, you cannot just jump over, it needs one to analyse what is actually supposed to be done before you address the problem (School I SGB chairperson).

NEIMS – National Educational Infrastructure Management System. That is where we do the conditional assessment of all the schools and we have developed the profiles of all schools so that we know exactly which schools need maintenance, which schools need the provision of toilets, which schools require additional classrooms. So we use the conditional assessment informed by NEIMS. Before we can go to schools, we do assessment and have the facts. When we go out we know exactly how many schools require maintenance, how

many schools fence, toilets, additional classrooms. So, our support is informed by the conditional assessment as we do it through the NEIMS system but that is not the only criterion because you are going to miss the point. You can do the assessment and the summer rains would come in and find that the school is storm-damaged. In such a case, we do an assessment and make recommendations for the provision of replacement infrastructure. In other instances, we assist the schools by engaging the municipalities. We get a call indicating there is no water in the school. The municipality has not provided us with water and the school cannot function under these conditions. We then engage the municipality to ensure that the school is assisted. That is what we do at the level of the district, all above our conditional assessment which gives us a picture about the state of the infrastructure (M1 official).

These responses denoted that some schools applied their management process of needs analysis on school infrastructure in accordance with the provisions as indicated in *Business Process for the Physical Resource Planning and Facilities Planning in the Provision of School Facilities* (Mpumalanga Department of Education, 2014:3). The *Business Process for the Physical Resource Planning and Facilities Planning in the Provision of School Facilities* affirms that the principal, SMT and SGB identify needs of the school, in the beginning of July of the previous year. These needs are discussed with the parents and teachers and included in the School Improvement Plan. Once the School Improvement Plan has been approved by the SGB, the SGB's plan should be to prioritise day-to-day maintenance (Mpumalanga Department of Education, 2014:3).

The needs analysis at school level constitutes the beginning of the lengthy business management process which culminates at Head Office of the Mpumalanga Department of Education. The needs analysis management process, which is a step-by-step planning process, is a lengthy, tedious exercise which renders the management of school infrastructure formidable to accomplish. Step 1 of this business management process begins at the school level as the schools' assessment of needs, proceeding through the circuits, districts right up to the provincial level. The

needs analysis at district and provincial level was fully discussed in section 5.5.2.1 below.

5.5.1.3 Sub-theme 3: Maintenance management plans and procedures

Participating school principals and SGB chairpersons identified the utilisation of management plans when managing infrastructure at their schools. The following quotations attested to the use of management plans by participants:

As a school, we have a management plan for the infrastructure, hence the general worker is taking care of the structure reporting any damages that are in the school. Hence the toilet system is dysfunctional, the general worker takes care of them and report to the principal, myself, and I further tell the SGB so that they take care of the damaged structures (School A principal).

We apply planning as a governance, what are our infrastructural needs of our school. We plan and then some of them they call for us to be purchased and that is procurement. Actually, we plan for them and then we have got a planning committee that we do organise and also make sure that there is a proper control (School K principal).

We have also a maintenance plan, which communicates to the teachers, to the parents, to the learners. We are proud that there is no class without windows because we are hands-on on our maintenance plan. The learners know that if you break a window, the parents receive a letter, they come and fix it. So that is our maintenance plan (School H principal).

We are having a management plan where we check, we prioritise according to the needs of the school, which facility must be fixed because we are maintaining the building so that it cannot dilapidate. The SGB is also involved (School C principal).

The views expressed by participants indicated that these schools executed their infrastructure management processes by applying the function of planning, an approach which is endorsed in management functions theory. The management

plans were devised and executed by only the schools represented above. The above-cited participants indicated to be implementing their management plans. For example, School H principal explained that once learners cause any damage on school infrastructure, the parents take responsibility of fixing the damage. The School K principal asserted that once infrastructural items have been purchased, the infrastructural planning committee ensures that proper control is exercised.

As the first element of the management process, planning is the setting of goals and the development of a plan of action to achieve the goals as productively as possible (Cronje et al., 2006:157). During the planning phase, the vision, mission and goals are determined as well as the resources needed for the task. Van der Walddt and Du Toit (2011:181) assert that planning is a basic management function which helps an organisation to keep up with change and helps managers to determine in advance what the organisation should achieve. Planning is a basic process involving every manager to some extent and the purpose of a plan is to facilitate the achievement of an organisation's goal, mission and objectives. Planning is therefore aimed at determining future circumstances and identifying the measures needed to realise them (Van der Walddt and Du Toit, 2011:182). The National Development Plan maintains that one of the factors affecting continued backlogs in school infrastructure is the lack of capacity in planning (RSA, 2012:312). Planning is therefore essential as a management function in accomplishing the set infrastructure goals.

It should, however, be pointed out that the other nine (9) schools did not mention management plans as part of their management processes for school infrastructure. This led to questioning whether these schools indeed follow common processes for managing school infrastructure.

5.5.1.4 Sub-theme 4: The involvement of external service providers

The infrastructure-attached district official and school principal participants mentioned the involvement of external providers in the management of school infrastructure. The participants regarded the involvement of external stakeholders such as municipalities, Provincial Regional Training Trust (PRTT), business and donors as playing a significant role in the development and management of infrastructure in non-fee-paying schools.

And the other thing to improve the infrastructure, I think in most cases even though the 13% may not be enough, we can assist in partnering with the PRTT because the Provincial Regional Training Trust has got students who can assist with labour. As a school, we can buy material and then PRTT can assist with labour. And as a district, we will support them in terms of assuring that whatever is done in school with regards to infrastructure is of quality (N2 official).

Then we also need the private sector to actually play part to assist these institutions like schools in the community. Like if we are looking in our own school, there are number of companies that are benefitting from the land in this community. Those companies should actually plough back to the community in terms of infrastructure. A company is supposed to just come to the school and offer support by building a laboratory or any structure or a proper fence. That is only done to former Model C schools which are already better off, leaving the schools from poor communities that were previously disadvantaged unattended to (School E principal).

With regards to finances, we talk to donors to assist us where they can (Official N1).

We do support schools in many ways like liaising with the municipalities for schools to get water. Sometimes speaking with corporates/the private sector to donate things like mobile laboratories, mobile classrooms, though it may not be financial in terms. We then engage the municipality to ensure that the school is assisted. That is what we do at the level of the district (Official M1).

And then we also try and get help from local businesspeople. We ask for donations, if we succeed, we are able to meet the need that has arisen during that time and we are able to survive under that condition (School B principal).

We had service providers which used to come and provide us with so many things in school. Then if we were given a tender, a service

provider, we ask a plough-back, just like now we had VIP toilets, then I asked the person who received a tender to come and fix the broken windows for us. The person promised that she would come and help (School C principal).

The alternatives we take include organising with SGB to go out for sponsorship from various businesspeople. Sometimes we seek help from other stakeholders like Mines. There is a company from Telkom that came here and provided us with a computer centre as one of our infrastructures. But now it is closed because we do not have funds to pay for human resource to operate the centre. We have therefore requested one of the businesspeople around to assist us with some funds so that we are able to continue with our computer centre and pay for the tutor and also carry out the maintenance of the computer centre. But for now, it has stopped (School J principal).

And also, we assist schools through donations from donors. Other schools also source donors on their own, so assist the maintenance of the school (Official M2).

When we try to assist the schools that do not have sufficient funds with regards to maintenance, first of all, we have the Provincial Regional Training Trust (PRTT) which is a section of the government where students are trained for various skills. So, if a particular school has less funds/budget, we talk to PRTT whereby students are able to practise/apply their skills in that particular school (Official N1).

The involvement of external service providers is in keeping with the prescripts of the Schools Act. In terms of Section 36 (1) of the Schools Act, the governing body of a public school must take all reasonable measures within its means to supplement the resources supplies by the State to improve the quality of education provided by the school to all learners at the school. The cast of attention by the infrastructure-attached district official and school principal participants to external sources to assist in the development and management of school infrastructure is a legitimate endeavour to improve the management of school infrastructure. Being propelled by the insufficiency of the 13% of the annual allocation to non-fee-paying schools (so

called Paper Budget) which is ring-fenced for infrastructure maintenance, the above-cited participants seemed to be reaching out to external stakeholders or the private sector for support in the management of their schools' infrastructure.

5.5.2 Theme 2: The challenges in the management of school infrastructure

In this theme, the school principal, SGB chairperson and infrastructure-attached district official participants cited different challenges that the non-fee-paying schools were faced with in the management of school infrastructure. This theme consists of the following sub-themes: the bureaucratic nature of the business management process; the insufficient day-to-day maintenance budget; escalating crime and vandalism in non-fee-paying schools; and the incongruity of infrastructure priority management plans.

5.5.2.1 Sub-theme 1: The bureaucratic nature of the business management process

In this sub-theme, the infrastructure-attached district official participants identified the business management process as a tool by which they engage in the management of infrastructure for the non-fee-paying schools at district and departmental level. The following quotations attested to the use of the business management process by the infrastructure-attached district official participants and bureaucracy thereof:

In our management of school infrastructure, the processes start at school. So, the SGB will convene the meeting and that meeting will be constituted by the principal, the ward councillor where the school is located. In that meeting, they do what we call school needs identification or school needs analysis. So, they look at the infrastructure needs of the school and then prioritise them as a school. Everybody will have an input. Why we bring in the ward councillor, in the past we didn't do so but we believe in a ward-based development model so that whatever happens in the school should be informed about the needs because the school is part of a ward. So, the community in that particular ward should embrace the school, it's their school. So, any school infrastructural needs should be informed by the that, that is why we have a ward councillor. So we

start there; the needs identification, needs analysis. From there the process cascades or culminates in the circuit priority list where schools will be prioritised in terms of, they will be ranked; the worst off and so on. It then comes to the district where the same priority is done, and then it goes to the province where we produce the Table B5. Basically, it a list of the funded projects, that is a process that we normally follow. But over and above that, we expect schools to have an infrastructure committee, that is key (M1 official).

In terms of school infrastructure, we have what we call business process. A business process has different steps that we follow. First, we start at a school level, where SGBs and SMTs identify the needs of the school. Then they must do that and make a submission to the circuit offices, what it is their needs at the school. After that, the circuit offices will hold what we call priority list meetings, where in those meetings different schools, principals together with the SGBs come and present what it is that they need in their schools. After that process, it will go to the district level where now circuit managers will come and present infrastructure challenges that are there in their schools. Then after that, as a district, once the circuit managers have completed, we do a final list of projects for a district then we submit it to the Head Office. Then at Head Office they sit down and compile what we call a provincial list now where they list all the infrastructure projects for the districts. Then they compare the budget against the needs, then they determine which infrastructure projects will be done in a particular financial year. That is how it works (M2 official).

Provincial department of education business process for the physical resource planning and facilities planning in the provision of school facilities is the procedure that is used to provide facilities to our schools. For example, when we use that particular document, first of all we are having step 1, whereby the principal, SMT and SGB identify the needs of the school by the beginning of July and again in Step 2, after those necessities have been identified by the principal and the SGB, they are then sent to the circuit whereby they are discussed

and there after we, as a district, make a priority list for all those schools, so that we can provide them according to the needs that they requested from us (N1 official).

What we actually do, we follow the business process, it is a planning process that is stretched for the period of two years. Basically, that is when the schools will have to make a submission for school needs to the circuit and the circuit on that compiles the priority list. From the list, then it goes to the circuit level whereby they consolidate the circuit priority list. From then that is when the district comes in. But what happens throughout the process is that all the stakeholders are advised accordingly to ensure that they can provide the needs as per Departmental target for that particular financial year (N2 official).

We have got a business process. It outlines all the processes that will be involved within the provision of infrastructure from the level of the school, circuit, district, province and then Public Works because the provisioning of school infrastructure is categorised into two: we have got the planning side of infrastructure and the implementation side of infrastructure. So, in terms of the planning, it starts from the level of the school where the schools identify their own needs. After identifying their own needs... Let me say, at the level of the school, there are two processes because there is a process whereby a school is given its allocation that we call Day-to day maintenance which is sourced from the Paper Budget. So, from that budget, there is a responsibility that has been given to the SGB to ensure that whatever basic needs they have as a school in terms of infrastructure, they have to address all those basic needs according to the Paper budget that has been allocated to them. So that is the first leg/level of provision in terms of the school level by SGB. The second level takes place where the school cannot afford those needs. In fact, in their meeting they must write two letters (set two options); they have to agree on the one that will be based on Paper budget and the second one that will be directed to district level. For the one that will be based on Paper budget, they must make their maintenance plan. Every year

they draft their maintenance plan. That maintenance plan has to be aligned according to their allocation and then they implement it. Then they provide expenditure based on that. Then the second one, that will be directed to us (district), they have to convene again, and they categorise the needs in terms of new construction, renovation, additional; all those categories. Then they write the letter and send it to circuit office. From the circuit, the circuit manager will receive the needs from different schools (O1 official).

We have different processes that we are following but the most one is what we call business planning process. Business planning process is a step-by-step document that has been formulated by the Department, and this business process comprises of introduction, background, business process and conclusion. It is actually a working document for the infrastructure. We normally start the business process by saying school needs, what school needs. When we talk of school needs, we talk of the principal, the SMT and the SGB who identify the needs of the school first and this is done normally in April the previous year in preparation for the current year. The SGB plan priorities for maintenance or day-to-day maintenance, it is a process. It starts from the school where the SGB and the SMT sit around the table and identify the needs of the school, and this should happen during April and May of the previous year. Now, the other process is the circuit where the circuit manager considers the submissions received from schools. Once the schools have finished the planning, they submit to the circuit and the circuit will also compile this as a one document that should be submitted to the district (P1 official).

The processes that we normally follow is the processes of schools to check their needs. It starts at school level through the SGBs, SMTs, they check they needs from May, June. Then in July they consolidate all their needs that they have discovered in their schools, then they submit to the circuit. The circuit converges for the circuit level consolidation of all the needs during the month of July, even August, but normally we state it must end around July, then in August and

September that is when the district comes in and meet with the circuits and find out the different meetings from their schools and consolidate the district one, then send it to Head Office around October, November (P2 official).

The views expressed by the infrastructure-attached district official participants in this sub-theme indicated that the management process of the needs analysis on school infrastructure is carried out in accordance with the provisions as obtained from document analysis (Mpumalanga Department of Education, 2014:3). The needs analysis at school level is the beginning and part of the lengthy business management process which culminates at provincial Head Office. The business management process, which is a step-by-step planning process poses a management challenge by itself, as it is a lengthy, prolonged exercise which renders the management of school infrastructure formidable to accomplish. This business management process begins as step 1 at the school level as the schools' assessment of needs, proceeding through the circuits, districts, and right up to the provincial level. The actual delivery of infrastructural provisions takes ages before it materialises because more time is consumed in the lengthy planning.

According to the Mpumalanga Department of Education (2014:5), once the provincial priority needs list is developed at Head Office, the provincial HOD signs off the draft user-asset management plan (U-AMP) for submission to the national Department of Basic Education (DBE) and Department of Public Works (DPW) at the beginning of June of the current year. The draft U-AMP is also made available to Districts for further refining, if necessary, in mid-June, of the current year. Meanwhile, the Province populates the draft Medium-Term Expenditure Framework (MTEF) budget in consultation with relevant stakeholders in the process. When the draft U-AMP is returned to the provincial Head Office after assessment, it is updated as per inputs from the DBE in October of the current year. The provincial HOD signs off the final draft U-AMP which includes the Infrastructure Programme Management Plan (IPMP) and Construction Procurement Strategy (CPS) for submission to the DBE, the Department of Co-operative Governance and Traditional Affairs (COGTA) and the provincial treasury (PT) at the end of October, the current year. COGTA comes in as a stakeholder because the land sites for construction are under municipal jurisdiction. Concurrently, the Department of Public Works prepares the Infrastructure

Programme Implementation Plan (IPIP) based on the IPMP and submit it to the provincial department of education at the end of November of the current year. The planning roles end here and implementation starts in March-April of the following year (Mpumalanga Department of Education, 2014:6). In a subsequent follow up in eliciting information about the source of budget for capital school infrastructure projects, the O1 official explained that the capital school infrastructure budget originates from the National Treasury. The DBE receives funds from the National Treasury and the DBE relays them to the provincial education departments for such capital infrastructure projects. Once the Department of Public Works has finished with the construction of the identified project, Public Works Department would submit a payment certificate to the provincial education department for the processing of payment for the work having been carried out.

As indicated earlier in this chapter the business process, by means of which the provincial department of education plays a role in the management of school infrastructure, involves 20 steps, commencing from July of the previous year to April of the second following year. This process is therefore considered to be very lengthy, bureaucratic and incapable of responding to immediate and urgent infrastructural needs of the schools. The business process is time-consuming, thus contributing to delays in the delivery of infrastructural facilities. The planning role of the Department lasts for two (2) full years before the implementation phase could take place. This prolonged duration of needs analysis in the form of a so-called business process is counterproductive to the urgency of quality education, as should be catapulted by the availability of adequate, sufficient and functional school infrastructure. According to the action plans as recommended by the National Development Plan, the national and provincial education departments should reverse the decision to centralise the delivery of school infrastructure and develop capacity at the appropriate levels. Procurement decision making should remain decentralised but there should be a central role in providing enabling structures (in this case guidelines on price, materials and construction firms) as well as differentiated oversight (RSA, 2012:213). Such an approach would be in line with cooperative governance theory.

However, the factors affecting backlogs in school infrastructure include the lack of capacity in planning, procurement, project management, financial management and construction management; and escalating building costs even though the school

infrastructure budget has increased (RSA, 2012:312). To avoid construction delays, the Department of Basic Education should clarify and streamline the responsibilities of different institutions including the Departments of Basic Education and Public Works, the Independent Development Trust, provincial departments of education, and local authorities (RSA, 2012:313). The preceding contention illustrates the large extent to which the challenges such as incapacities in planning, project management and financial management still beset efficiency in management, development and delivery of school infrastructure in South Africa.

5.5.2.2 Sub-theme 2: The insufficient day-to-day maintenance budget

Participants expressed concerns about the limited budget they received for the day-to-day maintenance and minor repairs. They felt the budget designated for the maintenance of school infrastructure was too little to meet their maintenance needs. The following were the responses provided by participants on the issue of the maintenance budgets at their schools:

The main challenge is that the school is non-fee-paying school. It is difficult for us to maintain the school buildings, hence in the Paper Budget of the school we have a limited amount allocated for maintenance. So other things sometimes if windows are broken and ceiling boards falling apart, they are very expensive and need manpower to fix them. So that is a great challenge particularly with funds. (School A principal).

One other challenge is insufficient capital that is driven/offered by the Department of Education. If the capital is still little, then there is nothing that you can make improvement on (School I SGB chairperson).

And we also face the challenge of the under-utilisation (misuse) of the 13% maintenance budget. It is there, allocated annually but you find that schools tend to use this 13% maintenance budget for other things, though we try to do something about it. So, these are the key challenges we face as we visit schools (M2 official).

We do receive but it is not enough (School H principal).

I would say no, but again this is another story. They don't pump any (fixed) amount of money into a school. For example, we are a small school with low enrolment. So, allocation is according to enrolment in a school, yet the needs are more than what they perceive to be equal to what enrolment is (School F principal).

I can say for small things it is enough, but for the big six or big projects it is not enough because we are taking the money from somewhere to somewhere (School C principal).

I would say yes because in all allocations there is money for day-to-day maintenance and every year it increases, and it is sufficient that we can be able to take care of minor repairs (R122 242 00) - it is more than enough to attend to minor projects (School D principal).

We do receive finance from the government, but it is not enough because we have to replace broken furniture. Most of the money is lost/spent on repairing. We are not moving forward. A lot of money is lost in municipal accounts and electricity. With the other stuff, we are stranded (School L SGB chairperson).

The challenge is that we are having financial constraints with regards to the budget that is given by the government. So sometimes that would constrain/ restrict our support with regards to infrastructure facilities. The major challenge is the issue of the limited budget that is available. Due to that we cannot provide enough infrastructure in most of the schools (N2 official).

All our schools receive the day-to-day maintenance allocation, of which the responsibility of the SGB is to make sure that allocation is used to get infrastructure facilities in good shape, to make sure that they are all maintained. But now the challenge is that most of the schools, especially the non-fee-paying schools, but even the fee-paying schools are having the same problem. They receive the money but not allocating the money into infrastructure. And when they are not allocating the money into infrastructure, we realise that

the infrastructure that they are using will be losing the good condition. It will be deteriorating because it is not well taken care of. So this money is not managed well by the schools because schools use this money for other things (O1 official).

We have suggested for some time and the plans for the Department are in place, but the problem is the release of money, the budget. The budget is the problem because if you want to improve the infrastructure you have to provide enough facilities like classrooms, sanitation. But so far the Department is able to provide but we have a backlog as a department to provide the brick and mortar classrooms. Infrastructure can be improved when the Department has enough budget to build all facilities like sanitation, classrooms (P1 official).

I think of improvement in terms of the budget. If it could be increased, we could be able to provide more facilities. And also, what is affecting is the issue of the tender system because you find that prices are inflated, so they affect expected delivery (M2 official).

Although all schools received the day-to-day maintenance allocation, both school and infrastructure-attached district official participants unanimously perceived the maintenance budget as of a limited nature. They argued that the insufficiency of the budget rendered their infrastructure maintenance plans ineffective. The other concerning issue surrounding these schools' maintenance budgets was that schools tended to redirect the infrastructure budget to other operational priorities, thus leaving the infrastructure needs unattended to. This pointed to the incapacity of the SGBs and school principals to effectively manage their budgets for which the capacitation should be provided by the infrastructure-attached district officials. In terms of participatory governance mechanisms, citizens should be involved in decision-making over the distribution of public funds between communities and the design of public policies, as well as in monitoring and evaluating government spending (Speer, 2012:2379). According to the Mpumalanga Department of Education (2021:29), the provincial maintenance budget has been increased to 30% of the total infrastructure budget in 2020/2021. The increase was affected by the need to focus funding on

continuous water supply and maintenance of sanitation facilities in response to COVID-19 hygiene requirements. This, however, was not reflected in the monetary allocation to schools as per the National Norms and Standards for School Funding of which 13% is ring-fenced for maintenance spending by SGBs. The data received from participants did not reflect any knowledge about the 30% increase of the infrastructure budget, and this increase was apparently meant to address the COVID-19 hygiene challenges and not to respond to school infrastructure maintenance needs in general.

As indicated earlier, Section 21 of the South African Schools Act provides that all public schools, including the non-fee-paying schools, could apply to the provincial HOD for the allocation of any of the Section 21 functions, including the function to maintain and improve the school's property, buildings and grounds. Although this additional function would result in adding to the financial burden of non-fee-paying schools, none of the participants indicated awareness or utilisation of such functions by the SGBs as means of mitigating the challenges pertaining to their schools' infrastructure needs. This could be ascribed to non-fee-paying schools not being allowed to charge school fees for the improvement of their school infrastructure. The *National Norms and Standards for School Funding* highlights that the school allocations are intended to cover non-personnel recurrent items and small capital items required by the school as well as normal repairs and maintenance to all the physical infrastructure of the school. Moreover, the school allocation is primarily and exclusively intended for the promotion of efficient and quality education in public ordinary schools (RSA, 2006:27). In view of the wide spectrum of items that should be covered by annual school allocations, the day-to-day maintenance budget turns out to be only 13% of the allocated amount, which is insufficient to not only maintain school infrastructure, but does not allow school governing bodies to do any infrastructural development at non-fee-paying schools.

As budget issues are an integral part of management planning function, the management functions theory maintains that budgeting serves as a control mechanism for evaluating organisational activities. A budget exercises control in two ways: it sets limits on the number of resources that can be used by a department or unit; and it establishes standards of performance against which future events could be compared. Generally, budgets help managers to co-ordinate resources and

projects and they help to define the standards needed in all control systems. Budgets also provide clear guidelines on an organisation's resources and on their utilisation (Smit et al. 2011:147; Lussier, 2015:427; Bloom and Boessenkool, 2006:188). The insufficiency of day-to-day maintenance budget invariably hindered the conversion of school infrastructure management plans into reality.

5.5.2.3 Sub-theme 3: Escalation of crime and vandalism in non-fee-paying schools

The participants were unanimous that crime was prevalent in non-fee-paying schools. The participants cited the criminal activities such as vandalism, burglary and theft as sabotaging the development and management of school infrastructure.

When we are speaking about the buildings, the furniture and other resources that we have, the first challenge that we have is vandalism, theft and burglary. We have just reported the case that 2 doors that were fitted last week have been stolen. The doors only spent less than a week. So that becomes a very serious challenge. So as much as we would love to maintain and make sure that everything that we have last for life because we believe that this school is here for life. Form one generation to the other, learners will be attending in this school but unfortunately vandalism from the community is actually a big challenge (School E principal).

I would mention thuggery. The community are breaking in the school premises with the intention to come and steal. And that has made the school to install these security measures which are too expensive to maintain. We could have used that money for other purposes but then we cannot allow a situation where we are given computers by MTN and we fail to ensure that those resources are safe (School D principal).

When we are speaking about the buildings, the furniture, and other resources that we have, the first challenge that we have is vandalism, theft and burglary. We have just reported the case that 2 doors that were fitted last week have been stolen. The doors only spent less

than a week. So that becomes a very serious challenge. Apart from that we also need the fencing of the school. We do have a fence, but it is not up to standard. We would love to have more secured fence. Right now kids can actually go through any part of the fence because there are openings all over it (School E principal).

The first challenge is vandalism. I think our community is ranked as high in terms of crime. It is rated within top ten in South Africa. So I was thinking for the past 3 years, it is then that we only have fencing which I can say it is nearly close to a proper fencing but we still need proper fencing because outside us they are disturbing. So it needs something fortified better than this as far as safety is concerned. I think to keep everything in good condition, safety and security first. So, if the government can budget in trying to introduce security personnel in the school, I think our school will remain in good condition. If they can invest on security, maybe one or two because we are wasting money on repairing (School G SGB chairperson).

Theft is our main challenge because in some 3 or 4 years back I remember we had a challenge where the corrugated irons were stolen, and we had got a cup on behalf of it and it was stolen. And then we had also a fence in the garden wherein we are supplementing the nutrition scheme, we have our vegetable garden and we had the Yoke Timbers donating fence to our school, so it was also stolen. So, I would say our main challenge as a school is theft from the community especially from these mushrooming informal settlements. During the hard lockdown there was no one in the school and criminals got a chance to come to school to do as they pleased (School H principal).

We face electricity reticulation. Security or safety is a challenge. People come and vandalise if something new has been bought. We need a fence for Grade R (School I principal).

So, we have a duty as management to talk to them. And again, we have these parents who are having this idea of looking at the school

just to benefit them as individuals, not as a community. If there is something that is happening, it is not them (they are not a part), they come and vandalise. So hence it is a challenge (School I SGB chairperson).

Another challenge is that there is a new trend now in the country whereby schools are vandalised, they are looted (M1 official).

The key challenges normally include vandalism in schools. There is a lot of vandalism, you would find out that the school has received adequate or quality infrastructure but within a short space of time vandalism took place in that school. Vandalism, theft are the greatest challenges in our schools (P2 official).

The participants in this sub-theme expressed concerns that crime at the non-fee-paying schools was bedevilling the effective management of school infrastructure. In the absence of reliable security measures such as fortified fences or walls and guards, schools were exposed to criminal activities such as burglary, theft, vandalism and threats to human life in the schools. As a result of the infrastructural losses incurred through crime, the management and maintenance of school infrastructure was sabotaged, and the progress was retarded. Instead of improving on and managing the existing infrastructure, the affected schools should start all over again in terms of replacing and repairing lost or damaged infrastructure. The prevalence of crime as exacerbated by lack of proper safety and security measures in the affected schools meant the management of infrastructure was compromised. The stolen goods such as computers, classroom doors, window frames and smart boards, meant that teaching and learning at non-fee-paying schools was rendered ineffective. It therefore became a challenge to manage and maintain quality school infrastructure if the external forces like crime were hostile and uncurbed in non-fee-paying schools.

The vulnerability of the non-fee-paying schools to crime and vandalism was contrary to safety precautions as enshrined in policy documents. The *Guidelines Relating to Planning for Public School Infrastructure* document explains that every school site, including school outbuildings and sporting fields, should be safely protected (RSA, 2012:11). The National Development Plan recommends that schools in poor communities should be strengthened and equipped with the best infrastructure,

equipment and resources (especially ICT infrastructure) to strengthen their role in countering historical disadvantage. The non-fee-paying schools should be targeted for significant infrastructure upgrading (RSA, 2012:312).

The Department of Basic Education has guidelines for planning public school infrastructure. The school environment should be graded according to basic safety, minimum functionality, optimum functionality, and possibilities for enrichment. The legislated guidelines should help to ensure they were not deliberately ignored by officials involved in planning, constructing, and improving school infrastructure. School infrastructure backlogs should be eradicated. All schools should have met the minimum standards by 2016 (RSA, 2012:313). It was therefore a finding that in non-fee-paying schools, the provincial education department had not yet heeded the preceding crime-prevention measures, the consequence of which posed a formidable challenge on the effective management of school infrastructure.

5.5.2.4 Sub-theme 4: The incongruity of infrastructure priority management plans between the districts and the non-fee-paying schools

The participants reflected on a mismatch of priority plans in the development of infrastructure, a situation that posed a challenge in terms of aligning the development and management of infrastructure in non-fee-paying schools. The following were the responses on the issue of infrastructure priority plans:

Priorities include three things: number one, additional classrooms; number two, ablution facilities; number three, issues of safety and health in our schools as envisaged in OHS – Occupational Health Safety. Those are the key issues. Water too. Other luxuries may follow (M1 official).

Our top priority with regards to management of infrastructure facilities is to make sure that we provide them with adequate facilities where they are lacking and making sure that if there are shortages of toilets in a school, we actually provide them with mobile toilets. In an event of the shortage of classrooms, we provide them with mobile classrooms. With regards to finances, we talk to donors to assist us where they can (N1 official).

Paying attention on a national level, the priority currently is water and sanitation, the basic services. If this priority is not met, that would mean we are not adhering to national Norms and Standards (N2 official).

So, we will only be able to improve the infrastructure at schools when we are able to construct brick and mortar classrooms. But for now, the Department is also giving mobile classrooms to try and improve the infrastructure in schools (P1 official).

The first priority in each school is water and sanitation, electricity and security fence. So those four (4) services we must make sure that are available in each school (P1 official).

I think what is important is the maintenance of the school. Besides being maintained by the Department, the schools themselves must come up with programmes for maintaining those schools (M2 official).

My priorities in different years, 2016, 2017, 2021, are not the same. For example, I have moved out of sanitation as a priority towards the need of classrooms. So, priority won't be the same. It is not stable response. The priority depends on the phase in which the provision of infrastructure is in terms of implementation. One district, for example, has dealt with pit latrines, which may no longer be a priority. The priorities must be aligned with the Norms and Standards (O1 official).

We need the admin block, the library and the laboratory. The renovation of the infrastructure is also our priority (School A principal).

If they can come and fence the school yard. After fencing the school yard, I can just mention two, of which are urgent: fencing of the school yard and attending to the ceiling (School C principal).

I would like the Department to do what we are requesting it to do, like for instance, for the past 7 years I have been asking that we don't have funds to repair electricity in the whole school. Electricity has

been prioritised for many years now. Electrifying all the classes that are without electricity is our priority (School E principal).

I think to keep everything in good condition, safety and security first. So, if the government can budget in trying to introduce security personnel in the school, I think our school will remain in good condition. If they can invest on security, maybe one or two because we are wasting money on repairing (School G SGB chairperson).

I would strongly suggest that the Department appoints safety and security services for the school, paid by them, working for 24 hours. Whatever we do if there is no security, takes us a step backward. I would also say, if they could build us enough toilets and classrooms. Grade R learners are in mobile classes and during cold season they are at risk in terms of health (School H SGB chairperson).

The preceding responses on infrastructure development pointed to a lack of affinity with regard to assuming a common point of departure in the management of school infrastructure. For example, the O1 official participant categorically explained that the management of infrastructure priority plans was phase-bound. The management of school infrastructure priorities was determined on a timeframe basis. In other words, the pivotal and imminent infrastructure priority plans of the schools could not be accommodated in infrastructure management plans of the districts if such priority plans did not fall within a specific infrastructure priority year. Despite the overwhelming priority plans of acquiring fencing, electricity, structural facilities and safety and security measures by the participating schools, these priority plans could not be addressed because the district could only be concerned with managing the delivery of ablution toilets, for example, in that particular priority year. This approach of pursuing fixed timeframes for managing school infrastructure priority plans reflected the overly bureaucratic nature of the infrastructure priority management process. The priority plans of the non-fee-paying schools should wait for the turn of the infrastructure priority cycle before their infrastructure priority plans could be addressed. The time-bound process therefore appeared to be rigid, time delaying and inefficient in managing the infrastructure priorities for the non-fee-paying schools. The finding therefore was that the infrastructure priority management process was

overly time-consuming, lengthy, and bureaucratic. It undermined the integrity of schools' priority plans. This situation also showed the lack of interaction between the districts and the schools with regard to the infrastructure priority plans per a year cycle.

The situation where there was misalignment of priority management plans between the non-fee-paying schools and the districts was indicative of the non-application of the management function of co-ordination within the provincial education department. In terms of the management functions theory underlying this study, co-ordination ensures that the activities and personnel of public institutions (e.g., provincial education department) across the spectrum of an organisation (e.g., the Department of Basic Education) do not overlap and that the organisational units (e.g., schools) work together to achieve the objectives set by legislation, which in this case is the Schools Act (Van der Walddt and Du Toit, 2011:192). At a middle level, such as the provincial education department, managers should be responsible for co-ordinating all activities of the various divisions within an organisation so that everyone strives to achieve the objectives without wasting limited resources which could emanate from overlapping. Co-ordination can therefore be described as putting together the parts of an organisation to achieve the outcomes one wants, in the most efficient way. Co-ordination covers all management functions and is one of the most important principles in the organising process (De Beer, 2011:95).

Smit et al. (2011:221) and Lussier (2015:188) explain that co-ordination ensures that all departments, sections, and individuals within the organisation work together to accomplish the strategic, tactical (medium-term) and operational goals of the organisation. Co-ordination entails integrating all organisational tasks and resources to meet the organisation's objectives. Similarly, Cronje et al. (2006:169) indicate that without co-ordination, individuals and departments lose sight of the organisation's primary goals and of their part in that effort. Therefore, co-ordination is the synthesis of separate parts into a unity, and as such it is the binding factor in the managerial process. Therefore, the co-ordinating process is about ensuring that all the resources available are arranged appropriately, function effectively and are in harmony in order that the plan can be realised (Martin, 2008:64). With this said, the finding could, therefore, be that the diversity of priority management plans among schools and between the districts within the same provincial education department is an indication

of the lack of synthesis and uniformity in the management of school infrastructure in non-fee-paying schools.

5.5.3 Theme 3: The role of the provincial education department

The participants shared their experiences and expectations about the role of the provincial education department in management of infrastructure in non-fee-paying schools. This theme was analysed under the following sub-themes: infrastructure needs of schools; the provision of civil infrastructure facilities and services; the training of school principals and SGBs; and physical support to the schools.

5.5.3.1 Sub-theme 1: Inability of the provincial department of education to meet the infrastructure needs of non-fee-paying schools

The participants cited the absence of structural infrastructure facilities as a shortage that deterred the success for the holistic development of infrastructure at their schools. The participants acknowledged that it was only the provincial education department that could provide the capital to address these needs of the schools. The participants further acknowledged that such infrastructural provisions had not been addressed in many non-fee-paying schools. The lack of facilities was considered a concern because it bedevilled the delivery of quality education, which should be supported by the availability of infrastructure capital budgets. The following were the responses provided by participants on the structural infrastructure shortages prevailing in the participating schools:

One of our challenges, we need a school hall to address our staff and learners because as the area is rainy, learners need to be protected from rain and sun. Some learners collapse because of the heat. And again, the library, we don't have it. Computer centre is also a need (School I SGB chairperson).

The greatest infrastructural need in our school is the library for learners to do their homework and research (School J principal).

I think the school is in great need of admin block that will obviously have the staffroom because currently we don't have one. And also, we are not having a school library where learners can be referred to

make their research. Hence, we also don't have a laboratory structure where those that should be participating in sciences when they come to FET level, they should perform those experiments (School A principal).

I want to start from the end to the beginning. We need to have the library, the laboratory and the media centre just because we are an MST Academy. Most of our learners are actually doing physical sciences and life sciences. In those subjects we are actually expected that learners should do some experiments. Unfortunately, as it stands today our learners are actually doing only the theory part of the science and that makes the performance in the physical and life sciences to be not as expected (School E principal).

The school does not have a proper kitchen. The school does not have an administration block. So, classes we converted into these centres. If our enrolment could increase in one of the years, then we will have problems because we won't have a staffroom or a kitchen (School F principal).

The challenge that we have is that our learners do not care about the property that they are having. Anything that we have, they think it must be used for a year. Then the following year we must get a new thing. We are supposed to keep what we have, take care of what we have. Those are the challenges that we have, to instil in them the importance of property (School L principal).

I think they are three, there could be others, but they are three greatest infrastructural needs. You see, we move on the premise that says the backbone of a successful school is its physical structure. So, the first point will be the provision of classrooms, that is key.... Number three is the ablution facilities (M1 official).

And the other one is an issue of shortage of classrooms. That is why we are currently providing mobile classrooms (M2 official).

The greatest infrastructural needs of the non-fee-paying schools is usually the classrooms, toilets.... (N1 official).

Mostly I can say it is maintenance, according to what I have seen thus far. We also need additional facilities, but the most important thing is maintenance because if they are not maintained they will be dilapidated and when they are dilapidated it means the Department now will have to demolish the structures and start afresh, of which that is another cost. So, I think that is the most challenge that I have come across (N2 official).

The greatest infrastructural need is the shortage of classrooms. It could be the shortage of classrooms or sanitation and water. So these three cannot be separated because really they are the basic need for any school. Any school that does not have classrooms would pose a problem to the Department and also to the community and would attract the community and the politicians would love to come and see what is happening whereas they have not assisted the Department. They come just to criticise. So many challenges that we are facing here are the schools that do not have enough classrooms or schools that have classrooms but are not safe. The school that does not have water, a school that does not have decent sanitation, those are the challenges that we are facing on a daily basis. If a school calls us, though they receive what you call Paper Budget which is for all non-fee-paying schools, they are receiving Paper Budget but that Paper Budget is not enough because at some stage you find out that a storm has ripped off ten classrooms and they are not allowed the Paper Budget to augment the situation, only the minor maintenance (P1 official).

The non-fee-paying schools greatest infrastructural need, long before, it was ablution facilities, now is mostly the classrooms but the ablution facilities I can say that we are at 85% as a district for schools to be covered but when it comes to classes, the lack of classes, it is still the greatest infrastructural need in our district (P2 official).

The challenges that we are facing everyday could be attributed to the facilities that were provided to schools. For instance, if a school was given a borehole, only to find that the borehole is no longer pumping water and the school is having flushing toilets, then it is a problem on its own because the SGB would come and request the Department to construct another types of toilets or to provide mobile toilets. So it is a challenge on its own and also the overcrowding, those are the challenges. You find out that a school was provided with enough number of classrooms from its inception but as time went by when the enrolment was raised, now the school is having the shortage of classrooms, and what does the Department do? The Department must make sure it builds classrooms or provides mobile classrooms. Those are challenges we are facing. Every day, we receive calls to tell us about “yah, we have unsafe classrooms, we have shortage of classrooms”, especially from January to February, it is the time when we receive a lot of calls, a lot of meetings and a lot of SGBs visiting this office, to come and report that they have no classrooms, and the learners are learning under the tree. So, it is this time that we are facing a lot of challenges. Oh, the other challenge that we are facing, we have schools that have been infested with termites and bats, schools that were built during the apartheid government or homeland government. Remember, this district was incorporated into this Province later on. All along, it was under the other province. So, schools that were built during those times were built up by community and they are no longer quality viable now. So those are the schools that are giving the Department tough time because every now and then people come and shout that 2 classrooms are falling, the ceiling or classroom is ripped off. So those are the challenges that we are dealing with every day (P1 official).

The unavailability of an administration block and staffroom, for example, meant that the facilities such as classrooms which were primarily intended for teaching and learning, should be used for administrative purposes. Such use of classrooms for unintended purposes could lead to undesirable didactic consequences such as

overcrowding or a decline in teacher morale, resulting in inefficient teaching and learning endeavours. The absence of an administration block invariably denied the affected schools the conducive environment for conducting effective administrative and management functions, which in turn had the potential to undermine quality education. An absence of such facilities forced teachers to perform their administrative duties, planning of lessons, marking of tests, etc. in congested corners and on open verandas, which negatively affected their quality of work and job satisfaction. According to the *Regulations Relating to Norms and Standards for Education Facilities*, all the schools must be provided with adequate offices, staffrooms, and administration spaces of appropriate sizes with the requisite storage areas (RSA, 2019:70). As explained earlier, the government's funding model for non-fee-paying schools and the selected provincial department of education's business management procedures should allow for these needs to be addressed, which did not seem to be the case.

The participants also expressed concerns about the unavailability of facilities such as libraries, multimedia centres, laboratories, kitchens, halls and computer centres at their schools. The absence of a laboratory, for example, meant that learners were disadvantaged in learning the science subjects holistically. They could not be involved in doing experiments, their learning was limited to the theory part, without practical engagements. The global COVID-19 pandemic exposed the inequalities that existed within the selected South African province with regard to availability of functional educational facilities and accompanying basic services (Mpumalanga Department of Education, 2021:29). In terms of document analysis, all schools must have a school library or a media centre and a minimum, adequate and suitable school library collection. All schools that offer science subjects must have a laboratory and the necessary apparatus and consumables in accordance with the specific curriculum needs of a particular school to make it possible to conduct experiments and scientific investigations (RSA, 2013:16). There appeared to be a gap between what the policy stipulated and the reality of the situation in non-fee-paying schools. The prescripts of the policy had not been put into practice.

The National Development Plan 2030: Our Future - make it work contends that infrastructure shortages are particularly acute in poor communities where learners are at a significant disadvantage. The no-fee school policy and school nutrition

programmes are important interventions to mitigate the negative effects of poverty on learning. In many rural areas schools are the only public institution communities have access to. The non-fee-paying schools are typically located in areas with low levels of education, fragile social networks, largely dysfunctional community structures, no community libraries, limited access to media, and few sources of information about opportunities. Schools in these communities should be strengthened and equipped with the best infrastructure, equipment and resources (especially ICT infrastructure) to strengthen their role in countering historical disadvantage. The non-fee-paying schools should be targeted for significant infrastructure upgrading (RSA, 2012:312). In terms of proposals to improve school infrastructure, the NDP maintains that the DBE should find ways to deliver infrastructure more efficiently and cost-effectively. The DBE should also improve the quality of information used for planning (RSA, 2012:312). For the DBE to address the infrastructure backlogs, The NDP recommends that the DBE should implement the following actions (RSA, 2012:313):

- “Investigate the spiralling costs of building schools;
- Develop measures to build schools at a reasonable cost without compromising quality; and
- Expand infrastructure delivery capacity”.

The status of capital expenditure showed that the NDP recommendations had not been realised in non-fee-paying schools a full decade after NDP had been adopted by Government.

The infrastructure-attached district participants confirmed that it was the responsibility of the provincial education department to provide schools with infrastructure facilities such as classrooms, ablution toilets, laboratories, libraries, administration buildings and other concomitant structures. These infrastructure facilities (and services) were identified by school principal and SGB participants as essential but lacking at their schools. The *Mpumalanga Department of Education Annual Report 2020/2021* affirms that although infrastructure provision is the responsibility of the provincial education department, the reality at the non-fee-paying schools proved that the delivery of resources and services was not accomplished. Due to historic low investment in infrastructure and lack of maintenance in public school infrastructure, the selected province experiences huge backlogs in the provision of infrastructure in

line with the Norms and Standards for Public School Infrastructure (Mpumalanga Department of Education, 2021:29).

It could be rightly inferred that the non-fee-paying schools' outcry about the outstanding capital projects was attributable to the bureaucratic and centralised approach which the provincial education department had adopted in the management and provision of school infrastructure. Again, the prolonged and time-consuming business management process seemed to be retarding the provision of needed and appropriate infrastructure at non-fee-paying schools. The affected non-fee-paying schools had to indefinitely wait for the provincial Head Office to reach the point of the bureaucratic cycle in which delivery could be made. It was apparent that the urgency and priority of capital projects such as the laboratories or a library was not taken into consideration. The pursuance of red tape was given preference.

Because the districts did not have a budget for the capital projects, this study therefore found that the infrastructure management process was tremendously centralised at the provincial Head Office. The management process was bureaucratic in outlook, and therefore delayed the delivery of essentially needed capital infrastructure at non-fee-paying schools. Such position by the provincial Head Office was in contradiction with the prescripts of participatory governance theory that underlies this study. Participatory governance theory has become a prominent strategy by governments in the different sectors of society, also for education and large-scale education reforms (Du Plessis, 2019:47). Decentralisation is "a means of enhancing democracy and citizen participation by governments as a way of reducing the role, and in particular the expenditure, of the central government" (Conyers, 2007:19). In South Africa the worldwide trend of decentralisation has coincided with political and social reforms which have intensified the notion that the education system should be democratised and should allow for greater participation, contrary to the general trend in most Sub-Saharan countries immediately after independence (Du Plessis, 2019:47).

Tabatadze (2020:1) asserts that decentralisation of the management system is a key feature of country's degree of democratisation. It implies delegation of rights, institutionalisation of local self-government, access to public service, and involvement of the population in the decision-making process. All this requires the separation of

powers between levels of government, the liberalisation of these processes, and the expansion of local self-government functions. Besides being one of the methods of society's democratic organisation, decentralisation should be understood as the basis of power delegation norms from government to society. For Sayed (2002:37), decentralisation "redistributes, shares and extends power and enhances participation by removing centralised control over educational decision making". It was therefore inferred that the provincial Department of Education did not heed the virtues of the participatory governance theory in terms of extending the participation powers to the local stakeholders.

Cishe and Jadezweni (2002:41) argue that while decentralisation is not a panacea for all the challenges facing education, it is only through it that people can enjoy opportunities to participate more directly in and be accountable for their decisions. Decentralisation is geared towards promoting participatory local governance, and some of the democratic principles enshrined in South African constitution transform theory to practice. These principles include equity, equality, and mass participation, to mention but a few. Decentralisation in education promises to be the best option to realise these noble principles. Furthermore, decentralisation in education has become a key aspect of educational restructuring in the international arena. It is at the centre of the current wave of education reform everywhere and has become a means to allow for maximum participation and more effective policy implementation. According to Du Plessis (2020:167), the main motivation for decentralisation in education is that local decision-making takes local characteristics into consideration. This resonates with the preamble of the National Education Policy Act, where it is envisaged that the national education system must be transformed into one that serves the needs and interests and upholds the fundamental rights of all the people in South Africa. The strengths of decentralisation seem to be overlooked in the infrastructure management process by the Department of Basic Education and provincial Head Office. The importance of local participation in decision-making in crucial education matters is ignored. The positive effects of decentralisation of education cannot be undermined. Worldwide it is understood that decentralisation strengthens democracy as it transfers power from central to local bodies. It brings the decision-making process closer to people. Doing so is beneficial as implementation of any innovation is possible if those at the grass-roots level support it.

Decentralisation also serves as a strategy to strengthen the local culture and the community as a whole (Cishe and Jadezweni, 2002:41).

5.5.3.2 Sub-theme 2: The training of school principals and SGBs in the management of school infrastructure

As a mitigation to the challenges the school principals and SGBs encountered in managing infrastructural resources, participants indicated the training of school principals and SGBs as one of the measures by means of which the provincial education department could support the management of infrastructure in non-fee-paying schools.

The Department should provide us with more workshops so that we can be able to do the right thing. They must also provide us with asset management files and teach us how to manage the assets of the school. So, by so doing, they will be playing a very important role by giving us knowledge on how to deal with infrastructure (School I SGB chairperson).

This preceding response indicated that the SGBs were unable to manage the school infrastructure independently and efficiently. This SGB chairperson felt that capacity building by the provincial department was essential for SGBs to be able to stand on their own in managing school infrastructure.

Training our community to take care of the school by the Department. The Department must make an audit of infrastructure and do training (School K principal).

The preceding response by the principal of School K also affirmed that the provision of training by the infrastructure-attached departmental officials was a prerequisite for the effective management of school infrastructure by school principals and SGBs.

We can improve the management of infrastructure in schools by ensuring there is correct and proper training and correct utilisation of the 13% maintenance budget. And then as a department, we tend to do corrective maintenance. I think we should move to preventative. We need to conduct routine and preventative maintenance instead of

doing the corrective measures because we are reactive. After the damage has been done, then we start to act. I think if we can improve on routine and preventative school maintenance, that will assist a great deal. Another one, communities should begin to embrace schools, such that they become part of the community so that we can avoid things like looting and vandalism (M1 official).

The infrastructure-attached district official M1 acknowledged that the provincial department tended to implement a reactive, rather than a proactive, approach in the management of infrastructure in non-fee-paying schools. Rather than being corrective, the official participant indicated that the department should practise a preventative approach. The provincial department could achieve this by, for example, conducting timely training workshops for the school principals and SGBs in order to ensure the proper management of school infrastructure.

In the first place, the management of infrastructure can be improved by making a point that the school principals and SGBs are trained. For example, we are having what is called minor maintenance in the schools. Sometimes the principals are not using the 13% Paper Budget that is allocated to them. So, if ever principals can be in a position to understand that, the 13% of the budget that is given to them can be used, that can improve the situation. And I also say that it is important for school principals and school management and also SGB to be workshopped as to how can they manage and use their infrastructural facilities. For example, principals fail to maintain just toilets. We do workshop them but are not following the guidelines (N1 official).

The notion of providing training workshops to school principals and SGBs was even shared by the infrastructure-attached district official participant in the preceding response. The infrastructure-attached district official participant acknowledged that the improvement and success in the management of infrastructure counted greatly on the provision of training to school principals and SGBs.

I think the first thing is to advise the schools in compiling the school maintenance plan, which would be guided by the 13% budget. That

should be done on an annual basis. At the same time, as a district we need to ensure that while we are busy with the business process for the planning of infrastructure, we ensure that maintenance and additional facilities are considered and paying more attention to non-fee-paying schools, to be given priority compared to other schools. (N2 official).

The management of infrastructure in non-fee-paying schools needs to take care of the infrastructure that they receive in schools. It is very important for the management to utilise the 13% that is given to schools for maintenance. It is very important to ensure that they take ownership of the facilities that they receive in schools. The ownership would mean that you would love whatever you are having and take of improving the facilities (P2 official).

In the preceding responses by infrastructure-attached district officials, there was an overarching concern about the lack of capacity to handle the 13% maintenance budget by the school principals and SGBs, which necessitated the training workshops.

We have already roped in the SGB and have included them in our business process to say when the process starts about identifying the needs, any need, the SGB must be part of that identification process. It should be SGB, SMT, principal, and the school – they should identify. As they identify, the process would be two-fold. There will be a process whereby the SGB will be doing their own maintenance plan for the school. What we are trying now to improve on our infrastructure management at school, we are enforcing schools that they do have maintenance plan. And maintenance plan that will speak of infrastructure challenges and that will be implemented based on the day-to-day maintenance allocation. So, what we are trying to do now is to follow up the schools whether they are implementing the plan according to the budget that they have. So, this is what we are trying to do now, but currently when we visit and check if schools do have that, yes some of the schools do have their plan, though some do have

a plan but at the end of the day they don't follow the plan. They would just implement things according to what they need which is not reflected on the plan. But some do have the plans and they implement according to their plans. But this is something that we need to make sure that all the schools practise this norm. Not all of them, as we visit them, have plans and we advise them on how to do it and we also indicate to them that we will be coming back and check whether they have started to keep one (O1 official).

The participants felt that by training school principals and SGBs on the management of infrastructural resources such as the 13% maintenance budget, effective management and maintenance of school infrastructure could be achieved. However, participating infrastructure-attached district officials explained that even though they trained the school principals, principals failed to follow the guidelines they had been trained on. The participants further indicated that the training of school principals and SGBs could capacitate the latter on the management of infrastructural facilities and services in general. The training of SGBs is prescribed in the South African Schools Act to enhance the capacity of the SGBs and is therefore a prerequisite that must be provided by the provincial department of education. According to Section 19 (1) of the Schools Act, the provincial HOD must establish such training programmes.

The National Development Plan affirms that the educational institutions should be provided with the capacity to implement policy. Where capacity is lacking, this should be addressed as an urgent priority (RSA, 2012:303). The training of SGBs by the provincial education department is therefore both an official expectation and a necessary undertaking. In terms of the participatory governance theory underpinning this study, the participants must be aware of their abilities to make judgements and know how to effect meaningful change and play educational roles as citizens. For such a change-inducing scenario to come to pass, citizens must act in a well-structured organ, e.g., SGB, and such joint cooperation improves collective administrative efficacy (Williams, 2007:31).

The underlying goal of building capacity for action is to increase the efficiency and effectiveness of the provision and management of public services. The primary goal of capacity-building is therefore “to provide citizens with the tools that are needed to

reflect on the normative principles that underlie the provision of public services” (Fischer, 2012:5). There is a need for participants to develop negotiating skills that advance the interests of the marginalised in society. Such negotiating skills should be accompanied by the development of practical mechanisms to promote the interests of ordinary people. Specific interests are usually only safeguarded through active participation in specific spaces of opportunity. It is only where a sense of dignity, vision and independence characterises participation that the notion of ‘citizenship’ assumes experiential substance and significance in the lives of ordinary people (Williams, 2007:32). In view of the foregoing exposition, the training on the management of infrastructure could capacitate and empower the school principals and SGBs to be effective in managing the school infrastructure. Apart from providing training on the correct handling of the allocated maintenance budget, it has to be spelt out that in the selected province, all public schools are permitted to make use of some of the Section 21 functions and these functions have huge financial implications for schools. The Section 21 functions have enormous financial implications for their school governing bodies. It therefore becomes unfair for the schools to be non-fee-paying schools that cannot generate revenue through charging school fees whilst they are allocated Section 21 functions. This situation becomes an “unbearable burden” on the SGBs of the non-fee-paying schools and it further makes a mockery of participatory governance as envisaged in the Preamble of the Schools Act.

The training of school principals and SGBs can enhance efficiency in the management of school infrastructure. In terms of the participatory governance theory, Ojha (2006:461) asserts that a range of experiences shows that community participation can improve the efficiency of programmes (in terms of uses of resources) and effective projects in the provision and delivery of services, in both the developed and developing worlds. In fields such as education or health care, it is seen to lead to quicker responses to emerging issues and problems, more effective development and design of solutions appropriate to local resources, higher levels of commitment and motivation in programme implementation, and greater overall satisfaction with policies and programs. Furthermore, an emphasis on efficiency generally leads to improved monitoring processes and verification of results. Fischer (2012:6) maintains that participation also has the potential to combine efficiency with

equity. This scholar proclaims that decisions made through the participation of community members rather than by traditional elites or unaccountable administrators offer less powerful groups in the community better chances of influencing the distribution of resources.

5.5.3.3 Sub-theme 3: Support provided by the selected provincial department of education to schools

The participants mentioned several ways in which the provincial department supported the management of infrastructure in non-fee-paying schools. However, participants of some of the participating schools indicated that other than the provision of the maintenance budget, the provincial department was not providing any support.

The Department only comes here and promise us something but does not deliver on it (School C SGB chairperson).

They do not support us. They give us empty promises (School C principal).

They would come to us and make some proposals, but practically there is nothing happening. (School K principal).

In no way, they don't. For the Department itself there is not much that they are doing. I remember in the past 5 years, we had been called as principals to come and do what they called infrastructure prioritisation. What is it that you feel the Department should do this year. In the past 7 years I have been attending those meetings and submitting. They have not done a single thing for us. So, it is interesting that someone is just collecting data about school needs but not doing anything about that information. So, something has to be done in that regard (School E principal).

It is conflicting because if infrastructure officials are in the school and showed that the school has no fence and they are unsafe, the response would be fence is not a school subject. (School G SGB chairperson).

The preceding responses by the school principal and SGB chairperson participants indicated that they did not receive tangible support from the provincial education department. They only received promises which are never fulfilled, and such a situation did not in any way assist them in terms of infrastructure development and management. This kind of situation was contrary to the proposals of the National Development Plan. The National Development Plan recommends that the non-fee-paying schools should be targeted when planning infrastructure to compensate for resource deficits in communities (RSA, 2012:303).

Contrary to the previous responses, the following participants' responses attested to some support that was provided to the non-fee-paying schools by the provincial department.

The Department assisted us by providing water tanks for tackling the water challenge and also installed boreholes. They also renovated the school a few years ago. We have been prioritised for the admin block for the financial year 2021/2022. They provide the school with NNSP – feeding scheme. The school environment is appealing due to the provision of the General Worker by the Department (School A principal).

They also assist by coming (doing a survey) to check the condition of the infrastructure. Sometimes they ask you to fill in the form, which is a survey, to check the condition of the infrastructure and identify the challenges that the school might have. By doing so they respond by sending people to come and do the assessment. If there is a need for infrastructure to be repaired or renovated, then they respond by doing the renovation or the major infrastructural challenges/projects. They also advise in other cases like when they do not have enough funds. They can advise you to fundraise or approach other stakeholders that can assist in addressing those challenges (School B principal).

They do also supply with learner infrastructure. The desks and chairs come from the Department. It may not be enough but there is support coming from the Department (School H SGB chairperson).

For the newly elected SGBs, the Department takes us to workshops as to how to manage the infrastructure, how to manage the budget. They are supporting us. We, however, do not have to solely rely on the Department. We need to have our own programmes to keep ourselves. We need to rope in some structures to assist us (School I chairperson).

The Department would send people to the school and take stock of the nature of our infrastructure and there after send the service providers to come and service some of our infrastructure like the toilets (School J principal).

They do provide items like furniture (School L principal).

We support the schools by giving technical advice because we have inspectors who are technically inclined. So, they go to schools and give advices. If there are projects that the schools are doing, they would give advice on those projects (M2 official).

We always make sure that we support them greatly. For example, we are able to help them with maintenance plans. If ever we are talking to them we advise them that for the school to be well maintained and well run, the school must have a programme for school maintenance and ensure that the 13% provided to the school is used in a correct way. When they report about the storm damage or any problem, for example, we assist them by reporting to the Head Office and make sure we do in-logo (on-site) inspections so that we can ensure all the problems reported are recorded and make sure we make time to help them in a correct way (N1 official).

Currently in the Department, we are utilising the planning process which is the business process. That is the one that we are using as our manual in ensuring that we support the school with regard to infrastructure. So again, we conduct ad hock inspection in schools as per request. For example, they may report that the roof or ceiling is falling or there are cracks on the structure, we go to the site and

conduct conditional assessment for that particular school and make submission to the HO for their attention so that they can attend to it as early as possible (N2 official).

What we are trying now to improve on our infrastructure management at school, we are enforcing schools that they do have maintenance plan. And maintenance plan that will speak of infrastructure challenges and that will be implemented based on the day-to-day maintenance allocation. So, what we are trying to do now is to follow up the schools whether they are implementing the plan according to the budget that they have. So, this is what we are trying to do now, but currently when we visit and check if schools do have that, yes some of the schools do have their plan, though some do have a plan but at the end of the day they don't follow the plan (O1 official).

There is the district staff that is going all out, the working inspectors checking the conditions of the schools before the conditional assessment. If they report, we go and do assessment and compile the report after the physical verification and submit it to the province (P1 official).

I normally send or go to these different schools for physical verification of the authenticity of their requests, then writing reports, coming back, consolidating the reports, then I write to the attention of the Department to be given to the schools. Normally as a district we go around to schools to do what we call physical verification or assessment. That in itself is to give that support to the management that if there are things that are not in order or in good state, they must immediately try to maintain. That in that way, it shows the support to the schools and we normally advise the schools that they need to utilise 13% for the maintenance of their infrastructural facilities in schools. That is the support I feel we can give as a district to our schools (P2 official).

All infrastructure-attached district participants were unanimous that they provided physical support to schools such as conducting conditional assessment or verification

of damaged infrastructure and providing guidance on the development and implementation of maintenance plans. However, the school principal and SGB chairperson participants differed on opinions about departmental physical support to schools. Some concurred that they received support as stated by the infrastructure-attached district participants, while others denied the support. The school principal and SGB chairperson participants mentioned the renovation of school buildings, the installation of boreholes and water tanks, electricity, construction of ablution toilets and provision of furniture such as desks and chairs as manifestation of physical support by infrastructure-attached district officials. The school principal and SGB chairperson participants therefore affirmed that they did receive some support from the provincial education department in the management of infrastructure at their schools. However, this support seemed too limited for maintenance and the provision of basic services and not related to substantially developing the infrastructure of the schools.

The support rendered by infrastructure-attached district officials in terms of guiding and advising schools regarding proper management of infrastructure could be aligned to the significance of the participatory governance theory in management practices. Fischer (2012:1) explains that participatory governance is a variant or subset of governance theory that puts emphasis on democratic engagement, in particular through deliberative practices. Participatory governance seeks to deepen citizen participation in the governmental process by examining the assumptions and practices of the traditional view that generally hinders the realisation of a genuine participatory democracy. As for Hollard (2013:2), participatory governance is a means to progressive realignment of institutions in favour of the poorest. Socially excluded groups' access to entitlements within the policy process is mediated by governance systems. Skyline College (2020:1) confirms that participatory governance is based upon individuals having a voice in decisions that affect them. It is designed to lead to effective participation in decision making that unites constituencies, produces an improved work environment, and draws upon the strength of diversity. Wampler and McNulty (2011:3) maintain that participatory governance brings new actors into incremental decision-making processes; citizens deliberate over and vote on the allocation of public resources and the use of state authority. The adoption of participatory governance is often based on the perception

that representative democracy should be able to improve the quality of state performance, educate and empower citizens, and make reasonably good use of scarce public resources. The adoption of participatory governance is not a rejection of representative democracy, rather it represents an effort to redesign institutions and improve the quality of democracy, social well-being, and the state.

5.5.3.4 Sub-theme 4: Overwhelming infrastructure problems at the participating schools

School principal and SGB chairperson participants pointed to the low quality and the inadequacy of infrastructure at their schools. In addition, there seemed to be huge and overwhelming backlogs in terms of infrastructure improvement. This was evident in all the responses indicated below.

I don't think now that it is of quality because the ceiling boards in the classrooms are falling. Some of the paintings are worn out. Also the classrooms are leaking, so I would not say it is of quality. There is a structure that has been built by SGB as we have insufficient classrooms. They are not of good quality (School A chairperson).

It is not of quality. Number one, we are having classrooms that have cracks. Number two, the ceiling is dilapidated. Number three, the school ground or yard does not have paving. If you can go, you will see how we go. It is not levelled. It is not safe for us. When we are having our high heels, we just fall (School C principal).

The preceding responses by participants indicated that the infrastructure at their schools was of low quality and a concerning matter. This situation could be linked to the adverse effects of the insufficient day-to-day maintenance funds and as the schools were unable to fix the challenges by themselves, the schools expected the provincial education department to save the situation.

No, poor quality and inadequate, given the fact that the school was built long ago in 1983 and has never been renovated. Everything is just dilapidated, and we have made submissions and requests to the Department but unfortunately, it fell on the deaf ears (School D principal).

I would say no. Let us take an example of the access road that I indicated. In summer, you would not be able to drive onto the school. So you have to stop somewhere down in the community and walk to the school (School F principal).

Based on my experience, my view says no, the reason behind that is that the school is not up to standard. We don't have a sports field, allow me to include the classrooms with no cupboards. We have got a kitchen that has just been made by a person as if it was a donation. It is not up to standard. Like I have mentioned electricity, it is not up to standard. There are wires that move around which are dangerous to our kids (School I SGB chairperson).

No. It is not of quality and adequate. In 2013, the Minister came up with Minimum Norms and Standards for School Infrastructure. It was precisely to address the quality and the inadequacy of the infrastructure. It spells out how should a school apply. So it is not adequate, particularly in the non-fee-paying schools the issue of the toilets stays a challenge. We were supposed to have eradicated the pit toilets by 2016, we have not done that. In our district, I think we have more or less 27 schools that are still using the pit latrines. Another challenge is that we still have unsuitable structures. We no longer have mud structures schools, but we still have unsuitable structures. Some of the conditions are appalling. So it is not adequate. We still have schools without water. That is why we rely on municipalities to supply those schools with water. And we still have schools with a terrible shortage of classrooms. That is why we have a phenomenon of a multi-graded teaching, which does not assist. So it is still inadequate but we are working towards at least addressing those challenges, informed by minimum Norms and Standards for School Infrastructure (M1 official).

I think what we are providing currently is of good quality, but I think it is not adequate because we have a huge backlog in terms of

infrastructure. We still need to provide schools with sanitation, classrooms. It is not adequate but of quality (M2 official).

It is of quality but not adequate. For example, we provide sanitation to the schools, we make it a point that we provide them with quality infrastructure, but it is not actually adequate in most cases we are having schools that are still using pit toilets. We are having schools that are overcrowded, schools that are still in need of water. So I would say it is not in actual fact adequate. So it needs to be improved (N1 official).

There are some schools where you find that the infrastructure is of quality and adequate but some due to lack of maintenance, then somewhere somehow the structures tend to deteriorate with time. So all I can say, some do have quality and adequate infrastructure while others don't meet the requirements in terms of Norms and Standards and quality required for that particular school (N2 official).

Yes, it of quality as well as adequate because when we provide infrastructure, we are not looking at the location of the school. We are using Norms and Standards for all the schools. Norms and Standards cut across because they are meant for each and every school regardless of their location (O1 official).

It would only be of quality and adequate, depending on the structure of the school. If a school is still new, yes okay but if the school is old, normally we have these whistle blowers who would come and tell us "I am from school no.2, no.3, there is a lot of cracks on the walls". It all depends on the material which the school was made of. We have what we call community-built schools, schools which were built out of the block bricks, which are not of quality, and we have what we call the standard brick and mortar schools, schools that were built with face bricks. So those are schools that are quality and have adequate infrastructure (P1 official).

Yes, the infrastructural facilities that we normally give to schools is of quality and adequate but the only challenge that we are having is that as the Department of Education, we are just planning and give it to the Department of Public Works as our implementers to continue with the construction of our projects. That is where we discover that the quality that we give in our scope is not according to the way we are planning as infrastructure because you may find that the school is completed, for example, with classrooms but within a period of 5 years those classrooms will develop some cracks and you will find ceiling falling down and sometimes the termites and that in itself shows that the engineers did not do their work properly. That is why we are saying whatever we anticipate or feel like giving quality and adequacy, it is not always coming out the way we want it to be, thank you (P2 official).

The following responses were related to the value the participants attached to quality and adequacy of school infrastructure at schools:

It is important to have a quality infrastructure because one, for safety purposes because a ceiling board fell on the veranda, fortunately no one was passing there. So, if maybe there was someone passing there, it could have been a different story. With the rats that enter the storeroom/kitchen, we don't know what those rats bring in there. We have a storeroom which is very important for the storage of school equipment that could be stolen if they are left in an open space (School A SGB chairperson).

Adequate and quality infrastructure in our school is very important because in terms of safety our learners and teachers when they are in class, they must feel safe. There should be no ceiling hanging over their heads that can collapse at any time. There should be windowpanes in the windows to make sure that the environment inside is controllable. That will ensure that teaching and learning inside the classroom occur as expected. We have also got the issue of the fence. If the school has no fence, it means the safety of the school is compromised because people can just enter from any direction of the

school and exit at any direction of the school. That creates a challenge in terms of safety. Then when we come to overall outlook of the school, it should be appealing to learners, appealing to all users of the school. It should not be something that looks too old sometimes unacceptable condition. That can hamper the issue of effective teaching and learning in a school if the school is not in a good condition (School B principal).

We are supposed to have quality infrastructure because when working with children, it is dangerous when you are using inadequate structures. When the structure collapses, for example, that becomes a danger to the child (School C SGB chairperson).

It must be important for the safety of the learners and educators (School C principal).

I think according to my view, this is very key because when we speak of a school, there is a building that is having all those components. If they want to perform scientific experiments, there must be a highly equipped laboratory and the laboratory we have here at the school is a joke that the school is able to produce 100% even among the science students. So to me it is important and the nature of the classrooms is so dilapidated in such a manner that it is not conducive for the learning and teaching encounter. So, I view it as very important and also the grounds for extracurricular activities (School D principal).

As much as I would differ from what most departmental officials would say because most officials say “we actually passed while learning under the tree. We got distinctions in Maths and Science without laboratory”. But my view is that quality and adequate infrastructure is directly proportionate to quality education. There is no way we can separate the two. The reason I am saying that is that as much as we might get good results, just like in our school, we have got learners who get good results in all these subjects. But we still feel like it is extra effort that is being given out by teachers and also our learners. We are actually not giving equal efforts as the schools that are having all the resources. If we were to compare the former Model C schools to our

schools, for them to get 100% is like obvious. But for us to get 100% is a struggle. We actually need to fight to get it. So that is why I say adequate and quality infrastructure is directly proportional to quality learner performance. To me, it has very serious positive effects on our learning (School E principal).

I think they are of importance because without them we cannot speak of quality education, we cannot speak of good quality teaching and learning if the infrastructure is not good. I am speaking here Mr you were complaining that the weather is not the same as where you come from. Just imagine if the classes do not have the doors, nor windows. Clearly, you would not expect learners to be sitting there and learning. They would not be concentrating because they would be freezing. So it is important that we have good quality infrastructure because it would impact on the learners (School H principal).

Remember if we have got quality, we will produce quality. For example, quality assists teaching and learning to take place. The delivery of the knowledge becomes easier since we have got the tools that will provide the skills (School K principal).

When it is quality, I think it will last longer as long as it is well taken care of. And it will not disturb teaching and learning (School L principal).

These could lead to better performance of the school in general (School F principal).

I think there is a correlation between quality and adequate infrastructure. It is important to have quality and adequate infrastructure for the improvement of the learner performance outcomes. But in my view, the school should be a learner's second home. When they look at the school, it should be their second home. It should be such that the atmosphere, ambience; the learners should feel that where they go to, they must be excited. They must be modulated because there is adequate and quality infrastructure. So, I

think that is critical. When we talk about digital infrastructure, our schools should begin to think about additional infrastructure to address the difficult times, like in happened during COVID-19. There was no way that learning could continue in the non-fee-paying schools, while in other schools teaching continued. So, it has to be adequate so as to make sure that teaching and learning continues despite odds. You see, our philosophy is that the school is not only about the learner outcomes. We are in a school to develop the learner holistically. That is the purpose. So, the infrastructure has to be adequate so that the learner is developed in totality. The sporting facilities should be there, all other things, the laboratory, the library, so that the learners could be developed in totality because we are not about developing the learner only academically, but the learner must be developed in all facets (M1 official).

I think when the infrastructure is of high quality and adequate, it will be important because it will carry out the Departmental mandates effectively. When we have a quality and adequate infrastructure, it is important because things which are not of quality do not last longer. Whilst we have something of a high quality, I think it also changes the mind-set of those people who are using that product (School I SGB chairperson).

The quality of education is not compromised; the learners are doing very well. They are always happy; they are able to assimilate what the teachers are teaching them because of the adequacy and the quality of our infrastructure (School J principal).

It is very much important to have quality infrastructure because when the infrastructure is of quality it will last long. Then adequate infrastructure is necessary because if ever you don't have adequate infrastructure, it would be a problem. For example, if you have a shortage of classes, learners will be overcrowded, and teaching and learning will be impeded because a teacher can't teach learners that are over 100 in a class. Another example, if ever you have a shortage

of sanitation like toilets, it means teaching and learning will be disturbed because learners should go and queue in the toilets and in that case, it will be time-consuming, and learners will not start teaching and learning in a correct way (N1 official).

To my understanding and knowledge, viewing quality and adequate infrastructure as important in the school is that somewhere somehow infrastructure has an impact towards teaching and learning in a school. So let us say it is raining and is windy at the same time, learners would be able to pay more attention during that lesson if the infrastructure is of quality. So I view it as imperative that as a Department we need to ensure that schools get a quality and adequate infrastructure to ensure that the basics of teaching and learning do not suffer (N2 official).

I will not view it as important. I will not view quality and adequate infrastructure as important for non-fee-paying schools because I am being guided by Norms and Standards, and my Norms and Standards are not subjected to non-fee-paying schools only. They cut across; they are meant for all the public ordinary schools within South Africa. So every school must get quality and adequate infrastructure according to what the Norms and Standards dictate to that particular school (O1 official).

Remember, teaching and learning cannot take place if there is no quality infrastructure in each school. So the purpose of this directorate from the Head Office to districts is to provide the quality infrastructure to learners for teaching and learning to take place. So, this is very important, we must have quality classrooms or quality facilities. Remember, most of our schools are non-fee-paying schools (P1 official).

It is important to give non-fee-paying schools quality and adequate infrastructure for the smooth running of schools. Teaching and learning must take place without any interruption, but if you find out that the quality is not according to the way it was supposed to be, you will find that the schools are being disturbed. For us as infrastructure,

it is important that we give quality and adequate infrastructure in our non-fee-paying schools (P2 official).

The following quotations reflected the feelings of participants about the effects which inadequacies and lack of quality infrastructure might have on the quality of teaching and learning at the affected schools.

The inadequacies in infrastructural provision are a hindering factor because if a basic need for a school to function is not there, obviously performance will not be up to scratch (School F principal).

Because the infrastructure is not of a quality, I would cite an instance where in the classroom we had to move a certain grade to another class because the class was not conducive for learning. So, it affects teaching and learning because the other class became overcrowded. We know that in our days we have Covid-19 pandemic, and we have to follow the regulations. So, we have insufficient classrooms which is affecting teaching and learning because learners don't always come to the school. They alternate on weekly basis and this tampers with teaching and learning (School A principal).

As we are a MST school, obviously some of our learners would never see some of the chemicals that are used for doing some of the experiments (because there is no fully equipped laboratory). You will find that learners in Grade 12 doing Physical Sciences don't even know if a certain substance is actually liquid or solid because they have never seen it. So when they hear about it, they just have something in mind. So that has got a very serious effect. Like I indicated earlier that we no longer have electricity in most of the classrooms because of the theft of cables, it makes it very difficult for teachers to teach during misty days because even those learners cannot see. So, it is just like if it is for a week, it is a week wasted. So that becomes a problem. That is why I am saying the inadequacies in infrastructural provision have got a very serious effect on teaching and learning. Sometimes you will find that some of the teachers would love to assist/or download a good lesson that was presented by someone who is very good and show it

to these kids. But if you do not have a multimedia centre, then it becomes impossible. You can't actually do that. I have had that even the Department would make provision that there are lessons broadcasted on radio. If you don't have that infrastructure, then it means that you won't have access to those lessons. There is that channel that deals with education. There are lessons that are presented there and the teacher could actually take the kids to the media centre and watch that and benefit from that (School E principal).

Lack of quality infrastructure could contribute to absenteeism because if it is cold learners might not come to school. If their toilets are not enough also, it is impacting on teaching and learning. If they go for break and the bell rings to call them back, they would not be done with the toilets because they would have to wait for one another. So, it does impact on learning. If the quality of school infrastructure is not good, they won't enjoy coming school (School H SGB chairperson)

Inadequacies do affect teaching and learning in that, for example, we have insufficient taps to provide water for our learners. The Department delivered water tanks which are not in use at the moment for some preliminary conditions to be met first. So, constraints on the access to water affects curriculum delivery to our learners (School J principal).

With the new developments that are taking place, they do affect teaching and learning as we are supposed to have proper facilities for each and every need of the learner (School L SGB chairperson).

If ever the infrastructure facilities are inadequate, that will give schools problems. For example, if ever a particular school is having a shortage of classrooms, that would mean that that particular school would have overcrowding. And if ever there is overcrowding, it would be difficult for teachers to give quality education to the learners. As I said before, if ever there is a shortage of toilets or sanitation in a particular school, it means then that learners would have to queue for accessing the facilities, thus inevitably spending the teaching and learning

time/failing to adhere to school time. Inadequacies will make a point that teaching and learning is impeded (N1 official).

There would be poor learning outcomes. Learners are not developed holistically. These inadequacies in infrastructure provision result in school serving the multi-graded classrooms, which impact negatively on learner performance and outcomes. Teachers in such schools tend to be demotivated. They really struggle and end up looking for other opportunities. They don't get excited to go to school (M1 official).

They do affect teaching and learning because, for example, the shortage of classrooms makes it difficult because such situation results in classrooms being overcrowded, which is a challenge. And also, the quality of sanitation facilities that are there is affected (M2 official).

The inadequacies will eventually affect teaching and learning because, for example, the teacher-learner ratio norm says learners in primary and secondary schools must be 40 in the classroom. Grade R learners must be 35 in the classroom. But because of the infrastructure inadequacies, such norm/condition cannot be met, as an ideal school. It becomes a problem because most of our classrooms are overcrowded, which would mean not all of the learners will be receiving effective teaching and learning because of the big number of learners that will be found in that classroom. With overcrowded classrooms, there is no effective teaching and learning. Secondly, there are inadequacies when it comes to the special centres such as library, laboratory, computer centre. All these centres have their own purpose of supporting teaching and learning. The absence of library or laboratory in a school will disadvantage the learners with regard to sourcing information for their assignments and carrying out experiments respectively. They can only learn abstractly, with no relation to the practicality of such learning (O1 official).

Inadequacies lead to shortage of classrooms whereby multi-graded teaching becomes the viable option, which unfortunately has

compromising effects on the quality of teaching and learning. Learners may not be able to pay attention as required. They do affect teaching and learning because, for example, the shortage of classrooms makes it difficult because such situation results in classrooms being overcrowded, which is a challenge. And also, the quality of sanitation facilities that are there is affected (N2 official).

Waiting to use scarce resources consumes time for effective learning and decreases the morale (School K principal).

They affect teaching and learning like we spoke of laboratories. So if the science laboratory is not there in a school, it means that the learners are not exposed to the balanced teaching and learning that is expected of them. For them, it is only theory; there is no practicality. So a lot of science-related subjects do not get enough resources when it comes to the work of the laboratory. As well as the library, when learners are to do research, they leave late from school and when they arrive at the community library, it is already closed. And the one that we have locally does not open over weekends. So the learners, instead of using what is within the school, they end up not doing enough research and it affects the quality of their submissions in terms of assignments and projects. If the input, quality and adequate infrastructure is not there, then the output, high performance by learners, will be affected (School G principal).

I think on the side of teachers and learners; their self-image will be demoralised. Other learners from better off schools will look at our learners as down-graded. In terms of curriculum, in a situation where teachers and learners have been, are learning where infrastructure is of a low standard, I think in term of curriculum, good quality results will not be maintained because the teachers and learners will be affected. You can only get good results from people who have peace of mind. Lastly, if teaching and learning is affected by the inadequate infrastructural provision, there will be no forward movement. There will

be no improvement in everything in the school premises (School I principal).

Inadequacies in infrastructural provision affects teaching and learning because you need to have meetings with SGB very often and having those meetings deprive me of time which should have been used for planning curriculum management and monitoring. Then if the buildings are not in good condition in a situation like ours where we don't have the adequate ablution facilities, it becomes a challenge. When we don't have water, there would be days when teachers would declare that we cannot work under these conditions because there is no water and request to be released. Then teaching and learning will obviously be affected because of absence of water. And also, we have an issue of extra-curricular activities like the playground which we all know that these are some of the resources that encourage learners to attend the school regularly because they know they are going to participate in extra-curricular activities. So if those things are not existing, then you have challenges like high absenteeism rate which is going to affect teaching and learning in the end (School B principal).

Absence of a protective fence allows for the entry of animals and gangsters, leading to a situation of unsafety in the school, thus affecting teaching and learning. Then the other thing disturbing teaching and learning is when there is no water, not enough toilets in the school (School C SGB chairperson).

Teaching and learning activities become conducive in a conducive environment. But look at the condition of our classrooms, it is inadequate. Our laboratory is a shock. You will never say this is a laboratory. Several times we make submissions, promising they will come and refurbish the laboratory (School D principal).

It affects teaching and learning adversely because once the learners are taken out of the classroom because of the shortage of classrooms or because of the unsafety of the classroom, there will obviously be taught under the tree and once they are under the tree, they attract the

eyes of the politicians and the political parties. Then they will simply go to the MEC or whatever office and start making noise, as if they are also assisting the Department whereas they are not. So, it is the inadequacies of facilities that makes the teaching and learning in a school not taking place (P1 official).

It affects teaching and learning in the sense that you will find that if there are no adequacies in our schools for the projects that have been given, the teaching and learning will be disturbed because the community will stand up and say we need infrastructure in our school which is adequate. If there is no adequacy in infrastructural needs in our schools, that in itself affects teaching and learning because if there is chaos like the interruption of schools because of infrastructure, it affects the smooth running of the schools (P2 official).

In addition to explaining the effects of inadequacies and lack of quality in infrastructural provision at the schools, the participants also indicated the significance of adequate and quality infrastructure in the attainment of quality education. The participants asserted that the inadequacies and a lack of quality infrastructure invariably contributed to low and undesirable learner performance. The participants felt that quality infrastructure could ensure the safety of learners and teachers in instances like when for example, the ceilings or buildings could fall or collapse and therefore endanger the lives of learners and teachers. Adequate and quality infrastructure was deemed to be a prerequisite for the better performance of the school. If school infrastructure was inadequate and of low quality, the performance of teachers and learners would be conversely affected. The participants even felt that the inadequacy and low-quality infrastructure could potentially demoralise both learners and teachers and result in a high drop-out rate.

The National Planning Commission's Diagnostic Report affirmed that infrastructure is poorly located, inadequate and under-maintained. Linked to this, the quality of school education for poor communities is low (RSA, 2012:25). Conversely, the use of high-quality products can positively change the mind-sets of the learners and teachers who are using such resources. However, the data suggested that the infrastructure problems experienced by the participating schools was so vast that it

became overwhelming and very difficult to address effectively. Only a drastic intervention by the government would remedy the situation.

The issue of inadequacy and lack of quality infrastructure could be viewed through the importance of the management functions of planning and organising, as ought to be performed by the Department of Basic Education. Through planning, scarce resources can be channelled and utilised rationally, which is necessary for the productivity and ultimate success of the organisation. Planning promotes cohesion amongst the various functional management areas, such as finance or communication, so that adequate and appropriate resources could be secured (Cronje et al., 2006:141). Effective planning should always be linked with the achievement of objectives. The strengths, weaknesses, opportunities and threats of an organisation should be known before the actual planning process begins (Van der Waldt and Du Toit, 2011:185). By organising effectively, managers can better co-ordinate human, material, and information resources (Oosthuizen, 2011:61).

5.5.3.5 Sub-theme 5: Insufficient financial support to the schools

The responses by participants under this sub-theme reflected that there was insufficient financial support provided for the management of infrastructure in non-fee-paying schools. The infrastructure-attached district officials further explained the alternative means they employed to help address the situation of insufficient funds for management of school infrastructure.

The answer is no. The Department uses one size fits all approach. Some schools do not have enough money while others do have (School G SGB chairperson).

I don't think the financial support from the Department is sufficient because this school started small but 30 years later it has grown bigger and now, we have 1200 learners; still, we have the same type of infrastructure. We need more classes to accommodate the number of our learners, but we do not have that. We are expecting the Department to add financial support so that we are to build more classes to accommodate our learners. More money for building extra

toilets is needed from the Department. So the financial support that we receive is insufficient (School J principal).

In no way, they don't. The only thing that they give to us is just a little budget that they call minor repairs budget and in most cases we end up going beyond that minor repair budget because we have got a lot of things. Like in our school, we have got only flushing toilets. If these toilets stop flushing, there is no way, you must get someone to fix those toilets, because otherwise the school would have to close. There is no way you could assemble 500 people and not have an ablution block (School E principal).

The Department allows us the use of 13% of the allocation to do repairs and this is not enough because we need more than 13% to do repairs. When you go beyond the 13% is misconduct (School F principal).

The financial support is insufficient. As the school is situated next to neighbouring countries, the undocumented learners from such countries are not catered for in the school Paper Budget, thus rendering the budget insufficient because they benefit from it having not been accommodated (School A principal).

I can say for small things it is enough, but for the big six or big projects it is not enough because we are taking the money from somewhere to somewhere (School C principal).

Like I indicated in one of the questions, there is a provision on the Paper Budget, Norms and Standards, that actually speaks about minor repairs. Unfortunately, we also have big infrastructural challenges that need to be addressed but unfortunately, we are unable to do that (School E principal).

We do receive finance from the government, but it is not enough because we have to replace broken furniture. Most of the money is lost/spent on repairing. We are not moving forward. A lot of money is

lost in municipal accounts and electricity. With the other stuff, we are stranded (School L SGB chairperson).

We are a district office. We have no budget at all. Our budget is zero. The financing of the schools becomes a provincial competence, but we do support schools in many ways like liaising with the municipalities for schools to get water. Sometimes speaking with corporates/the private sector to donate things like mobile laboratories, mobile classrooms, though it may not be financial in terms (M1 official).

Okay, financially the budget lies with Head Office. So, Head Office is responsible for the payments but in terms of the schools, there is a Paper Budget that is given to schools. So, 13% of that Paper Budget is responsible for the maintenance of the school. So that is how the schools are assisted (M2 official).

In actual fact, as a district we do not support the schools financially. What we are doing is to try and get the needs of each and every school and take that information to the Head Office. From the generated priority list, the Head Office provides the schools financially. Sometimes the Department supports the schools, in case of emergencies like storm damages, by securing outsourcing contracts that can address the problem (N1 official).

As a district, financially we do not support the schools as we do not have the budget. what we can do is to advise the schools on how to manage the day-to-day maintenance budget so that they are always in a good condition. The financial support is actually done at Head Office level whereby if there a storm damage or a hazard to learners, we make a submission to Head Office and request that a service provider be appointed to go and rectify the issue at schools (N2 official).

The district does not have the budget for infrastructure but if there is a damage that would cost more than R500 000, the district will request the province to assist. I know one thing for sure that now schools are

given the Paper Budget, but it is not meant to implement the bigger projects at the schools, but minor or day-to-day maintenance. So, unless we are given a budget by the province, as we are four (4) districts. You find that maybe the province is giving 2 million per district, then we prioritise which school is the most suffering, that has a lot of challenges, then we channel the money according to that (P1 official).

Unfortunately, I do not have finance/money, I do not have anything. Some time ago, we used to have a budget, but things have changed, we do not have any longer. Actually, the Head Office relayed the money to the districts when they realised that there was more money with them and could be underspent, so they would pass to districts to spend (O1 official).

Certainly, the 13% for maintenance is not sufficient but what we normally do we request schools to do the basic maintenance with the 13% like fixing windows. But if there are key things that cannot be accommodated within the 13%, we go and conduct the assessment as a district and make recommendations for the HOD for the maintenance because the 13% is too little. Perhaps in the future, we will motivate for the increase of the 13% maintenance budget because this forces us to go out with a begging bowl to the corporates and ask them to assist our schools by way of providing them with the classrooms, mobile laboratories because the 13% is insufficient. We appreciate it is mainly for basic services, basic maintenance (M1 official).

With this one, there are small schools where you find that their budget is very little, usually we request for additional funding from the Head Office so that those schools are assisted. And we assist schools through donations from donors. Other schools also source donors on their own, so assist the maintenance of the school (M2 official).

First of all, the term maintenance is divided into 2 (has two connotations), the first is one minor and the second is major. When we try to assist the schools that do not have sufficient funds with regard

to maintenance, first of all, we have the Provincial Regional Training Trust (PRTT) which is a section of the government where students are trained for various skills. So, if a particular school has less funds/budget, we talk to PRTT whereby students are able to practise/apply their skills in that particular school. Secondly, minor maintenance is when at the school level the infrastructure facilities are damaged and in that way that is when the school itself should be able to solve its problems. For example, those schools are encouraged to use the 13% of their day-to-day maintenance budget. We assist them to be able to use that money also with how much should be used in that particular case. But in case of major maintenance, that one is not done by the school, but by Head Office. With regard major maintenance, we identify and gather information from all schools that need major maintenance and forward it to Head Office (N1 official).

We do come across this challenge whereby 13% is not enough to carry out maintenance. What we usually do is to engage PRTT to assist us with labour. The school can buy material and PRTT assists with labour. And again, it is to try and attend to maintenance in phases. If for example they have 4 blocks of classrooms, they may attend to one block in one financial year, another in the next (N2 official).

Normally we request the schools to first implement their Paper Budget. if it is finished then we say they must write and request to the District Director and request for assistance. On the receipt of the memorandum or the request by the District Director, the District Director will submit to this section (infrastructure). Then we will write the letter to the HOD requesting the assistance to the schools (P1 official).

We normally write for the extension of the funds if the funds that are there are not enough to cover the work that is supposed to be covered. Then we write to the attention of the CFO of the Department and the HOD to take note of that and prioritise for that school to be covered for everything that is indicated (P2 official).

In this sub-theme, the participants acknowledged that although the provincial education department financially supported the schools for infrastructure maintenance, it was not enough to address their infrastructural challenges. The infrastructure-attached district official participants further explained that in mitigating the insufficient financial crisis at schools, they advised the schools to write a memo to the District Director for the extension of allocated funds for school infrastructure which finally reaches the Chief Financial Officer and provincial HOD through the district infrastructure section. The National Development Plan, through its education and training vision, highlights the need for access to quality education for all. In this context, good educational outcomes must be aligned to the interests of all stakeholders and be responsive to local community needs and economic development (RSA, 2012:302).

5.5.4 Theme 4: Perceptions of the role played by the provincial department of education

The school principal and SGB chairperson participants indicated a number of challenges which they experienced when managing infrastructure at their schools. This theme was structured according to the following sub-themes: the interaction between schools and the provincial education department; assurance of safety and security; assurance of quality and adequate infrastructure; and the financial support by the provincial education department.

5.5.4.1 Sub-theme 1: Insufficient interaction between schools and the provincial education department

In this sub-theme, the school principal and SGB chairperson participants expressed varying viewpoints about the infrastructural support they expected to be provided by the provincial education department. The expectations were aligned to their schools' infrastructural priority needs.

The priority for now, which is underway, is the construction of toilets for learners. they sent a team of engineers to do the assessment and promised the construction will start very soon. This is one of the priorities which I will be happy if the Department can assist. Also, the

renovation of the roof of the classrooms and the staffroom (School B principal).

Our priority is that the Department sends someone to discuss issues of infrastructure because challenges are many. That someone should also assess the conditions as well (School C SGB chairperson).

I would say the provincial department must learn to act now because it is long that we have been making submissions, but it fell on deaf ears. They should implement our submissions or requests to them. For laboratory, senior officials would come and observe and promise that in two weeks' time something would be done but ended just like that. It needs to support the cream schools (it is getting good results) so as to sustain the good performance (School D principal).

I would like the Department to do what we are requesting it to do, like for instance, for the past 7 years I have been asking that we don't have funds to repair electricity in the whole school. Electricity has been prioritised for many years now. Electrifying all the classes that are without electricity is our priority (School E principal).

It is for the Department to send officials now and then to schools to find out what is happening there, so that they take back the reports that will impact positively on the visited schools and prioritise what schools need in terms of infrastructure (School F principal).

To assist us with the management of infrastructure, I think if the Department can assist us with their staff, experts to come and help us (School J principal).

The preceding quotations of responses by school principal and SGB chairperson participants indicated that there was a communication gap between the schools and the provincial education department in terms of how the management of school infrastructure should be supported by the provincial education department. The participants expected the provincial education department to communicate with the schools on a regular basis so as to acknowledge the infrastructure needs of the schools and how the schools would be supported in managing these needs. The

participants strongly felt that the state of infrastructure could be improved if the departmental officials acted timeously and visited the schools regularly. The participants were concerned about the lack of accountability of the departmental officials and the provincial department by failing to honour the promises they made in terms of supporting schools in management of school infrastructure. In terms of the management functions theory underlying this study, Brevis (2008:68) and DuBrin (2009:408) contend that communication is an integral part of all management functions. In order to plan, organise, lead and control, managers have to communicate with their subordinates.

According to DuBrin (2009:408), effective communication is the manager's potent tool for inspiring employees to take responsibility for implementing the vision of the organisation. Decision making necessitates communication, and management by objectives relies heavily on communication skills. Communication can thus be described as the process of transmitting information and meaning. This process is used when there is something that the sender wants the receiver to know, understand or act upon. Therefore, the effective management of school infrastructure can be reinforced by regular communication from district or provincial education officials. Dryzek (2008:459) asserts that participatory governance contributes to the development of communicative skills, citizen empowerment, and community capacity-building.

Hellriegel et al. (2008:323) contend that in an organisation, managers use the communication process to carry out their four tasks, namely; planning, organising, leading, and controlling. To do so, they gather information from both inside and outside the organisation. The manager's communication role is purpose-directed and includes strategic conversations, and use is made of different communication methods such as upward, downward and horizontal channels, personal networks, and non-verbal communication. According to document analysis, district offices should ensure communication and information sharing between the education authorities and schools, and also between schools (RSA, 2012:303). Communication as an effective tool in management functions therefore appeared to be underutilised on the part of the provincial education department, thus compromising common understanding between all parties involved in the management of school infrastructure.

5.5.4.2 Sub-theme 2: Assurance of safety and security

The school principal and SGB chairperson participants cited threats to and violation of safety and security measures as on effective management and maintenance of infrastructure at their schools. The following were the responses provided by participants on the issue of safety and security at schools:

I think to keep everything in good condition, safety and security first. So, if the government can budget in trying to introduce security personnel in the school, I think our school will remain in good condition. If they can invest on security, maybe one or two because we are wasting money on repairing (School G chairperson).

I would strongly suggest that the Department appoints safety and security services for the school, paid by them, working for 24 hours. Whatever we do if there is no security, takes us a step backward (School H principal).

Most of the furniture and buildings are destroyed during burglary. If they can assist us with security services to ensure there is somebody taking care of the school when there is no one. Then we also need a watchman infrastructure at our gate. I think each and every school needs such a facility. If it is there, then anyone who is responsible the gate duties will have a proper structure against the sun, excessive wind, cold. We also need to improve our gate and our fencing quality. Those I think they are most important for our safety (School L principal).

Our school does not have a proper fence. Our learners are at risk, anything can happen at any time. Then the premises are not catered for, they are not having the paving. Absence of a protective fence allows for the entry of animals and gangsters, leading to a situation of unsafety in the school, thus affecting teaching and learning (School C principal).

The participants felt that for their school infrastructure to be effectively and sustainably maintained, the provincial education department needed to provide them

with security personnel and/or services. The progress in the development and maintenance of school infrastructure was set back by the absence of security at their schools, leading to vandalism and theft. As a result of the absence of security at non-fee-paying schools, school furniture and buildings got destroyed during burglary. The participants in this sub-theme further felt that the unavailability of protective fence around the school put teachers and learners at risk in the sense that they were exposed to dangerous animals and gangsters that boundlessly entered the school premises. According to the National Development Plan, learner safety should be considered when planning for the school infrastructure (RSA, 2012:303). Safety and security provisions must be taken into consideration during the planning stage and incorporated in the designs, having the necessary risk assessment been carried out (RSA, 2019:85). One of the values upheld in the mission statement of the selected provincial department of education is about safety. The provincial education department should ensure that provision of quality education is conducted in a safe and secure environment (Mpumalanga Department of Education, 2022:14). It was on the basis of these safety concerns that the school principal and SGB chairperson participants maintained that it was upon the onus of the provincial education department to ensure that safety and security measures at non-fee-paying schools were provided.

The *Guidelines Relating to Planning for Public School Infrastructure* document attests to the fact that every school site, including school outbuildings and sporting fields, should be surrounded by appropriate fencing to a height of at least 1.8m. School buildings should be provided with some form of security measure. All ground-floor buildings and other areas built at ground level that are accessed by learners and teachers should at least be provided with burglar proofing. Every school should have an arrangement pertaining to a security guard. An alarm system, in addition to burglar proofing and a security guard arrangement is advisable and should exceed the minimum security requirements. School buildings and other school facilities should conform to all laws relating to fire protection (RSA, 2012:11).

In terms of the management functions theory which underpinned this study, the lack of safety and security measures in the schools was in direct contradiction with the control management function. In this regard, Smit et al. (2011:439) maintain that the following are the reasons for control to be heeded: control is exercised to ensure that

all activities at all levels of the organisation (school) are in accordance with the organisation's mission and goals; control is applied to ensure that the organisation's resources are deployed in such a way that it achieves its goals; tight control is likely to result in better quality; control enables the school managers to cope with environmental change and uncertainty; and control can help to minimise costs and limit the accumulation of errors.

In terms of the participatory governance theory, the SGBs can play a significant role in ensuring that safety and security prevails in non-fee-paying schools. Unfortunately, the autonomy of SGBs in executing their functions in public schools is beset with inhibiting challenges. The virtues of decentralisation in school governance are being threatened by centrally inclined interferences. The National Development Plan has as an objective to “develop a strong sense of community ownership” and acknowledges the need to provide additional support to school governing bodies (RSA, 2012:311). This sense of community ownership encourages community members to assist with a range of tasks, such as helping to deliver the school nutrition programme, growing and supplying the school with vegetables and preparing meals, monitoring learner safety, and preventing vandalism and theft. School management has to work with communities on an on-going basis to develop and maintain such a sense of ownership (RSA, 2012:311). Thus, instead of curtailing local governance autonomy, means of incentivising, rewarding and supporting school governing bodies to strive towards substantial and durable improvement should be secured. In this way the constitutional principle of co-operative governance could be strengthened.

5.6 DISCUSSION OF FINDINGS

This discussion on findings was informed by the participants' responses as presented above and was linked to the narrative descriptions of both themes and sub-themes. The findings were formulated with the backing support of the document analysis and the theoretical frameworks for this study.

5.6.1 The findings under Theme 1: The management processes

The findings were presented as per the discussion of each sub-theme.

5.6.1.1 Management structures and processes

The finding in sub-theme 1 was apparent that there were schools who set up infrastructure structures as propagated by the management functions theory, for example infrastructure committees. However, from the total of twelve (12) schools which participated in the study, it was a finding too that there were also non-fee-paying schools that did not engage in the establishment of infrastructure management committees. In those schools where infrastructure committees were established, the effectiveness of these committees could be suspicious due to the lack of financial support from the provincial education department. The involvement of SGB members in the school infrastructure committees tallied with the participatory governance theory whereby the latter links to the directive principles of the National Education Policy Act, 27 of 1996, according to which “representation of stakeholders in the governance of all aspects of the education system shall be ensured” (section 4(m)). This notion of “shared responsibility” is manifested in the Schools Act in that it provides for the provisioning of “public schools” rather than “state schools” (Du Plessis, 2020:166).

5.6.1.2 The needs analysis

The practice of needs analysis as a management process by some non-fee-paying schools could be aligned to strategic planning process as an integral part of the management functions theory. The main purpose of strategic planning is to improve the productivity and effectiveness of an organisation by analysing community needs, formulating organisational objectives, and identifying steps to achieve these objectives (Van der Walddt and Du Toit, 2011:285). Based on the responses offered by the participants, the finding in this sub-theme was therefore that not all non-fee-paying schools were following the needs analysis approach in management of school infrastructure, a practice which was officially documented, reiterated and referenced by the infrastructure-attached district officials. As the effective management of infrastructure, should commence with identifying and addressing the school infrastructural needs, the finding could also be stated that the management of school infrastructure in non-fee-paying schools was not all anchored on strategic planning, but that in some schools it occurred on an *ad hoc* basis. Strategic planning enables organisational managers to evaluate, select and implement alternatives for rendering

effective service. It is interwoven in the whole management process (Van der Waldt and Du Toit, 2011:285). Weitsz (2008:100) contends that strategic planning enables an organisation to choose the best goal and decide how the organisation will be run to accomplish the goal. Smit et al. (2011:134) assert that strategic plans are designed to ensure that the organisation as a whole is aligned with the changing external environment. The finding with the needs analysis management process was that the needs assessment at school level was limited to day-to-day maintenance. In addition, the needs analysis management process was too time-consuming and extremely bureaucratic in nature and as a result, the ultimate delivery of identified infrastructural needs took too long to accomplish.

5.6.1.3 Maintenance management plans and procedures

The finding was that it seemed as if a sizable number of non-fee-paying schools did not use management plans when managing their schools' infrastructure. Van der Waldt and Du Toit (2011:182) assert that planning is a basic process involving every manager to some extent and the purpose of a plan is to facilitate the achievement of an organisation's goal, mission and objectives. Planning is therefore aimed at determining future circumstances and identifying the measures needed to realise them. As the first element of the management process, planning is the setting of goals and the development of a plan of action to achieve the goals as productively as possible (Cronje et al., 2006:157). Therefore, without thorough planning, non-fee-paying schools struggled to manage their infrastructure successfully. The data, however, brought a number of factors to the fore which negatively impacted on the execution of the infrastructure management plans on non-fee-paying schools. These were indicated in Sub-section 5.6.2

5.6.1.4 The involvement of external service providers

The involvement of external service providers by the participating schools under this sub-theme concurred with the prescripts of the Schools Act. In terms of Section 36 (1) of the Schools Act, the governing body of a public school must take all reasonable measures within its means to supplement the resources supplies by the State in order to improve the quality of education provided by the school to all learners. The focusing of attention by the infrastructure-attached district official and school principal participants to external sources to assist in the development and management of

school infrastructure was a legitimate function to improve the management of school infrastructure. The finding in this sub-theme was that in an attempt to deal with the insufficiency of maintenance budget, the participating schools were attempting to seek external support to supplement the State resources.

Theme 1 explored the management processes the non-fee-paying schools applied in the management of infrastructure. The participants indicated varying management processes, from the setting up of infrastructure and/or maintenance committees, the needs analysis, management plans to involvement of external service providers. It was apparent that the management processes that the schools followed tallied with the theoretical frameworks that underpinned this study and were also supported by the document analysis. From the varying responses provided by the participants, the finding was that the non-fee-paying schools did not have a common guiding policy or standards for the management of school infrastructure. Some schools had established infrastructure committees, while others followed different management structures and processes. The participating schools consequently used their own discretion in applying management processes for infrastructure management. A common approach for the management of infrastructure did not exist in the participating non-fee-paying schools. Although there was some evidence of participating schools conducting a needs analysis and drafting management plans, it was questionable whether these schools were actually empowered to implement such plans themselves as they were very much reliant on financial support from the provincial department of education and other external sources.

5.6.2 The findings under Theme 2: The challenges in the management of school infrastructure

The findings were presented as per the discussion of each sub-theme.

5.6.2.1 The bureaucratic nature of the business management process

The business management process employed by the selected provincial department of education was time-consuming and tedious, thus contributing to delays in the delivery of infrastructural facilities. The planning role of the provincial education department lasted for two (2) long years before the implementation phase could take place. This prolonged duration of the needs analysis in the form of business process

diluted the urgency for the delivery of quality educational facilities, adding to the already existing backlogs. The factors affecting backlogs in school infrastructure include the lack of capacity in planning, procurement, project management, financial management and construction management; and escalating building costs even as the school infrastructure budget has increased (RSA, 2012:312). The business management process was further compounded by the involvement of many stakeholders such as the Department of Public Works and Department of Cooperative Governance and Traditional Affairs. The finding in this sub-theme was that on account of being too lengthy and bureaucratic, the business management process could not be described as efficient, and could be said to have contributed to the poor management of school infrastructure in the province.

5.6.2.2 The insufficient day-to-day maintenance budget

The limited day-to-day maintenance budget (so-called Paper Budget) that was allocated, to non-fee-paying schools was inadequate to meet the maintenance of these schools. This resulted in maintenance backlogs increasing, which ultimately led to relatively small maintenance issues escalating into larger and more serious capital expenditure projects, exacerbating the existing infrastructure development backlogs. According to the management functions theory underlying this study, budgets facilitate performance evaluation of managers by assessing a unit, department or section against specific standards (Smit et al., 2011:427). Bloom and Boessenkool (2006:189) and Weitsz (2008:100) confirm that the budget is one of the most important planning and control mechanisms of an organisation. A complete budgetary system can therefore lead to effective planning, provided it is based on realistic assumptions. Since the budget for infrastructure maintenance was not sufficient for non-fee-paying schools, the participating schools found it hard to effectively realise their infrastructure management plans.

Management of infrastructure which is not informed by a sound budgetary base would therefore be tantamount to a futile endeavour on the part of the school governing bodies who are in terms of section 20 of the South African Schools act, tasked with this responsibility. The provincial education department in particular and the Department of Basic Education in general therefore failed to meet the financial needs for infrastructure development and maintenance of non-fee-paying schools

and this consequently compounded the ineffective management of infrastructure by school principals and the SGBs at the schools. Another finding in this sub-theme was that the SGBs and school principals seemed to be lacking appropriate knowledge on the appropriate utilisation of the infrastructure maintenance budget. This state of affairs might be caused by the SGBs' and school principals' lack of training by the provincial education department on the proper utilisation of the day-to-day maintenance budget.

5.6.2.3 Escalation of crime and vandalism in non-fee-paying schools

The exposure of the non-fee-paying schools to crime was contrary to safety regulations. The document analysis confirmed that there are expectations that schools should have effective security measures. However, this did not seem to be the case. As result, schools were vulnerable to crime and vandalism, which further exacerbated the maintenance challenges that were experienced by non-fee-paying schools.

5.6.2.4 The incongruity of infrastructure priority management plans between the districts and the non-fee-paying schools

The priority plans of the non-fee-paying schools had to wait for the provincial infrastructure priority cycle to run its course before their infrastructure priority plans could be addressed. This time-bound process (the business management plan of the provincial education department) therefore appeared to be rigid, time delaying and inefficient in managing the infrastructure priorities for the non-fee-paying schools. The finding therefore was that the infrastructure priority management process was time-consuming, lengthy and bureaucratic. It undermined the schools' priority plans. This state of affairs also showed the lack of collaboration between the districts and the schools with regard to the infrastructure priority plans per annual cycle.

5.6.3 The findings under Theme 3: The role of the provincial education department

The findings were presented as per the discussion of each sub-theme.

5.6.3.1 Inability of the selected provincial department of education to meet the infrastructure needs of non-fee-paying schools

The participants pointed out that there was unavailability of infrastructure facilities such as libraries, multimedia centres, laboratories, kitchens, administration blocks and computer centres at the non-fee-paying schools. The infrastructure-attached district participants confirmed that it was the responsibility of the provincial education department to provide schools with such infrastructure facilities. The National Development Plan maintains that the non-fee-paying schools should be targeted when planning infrastructure, to compensate for resource deficits in communities. There should be well-equipped libraries, laboratories, computer and media centres to ensure that learners in non-fee-paying schools have access to similar learning resources as their counterparts in less poor communities (RSA, 2012:303). Again, the lengthy, bureaucratic business process that was followed by the selected provincial department in the planning phase for the delivery of capital infrastructural projects such as administration blocks, laboratories, libraries, multimedia centres, computer centres and school halls delayed the delivery of essential infrastructure, thus stifling the effective management of school infrastructure (Mpumalanga Department of Education, 2014:6).

Therefore, the finding in this sub-theme was that the non-fee-paying schools were subjected to the unavailability of structural infrastructure facilities, a barrier that inevitably denied learners from attaining effective and quality education. The finding in this sub-theme also revealed that the educational proposals as outlined in the National Development Plan were not in practice in non-fee-paying schools (RSA, 2012:303).

5.6.3.2 The training of school principals and SGBs on management of school infrastructure

The participants felt that the training of school principals and SGBs on the management of resources such as the 13% maintenance budget was a prerequisite for effective management and maintenance of school infrastructure. Most SGBs had parents who had little or no financial knowledge and skills; and they did not have the required capacity to manage school finances. The inability of schools to manage their funds could not necessarily be attributed to lack of training; other reasons could be

poor working relationship between the principal and the SGB (Thenga, 2012:33). Mestry and Bisschoff (2009:2) contend that in a school context, financial management is the performance of management actions connected with financial aspects of the schools with the aim of achieving effective education. Financial management is an integral part of resource management. It ensures that expenditure is directed towards achieving good value for money through appropriate acquisition and allocation of resources.

In this regard, participatory governance contributes to the development of communicative skills, citizen empowerment, and community capacity-building. With regard to citizen competence and empowerment, the practices of participatory governance are put forth as a specific case of the broader view that participation contributes to human development generally, both intellectual and emotional (Dryzek, 2008:459). The foregoing contentions highlighted the significance of the training of school principals and SGBs by the provincial education department in order for the former to attain competence and capacity-building for effective management of school infrastructure. Therefore, the finding in this sub-theme was that the lack of training of the school principals and SGBs on management of school funds by the provincial education department bore adverse effects on the management of such infrastructure in non-fee-paying schools. Furthermore, besides confirmation by only O1 official, where school principals and SGBs had been trained on the effective management of school infrastructure, it was a finding that there was no subsequent support and monitoring provided by the rest of other infrastructure-attached district officials on the infrastructural services provided.

5.6.3.3 Support provided by the selected provincial department of education to schools

The infrastructure-attached district official participants unanimously maintained that they provided physical support to schools such as conducting the conditional assessment of damaged infrastructure. The infrastructure-attached district officials visited the schools for monitoring the conditions and the use of the provided or installed infrastructure facilities and services. The physical support by provincial education department was congruous with the stipulations as entrenched in document analysis.

Schools should be provided with adequate sanitation facilities, which promote health and hygiene standards, and comply with all relevant laws. The choice of appropriate sanitation technology may only be based on an assessment conducted on the most suitable sanitation technology. Plain pit and bucket toilets are not allowed in schools and shall render a school non-functional. All schools should at the least be provided with a basic water supply that complies with all the relevant laws. The choice of appropriate water technology may only be based on an assessment conducted on the most suitable water supply technology. No school is allowed to function without potable water. All schools should be provided with some form of electricity that complies with all the relevant laws (RSA, 2012:10). On the basis of the responses by the participants, the finding in this sub-theme was that although not all non-fee-paying schools agreed on receiving departmental physical support in relation to the provision of sanitation facilities, conditional assessment and guidance on the development and implementation of maintenance plans, the participants' responses attested that the physical support was ongoing in non-fee-paying schools.

5.6.3.4 Overwhelming infrastructure problems at the participating schools

The participants commented on the importance of having adequate and quality infrastructure at the schools for the better attainment of educational goals. The provision of adequate and quality infrastructure could be related to the importance of executing the planning function in an organisation. Planning is necessary in education sector because it helps the organisation to discover new opportunities and to anticipate and avoid future problems (Rudansky-Kloppers, 2011:77). The quality of school buildings is critically important in the drive for improving education. Good quality facilities provide teachers and learners with supportive environments that are responsive to their changing needs and could make a real difference to learning and teaching. Successful teaching and learning depends on the availability of crucial resources, such as learning materials and a teaching and learning environment that is conducive (RSA, 2012:4). On the basis of the foregoing exposition, the finding in this sub-theme was that the non-fee-paying schools lacked the adequate and quality infrastructure facilities, and as such the quality of learning output was compromised. The lack of adequate and quality infrastructure inevitably stifled and inhibited the delivery of quality education in non-fee-paying schools.

5.6.3.5 Insufficient financial support to schools

The participants acknowledged that the provincial education department supported the schools with finance for the management of infrastructure, but such financial support was not enough. They felt the budget allocated for infrastructure was not sufficient to address their infrastructural challenges. According to the management function of planning, a budget is a means of conveying policy to subordinates who are responsible for implementing policy-specific guidelines (Bloom and Boessenkool, 2006:189). As finance is essential for implementing policy, the finding in this sub-theme was, therefore, that the management of infrastructure in non-fee-paying schools was constrained and hindered by the insufficient financial allocations by the provincial education department. Even if plans for infrastructure development and improvement existed, the lack of sufficient financial support rendered such plans unrealisable.

5.6.4 The findings under Theme 4: The participating schools' perception of the role of provincial education department

The findings were presented as per the discussion of each sub-theme.

5.6.4.1 Insufficient interaction between schools and the provincial education department

In this sub-theme, the school principal and SGB chairperson participants enunciated that there was a communication gap between the schools and the provincial education department in terms of supporting management of school infrastructure. In terms of the management functions theory, effective communication is the manager's potent tool for inspiring employees to take responsibility for implementing the vision of the organisation. Decision making necessitates communication, and management by objectives relies heavily on communication skills (DuBrin, 2009:408). Brevis (2008:71) explains that downward communication starts with top management and flows down through the management levels to employees. The major purpose of downward communication is to provide subordinates with information on organisational goals, objectives, strategies and policies. With this said, the finding in this sub-theme pointed to the blurred lines of communication between the schools and the department as compounding the effective and efficient management of

school infrastructure. The provincial education department did not promptly respond to the infrastructural needs of the schools, probably on account of the bureaucratic ways it followed. The National Development Plan asserts that district offices should ensure communication and information sharing between the education authorities and schools, and also between schools (RSA, 2012:303).

5.6.4.2 Assurance of safety and security

The participants cited threats to and violation of safety and security measures as a concerning challenge on the effective management of infrastructure at their schools. Document analysis attested to the fact that every school site, including school outbuildings and sporting and recreational facilities, should be surrounded by appropriate fencing to a minimum height of at least 1.8 metres, and school buildings must have at least one form of safety and security measure, such as burglary proofing to all opening window sections, a security guard arrangement or an alarm system linked to a rapid armed response, where available (RSA, 2012:11; RSA, 2013:18). The learner safety should be considered when planning infrastructure (RSA, 2012:303). The safety and security frustrations of non-fee-paying schools were the explicit manifestation of non-compliance by the provincial education department to assist these schools in terms of overcoming the safety and security challenges in managing school infrastructure, as required by policy. Therefore, the finding in this sub-theme was that the non-fee-paying schools that were exposed to safety and security threats were systemically failed in terms of being provided with perimeter security and safety measures, and their management of infrastructure was consequently compromised.

5.7 CONCLUDING THE CHAPTER

This chapter presented the demographic descriptions of participating schools in terms of the learner enrolment and the staff establishment in each school. The biographic profiles of the participants in this study were also provided. I also presented and discussed the data obtained from the document analysis and the interview data. The analysis and interpretation of sub-themes were conducted with due consideration of the theoretical frameworks of this study. The chapter finally provided a discussion of findings, which was supported by document analysis and inputs from the theoretical frameworks that underpinned this study. In the next

chapter I answered the research questions, made recommendations based on the findings and suggested areas in need of further research.

CHAPTER SIX

CONCLUSION AND RECOMMENDATIONS

6.1 INTRODUCTION

In Chapter 5, I presented the demographic descriptions of the participating schools and the biographic profiles of all the participants. I further provided a discussion of the document analysis which was used to support the analysis of the interview data. I also presented the interview data obtained from the participants. Lastly, I presented a discussion of the findings. The findings were formulated with the backing support of the document analysis and the theoretical frameworks for this study. This chapter presented a discussion/summary of the findings of the research study in terms of how the findings related to the research questions, resolved the problem statement, and realised the research objectives. This chapter further presented an overview of the limitations of the study, recommendations of this study and suggestions for further research.

6.2 ANSWERING THE RESEARCH QUESTIONS

The primary form for representing and reporting findings in qualitative research is a narrative discussion, which is a written passage in a qualitative study in which I summarised the findings from my data analysis (Creswell, 2014:278). I stated each individual research question again and provided findings for each question. The overall intent of this narrative discussion was to provide readers with an overview of the findings to complement the more detailed results in the discussion of themes and sub-themes (Creswell, 2014:282), as provided in the previous chapter.

The main research question was:

How is school infrastructure managed in non-fee-paying schools in a selected South African province?

The sub-questions to answer and support the key research question were:

- What processes do non-fee-paying schools engage in when managing school infrastructure?

- What challenges do non-fee-paying schools experience in management of school infrastructure?
- What is the role of the provincial education department in the management of infrastructure of non-fee-paying schools?
- How do school governing bodies and school principals perceive the role of the provincial education department in the management of infrastructure of non-fee-paying schools?

6.2.1 What processes do non-fee-paying schools engage in when managing school infrastructure?

This research question was answered with due consideration of three (3) sub-themes; namely, management structures and processes, the needs analysis and maintenance management plans and procedures.

6.2.1.1 Management structures and processes

The views shared by the school principal and SGB chairperson participants as captured under the first sub-theme indicated that their schools applied the management process of management plans and procedures on school infrastructure, an approach that was in line with the management functions theory as an underlying theoretical framework for this study. However, this study revealed that the provincial education department did not support the non-fee-paying schools to implement these plans and procedures. As the first element of the management process, planning is the setting of goals and the development of a plan of action to achieve the goals as productively as possible (Cronje et al., 2006:157). Planning gives direction to the organisation in the form of goals and in the form of plans, indicating how to set about achieving them. Planning promotes co-ordination between the various departments and employees in the organisation - once goals have been clearly formulated and plans have been developed, tasks and resources can be allocated so that everybody involved is able to contribute effectively to the realisation of the goals; and scarce resources can be channelled and utilised rationally, which is necessary for the productivity and ultimate success of the organisation (Cronje et al., 2006:141). However, based on the responses by the participants, the participating non-fee-paying schools did not receive the necessary planning support from the provincial education department. The provincial education department did not provide the co-

ordination role to the non-fee-paying schools in terms of financial and physical resources that would enable the developed plans to be implemented.

It was apparent that the provincial department of education did not assist the non-fee-paying schools to realise their infrastructure management plans and procedures. In terms of management functions theory, Van der Waladt and Du Toit (2011:183) point to various advantages of planning in an organisation: planning promotes cooperation between the various departments and individuals in an organisation; if objectives are formulated clearly and suitable plans are prepared, tasks and resources can be allocated so that everyone can contribute effectively to the achievement of the objectives; planning gives direction to an organisation in that it helps formulate objectives and shape plans that indicate how to achieve the objectives; and planning forces managers to look to the future, and this eliminates crisis management since management has to anticipate threats in the environment and take steps in good time to avert them.

According to Smit et al. (2011:9), planning forces an organisation to be proactive, and not reactive. It forces management to consider possible changes that may occur and then prepare timeously for such changes. Planning ensures that managers and employees focus on the attainment of the same goals. Sound plans are essential when monitoring the progress of an organisation, as actual results can be measured against clearly stated goals and deviations from the goals can be identified and rectified. Van der Waladt and Du Toit (2011:185) assert that effective planning should always be linked with the achievement of objectives. The strengths, weaknesses, opportunities, and threats of an organisation should be known before the actual planning process begins.

This study therefore concluded that the provincial department of education underplayed its management planning function of overseeing and augmenting the infrastructure plans developed at the non-fee-paying school level. This status also indicated the failure by the provincial education department to play an active and conspicuous leading role in the school infrastructure management processes in the province. The management functions theory that underpinned this study contends that leading focuses on directing, communicating, guiding, and motivating the human resources in the organisation. Managers need to act as leaders in order to influence

employees and subordinates to perform with the maximum application of their abilities in order to achieve set objectives and plans (Ferreira et al., 2015:297; Robbins and Decenzo, 2009:7; Hellriegel et al., 2007:11). Managers are responsible for getting things done through other people; the provincial education department should therefore collaborate with its superiors, colleagues, and subordinates, with individuals and groups, in order to realise the infrastructure management plans of the department, particularly those of the non-fee-paying schools (Smit et al., 2011:309).

6.2.1.2 The needs analysis

The practice of needs analysis as a management process by some non-fee-paying schools could be aligned to strategic planning process as an integral part of the management functions theory. The main purpose of strategic planning is to improve the productivity and effectiveness of an organisation by analysing community needs, formulating organisational objectives, and identifying steps to achieve these objectives (Van der Walddt and Du Toit, 2011:285). However, based on the responses offered by the participants, it was found that not all non-fee-paying schools were following the needs analysis approach in management of school infrastructure, a practice which was officially documented, reiterated, and referenced by the infrastructure-attached district officials. As the effective management of infrastructure should commence with identifying and addressing the school infrastructural needs, it was also found that the management of school infrastructure in non-fee-paying schools was not all anchored on strategic planning, but that in some schools it occurred on an *ad hoc* basis. Strategic planning includes developing a vision, mission statement and long-term objectives, and determining in advance how they will be accomplished. This is done with due consideration of the norms, values and philosophy of management and the employees of the organisation, its internal strengths and weaknesses and the external opportunities and threats in the organisational work environment (Oosthuizen, 2007:41; Brevis, 2008:52). Weitsz (2008:100) confirms that strategic planning enables the organisation to choose the best goal and decide how the organisation will be run to accomplish the goal.

6.2.1.3 Maintenance management plans and procedures

The finding under this sub-theme was that a sizable number of non-fee-paying schools were not orientated towards effectively executing their management plans

when managing schools' infrastructure. The management functions theory underpinning this study explains that planning involves, *inter alia*, the development of a plan of action to achieve the goals as productively as possible (Cronje et al., 2006:157). Therefore, without being empowered and capacitated by the provincial education department to engage in maintenance management plans, the non-fee-paying schools found themselves struggling to manage their infrastructure successfully.

In the main, the varying participants' responses indicated that the non-fee-paying schools did not have a common guiding policy or standards for the management of school infrastructure. Some schools had established infrastructure committees, while others followed different management structures and processes. The participating schools consequently used their own discretion in applying management processes for infrastructure management. A common approach for the management of infrastructure did not exist in the non-fee-paying schools. This state of affairs reflected the lack of the application of the organising management function by the provincial education department. In terms of the management functions theory, organising typically involves developing a framework or organisational structure to indicate how and when employees and other resources should be deployed in order to achieve goals. The success of the organisation lies in directing the different resources towards the achievement of a common set of goals (Brevis, 2008:41).

Organising involves combining activities so that organisation's goals can be achieved (De Beer, 2011:93). Tasks, roles, and responsibilities have to be defined to ensure that each person knows what he or she is responsible for within the organisation (Smit et al., 2011:11). Organising means that managers have to develop mechanisms to facilitate the implementation of the strategy or plan. Arrangements have to be made to determine what activities will be carried out, what resources will be employed, and who will perform the various activities. This involves the distribution of tasks among employees, the allocation of resources to persons and departments, and giving the necessary authority to certain employees to ensure that the tasks are in fact carried out. Moreover, there must be communication, cooperation and co-ordination between the individuals and the departments or sections performing tasks (Cronje et al., 2006:158). With this said, the provincial department of education seemed not to adhere to the application of the organising management function when

managing school infrastructure for non-fee-paying schools. The power of the communication tool as a management function seemed to be insufficiently utilised by the provincial education department.

Again, the lack of a common approach for the management of infrastructure could be ascribed to the evasiveness of the co-ordination management function by the provincial education department. Co-ordination is a process which ensures that the activities and personnel of public institutions (e.g. schools) across the spectrum of an organisation (e.g. the Department of Basic Education) do not overlap and that the organisational units work together to achieve the objectives set by legislation, which in the case of education is the South African Schools Act (Van der Waldt and Du Toit, 2011:192). Education managers should be responsible for co-ordinating all activities of the various divisions (e.g., infrastructure section) within an organisation so that everyone strives to achieve the objectives without wasting limited resources which could emanate from overlapping and diversification. Co-ordination can therefore be described as putting together the parts of an organisation to achieve the outcomes one wants, in the most efficient way (De Beer, 2011:95). Co-ordination pervades all management functions and is one of the most important principles in the organising process.

Smit et al. (2011:221) and Lussier (2015:188) contend that co-ordination ensures that all departments, sections, and individuals within the organisation work together to accomplish the strategic, tactical and operational goals of the organisation. Co-ordination entails integrating all organisational tasks and resources to meet the organisation's objectives. Similarly, Cronje et al. (2006:169) indicate that without co-ordination, individuals and departments lose sight of the organisation's primary goals and of their part in that effort. Therefore, co-ordination is the synthesis of separate parts into a unity, and as such it is the binding factor in the managerial process. To this end, the co-ordinating process is about ensuring that all of the resources available are arranged appropriately, function effectively and are in harmony in order that the plan can be realised (Martin, 2008:64). The current diversity of maintenance management plans amongst the non-fee-paying schools could therefore be attributable to the lack of the application of the co-ordination management principle in managing school infrastructure for non-fee-paying schools by the provincial department of education. Although there was evidence of some participating non-fee-

paying schools conducting a needs analysis and drafting management plans, it stood out that these schools were actually not empowered to implement these plans themselves as they were heavily reliant on financial support from the provincial department of education and other external sources, which was not sufficient to accomplish any infrastructure management plan.

6.2.2 What challenges do non-fee-paying schools experience in management of school infrastructure?

This research question was answered under the analysis of four (4) sub-themes; namely, the bureaucratic nature of the business management process, the insufficient day-to-day maintenance budget, escalation of crime and vandalism in non-fee-paying schools and the incongruity of school infrastructure priority management plans between the districts and the non-fee-paying schools.

6.2.2.1 The bureaucratic nature of the business management process

The business management process, which is a step-by-step planning process posed a management challenge by itself. It was a lengthy, prolonged exercise which rendered the effective management of school infrastructure virtually impossible to accomplish. This business management process begins at the school level as the schools' assessment of needs, proceeding through the circuits, districts, and right up to the provincial level. The actual delivery of infrastructural provisions takes ages before it materialises because more time is consumed in the lengthy planning process. This process was therefore considered to be very lengthy, bureaucratic, and incapable of responding to immediate and urgent infrastructural needs of the schools. The business process was time-consuming; thus contributing to delays in the delivery of infrastructural facilities. This prolonged duration of the needs analysis in the form of business process diluted the urgency for the delivery of quality educational facilities, adding to the already existing backlogs.

The business management process was further compounded by the involvement of many stakeholders such as the Department of Public Works and Department of Co-operative Governance and Traditional Affairs. On account of being too lengthy and bureaucratic, the business management process could not be described as efficient, and it was contributing to the poor management of school infrastructure in the

province. Although there was an enormous emphasis being made on needs analysis and planning for school infrastructure, the processes employed by the national and provincial education departments seemed to be ineffective and inefficient.

By centralising the management processes, the principles of participatory governance theory were being undermined. According to Fischer (2012:1), participatory governance is a variant or subset of governance theory that puts emphasis on democratic engagement, in particular through deliberative practices. Participatory governance seeks to deepen citizen participation in the governmental process by examining the assumptions and practices of the traditional view that generally hinders the realisation of a genuine participatory democracy. Participatory governance is a means to progressive realignment of institutions in favour of the poorest. Socially excluded groups' access to entitlements within the policy process is mediated by governance systems (Hollard, 2013:2). Speer (2012:2379) describes participatory governance mechanisms as follows:

“They involve citizens in decision-making over the distribution of public funds between communities and the design of public policies, as well as in monitoring and evaluating government spending”.

The adoption of participatory governance is often based on the notion that representative democracy is able to improve the quality of state performance, educate and empower citizens, and make reasonably good use of scarce public resources. The application of participatory governance therefore represents an effort to redesign institutions and improve the quality of democracy, social well-being, and the state (Wampler and McNulty, 2011:3).

6.2.2.2 The insufficient day-to-day maintenance budget

Although all schools received the day-to-day maintenance allocation, both school and infrastructure-attached district official participants unanimously confirmed that the maintenance budget was of a limited nature. They maintained that the insufficiency of the budget rendered the infrastructure maintenance plans difficult to implement. The other concerning issue surrounding these schools' maintenance budgets was that schools tended to redirect the infrastructure budget to other operational priorities; thus leaving the infrastructure needs unattended to. This pointed to the lack of

empowerment and/or incapacity of the SGBs and school principals to effectively manage their budgets, of which it was the responsibility of the infrastructure-attached district officials to provide such capacity building. The capacitation was not provided to non-fee-paying schools to overcome the challenge, thus effectively managing the day-to-day maintenance budget.

The provision of an insufficient day-to-day maintenance budget by the provincial education department was a clear indication that the management planning function, which incorporates budgeting, was totally undermined. The significance of budgeting was not accorded its rightful place in the provincial planning for school infrastructure for non-fee-paying schools. Smit et al. (2011:146) and Lussier (2015:426) state that, as a planning tool, a budget is a financial plan that deals with the future allocation and utilisation of resources over a given period. Although budgets are typically thought of in financial terms, they are also relevant in terms of the allocation and utilisation of raw material, labour, office space, computer time, and the like. A budget can be seen as a tool that managers use to translate future plans into quantitative terms, as rands and cents. Smit et al. (2011:147), Lussier (2015:427) and Bloom and Boessenkool (2006:188) maintain that although budgeting is an important part of planning, it also serves as a control mechanism for evaluating organisational activities. A budget exercises control in two ways: it sets limits on the number of resources that can be used by a department or unit; and it establishes standards of performance against which future events will be compared. Generally, budgets help managers to co-ordinate resources and projects, and they help to define the standards needed in all control systems. They provide clear guidelines on an organisation's resources and on their utilisation. Budgets also facilitate performance evaluation of managers by assessing a unit, department or section against specific standards (Smit et al., 2011:427). The budget is one of the most important planning and control mechanisms of an organisation. A complete budgetary system can therefore lead to effective planning, provided it is based on realistic assumptions (Bloom and Boessenkool, 2006:189; Weitsz (2008:100).

The attempts by the non-fee-paying schools to mitigate the challenge of insufficient maintenance budget culminated in them seeking external financial help, as the governing body of a public school must take all reasonable measures within its means to supplement the resources supplies by the State in order to improve the

quality of education provided by the school to all learners at the school (Sub-section 36(1) of the South African Schools Act). However, the success in obtaining financial help from external providers was not always guaranteed; thus still leaving the non-fee-paying schools in a situation where they had to manage their school infrastructure with unreliable funding.

6.2.2.3 Escalation of crime and vandalism in non-fee-paying schools

The widespread crime as exacerbated by lack of proper safety and security measures in non-fee-paying schools meant that the management of infrastructure was compromised. The stolen goods such as computers, classroom doors, window frames and smart boards, meant that teaching and learning at non-fee-paying schools was rendered ineffective. It therefore became a challenge to manage and maintain quality school infrastructure if the external forces like crime and vandalism were hostile and uncurbed in non-fee-paying schools. The vulnerability of the non-fee-paying schools to crime and vandalism was contrary to safety precautions as enshrined in policy documents. The *Guidelines Relating to Planning for Public School Infrastructure* document explains that every school site, including school outbuildings and sporting fields, should be safely protected (RSA, 2012:11). All schools should have met the minimum standards by 2016 (RSA, 2012:313). It was therefore found that in non-fee-paying schools, the provincial education department had not yet heeded the preceding crime-prevention precautions, the consequences of which posed a formidable challenge on the effective management of school infrastructure. The non-fee-paying schools were exposed to crime, and this was a contravention of the safety regulations. Therefore, schools were vulnerable to crime and vandalism, which further exacerbated the maintenance challenges that were experienced by non-fee-paying schools.

The prevalence of crime and vandalism could be ascribed to the lack of effective control of school infrastructure as should be ensured by the provincial education department. The provincial department of education neglected safety and security in non-fee-paying schools by not strengthening the control management measures. In terms of management functions theory, control is the process that ensures that actual activities correspond with planned activities. This is an ongoing process that follows the planning and organising phases. The actual results obtained are compared with

the planned results and corrective action is taken where necessary (Van der Walddt and Du Toit, 2011:201; DuBris, 2009:8). Nieman and Bennet (2007:103) state that control as the final primary management task links up directly with planning and allows for effective leadership within the set organisational structure.

Control is a management task that ensures the co-ordination and effective functioning of all the organisational activities, so that formulated organisational objectives are implemented and pursued according to plan. As part of an active management process, control is used to monitor planning and support leadership. It is the process of establishing and implementing mechanisms to ensure that organisational goals are reached. Controlling ensures that the performance and behaviour of individual employees, groups and teams, as well as the rules and procedures of the organisation, meet the set standards (Oosthuizen, 2011:159). Controlling is the process whereby managers monitor and regulate how efficiently and effectively an organisation and its members are performing the activities necessary to achieve organisational goals. In controlling, managers monitor and evaluate whether their organisation's strategy and structure are working as managers intended, how they could be improved, and how they might be changed if they are not working. Control means keeping an organisation on track and anticipating events that might occur (Jones, George and Hill, 2008:313). Malpractices and waste in an organisation can be prevented through the implementation of effective control systems (Van der Walddt and Du Toit, 2011:201).

With reference to the participatory governance theory, it should be pointed out that the autonomy of SGBs in executing their functions in public schools was faced with inhibiting challenges. The virtues of decentralisation in school governance were being threatened by centrally inclined interferences. The National Development Plan has as an objective to "develop a strong sense of community ownership" and acknowledges the need to provide additional support to school governing bodies (RSA, 2012:311). This sense of community ownership encourages community members to assist with a range of tasks, including monitoring learner safety and preventing vandalism and theft. School management will have to work with communities on an on-going basis to develop and maintain such a sense of ownership (RSA, 2012:311). Thus, instead of curtailing local governance autonomy, means of incentivising, rewarding and supporting school governing bodies to strive

towards substantial and durable improvement should be sought. In this way the constitutional principle of co-operative governance could be strengthened. The centrally inclined interferences by both the national and provincial departments made it difficult for SGBs to combat crime and vandalism at the non-fee-paying schools.

6.2.2.4 The incongruity of infrastructure priority management plans between the districts and the non-fee-paying schools

The participants' responses on infrastructure development priorities pointed to a lack of affinity with regard to assuming a common point of departure in the management of school infrastructure. The provincial education department determined the management of school infrastructure priorities on a timeframe basis. In other words, the pivotal and urgent infrastructure priority plans of the schools could not be accommodated in infrastructure management plans of the districts if such priority plans did not fall within a specific infrastructure priority year. This approach of pursuing fixed timeframes for managing school infrastructure priority plans reflected the overly bureaucratic nature of the infrastructure priority management process.

The priority plans of the non-fee-paying schools had to wait for the provincial infrastructure priority cycle to run its course before their infrastructure priority plans could be addressed. This time-bound process therefore appeared to be rigid, time delaying and inefficient in managing the infrastructure priorities for the non-fee-paying schools. The finding therefore was that the infrastructure priority management process was overly time-consuming, lengthy and bureaucratic. It undermined the integrity of schools' priority plans. This state of affairs also showed the lack of interaction between the districts and the schools with regard to the infrastructure priority plans per a year cycle. Therefore, the diversity of priority management plans among schools and between the districts within the same provincial education department was an indication of the lack of collaboration and cohesion in the management of school infrastructure in non-fee-paying schools. This manifestation of the diversity of management priority plans reflected the lack of application of the management co-ordination principle as entrenched in the management functions theory for this study. Co-ordination can be described as putting together the parts of an organisation to achieve the outcomes one wants, in the most efficient way. Co-ordination covers all management functions and is one of the most important

principles in the organising process (De Beer, 2011:95). Co-ordination entails integrating all organisational tasks and resources to meet the organisation's objectives (Smit et al., 2011:221; Lussier, 2015:188). Cronje et al. (2006:169) explain that without co-ordination, individuals and departments lose sight of the organisation's primary goals and of their part in that effort. Therefore, co-ordination is the synthesis of separate parts into a unity, and as such it is the binding factor in the managerial process. On this score, the failure by the provincial department of education to facilitate the co-ordination management task evidently undermined the effective management of school infrastructure for the non-fee-paying schools.

6.2.3 What is the role of the provincial education department in the management of infrastructure of non-fee-paying schools?

This research question was addressed under the following five (5) sub-themes, namely: inability of the provincial department of education to meet the infrastructure needs of non-fee-paying schools; the training of school principals and SGBs on the management of school infrastructure; support provided to schools by the provincial department of education; overwhelming infrastructure problems at the participating schools; and insufficient financial support to the schools.

6.2.3.1 Inability of the selected provincial department of education to meet the infrastructure needs of non-fee-paying schools

The participants expressed concerns about the unavailability of facilities such as libraries, multimedia centres, laboratories, kitchens, halls and computer centres at their schools. The infrastructure-attached district participants confirmed that it was the responsibility of the provincial education department to provide schools with infrastructure facilities such as classrooms, ablution toilets, laboratories, libraries, administration buildings and other concomitant structures. These infrastructure facilities (and services) had been identified by school principal and SGB participants as essential but lacking at their schools. It could rightly be inferred that the non-fee-paying schools' outcry about the outstanding capital projects was attributable to the bureaucratic and centralised approach which the provincial education department had adopted in the management and provision of school infrastructure.

Again, the prolonged and time-consuming business management process seemed to be retarding provision of needed and appropriate infrastructure at non-fee-paying schools. The affected non-fee-paying schools had to indefinitely wait for the provincial Head Office to reach the point of the bureaucratic cycle in which delivery could be made. It was apparent that the urgency and priority of capital projects such as the laboratories or a library was not taken into consideration. The pursuance of red tape was given preference. On account of the fact that the districts did not have a budget for the capital projects, this study therefore found that the infrastructure management process was tremendously centralised at the provincial Head Office. The management process was bureaucratic in nature, and therefore delayed the delivery of essentially needed capital infrastructure at non-fee-paying schools.

The preceding discussion showed that the provincial department of education did not adhere to the principles of participatory governance theory. Decentralisation in school governance was being threatened by centrally inclined interferences. According to Cishe and Jadezweni (2002:41), the role played by decentralisation of education cannot be undermined. It is understood worldwide that decentralisation strengthens democracy as it transfers power from central to local bodies. It brings the decision-making process closer to people. Doing so is beneficial as implementation of any innovation is possible if those at the grass-roots level support it. Decentralisation also serves as a strategy to strengthen the local culture and the community as a whole. Decentralisation signifies a shift in location of those who govern and the devolution of some authority and institutional autonomy to the local school and community level (Fullan and Watson, 2000:453). According to Makara (2018:23), “meaningful decentralisation involves organised dispersal of power in society in the political, social and the economic sense”. The implication is that the various actors in society must be afforded the authority and freedom to participate meaningfully in governance (Makara, 2018:23).

Against the bureaucratic and centrally inclined interferences by the provincial department of education, Ojha (2006:461) asserts that a range of experiences shows that community participation can improve the efficiency of programmes (in terms of uses of resources) and effective projects in the provision and delivery of services, in both the developed and developing worlds. In fields such as education, health care or environmental protection, it is seen to lead to quicker responses to emerging

issues and problems, more effective development and design of solutions appropriate to local resources, higher levels of commitment and motivation in programme implementation, and greater overall satisfaction with policies and programs. Furthermore, an emphasis on efficiency generally leads to improved monitoring processes and verification of results. Fischer (2012:6) maintains that participation also has the potential to combine efficiency with equity. The decisions made through the participation of community members rather than by traditional elites or unaccountable administrators offer less powerful groups in the community better chances of influencing the distribution of resources.

Cishe and Jadezweni (2002:41) argue that while decentralisation is not a panacea for all the challenges facing education, it is only through it that people can enjoy opportunities to participate more directly in and be accountable for their decisions. Decentralisation is geared towards promoting participatory local governance, and some of the democratic principles enshrined in South African constitution transform theory to practice. These principles include equity, equality, and mass participation, to mention but a few. Decentralisation in education promises to be the best option to realise these noble principles. Furthermore, decentralisation in education has become a key aspect of educational restructuring in the international arena. It is at the centre of the current wave of education reform everywhere and has become a means to allow for maximum participation and more effective policy implementation.

6.2.3.2 The training of school principals and SGBs on management of school infrastructure

The participants indicated that the training of school principals and SGBs on the management of resources such as the 13% maintenance budget for effective management and maintenance of school infrastructure was not duly provided. Most SGBs had parents who had little or no financial knowledge and skills, and they did not have the required capacity to manage school finances. This study unravelled the significance of the training of school principals and SGBs by the provincial education department in order for the former to attain competence and capacity-building for effective management of school infrastructure. Therefore, the finding in this sub-theme was that the lack of training of the school principals and SGBs on management

of school funds by the provincial education department bore adverse effects on the management of such infrastructure in non-fee-paying schools.

The preceding scenario pointed to the failure of the provincial department of education to abide by the universally acknowledged management functions theory and participatory governance theory respectively. In terms of the organising management function, once the goals and plans have been determined, managers have to allocate the organisation's human and other resources to relevant sections (Smit et al., 2011:9). DuBrin (2009:8) explains that organising is the process of making sure the necessary human and physical resources are available to carry out a plan and achieve organisational goals. This presupposed that such human resources should have been well trained and well equipped to carry out the assigned organisational tasks, for example, the effective management of school infrastructure. Organising typically involves developing a framework or organisational structure to indicate how and when employees and other resources should be deployed in order to achieve goals (Brevis, 2008:41). The success of the organisation lies in directing the different resources towards the achievement of a common set of goals.

With reference to the participatory governance theory, Fischer (2012:5) argues that, for many, the underlying goal of building capacity for action is to increase the efficiency and effectiveness of the provision and management of public services. For others concerned with participatory governance, the primary goal of capacity-building "is to provide citizens with the tools that are needed to reflect on the normative principles that underlie the provision of public services" (Fischer, 2012:5). That is, the goal is to provide citizens with opportunities to critically reflect on the norms and values justifying the equity of the outcomes. Williams (2007:32) asserts that there is a need for participants to develop negotiating skills that advance the interests of the marginalised in society. Such negotiating skills should be accompanied by the development of practical mechanisms to promote the interests of ordinary people. Specific interests are usually only safeguarded through active participation in specific spaces of opportunity. It is only where a sense of dignity, vision and independence characterises participation that the notion of 'citizenship' assumes experiential substance and significance in the lives of ordinary people.

Dryzek (2008:459) concurs that participatory governance contributes to the development of communicative skills, citizen empowerment, and community capacity-building. With regard to citizen competence and empowerment, the practices of participatory governance are put forth as a specific case of the broader view that participation contributes to human development generally, both intellectual and emotional. Empowerment through participation has, as such, been part of the progressive educational curriculum and numerous citizen-based deliberative projects bear out its influence on personal development. Fischer (2012:4) highlights that much more challenging is the situation for marginalised members of society, those who ought to benefit from participatory governance the most. This scholar indicates that experiences in developing and underdeveloped countries, show that citizens with less formal education can also, under the right conditions, participate with surprisingly high levels of competence.

6.2.3.3 Support provided by the provincial department of education to schools

The infrastructure-attached district official participants were unanimous that they provided physical support to schools such as conducting the conditional assessment of damaged infrastructure. The district official participants confirmed that they visited the schools for monitoring the conditions and the use of the provided or installed infrastructure facilities and services. The physical support by the provincial education department was congruous with the stipulations as obtained from document analysis. However, the finding in this sub-theme was also that not all non-fee-paying schools agreed on receiving physical departmental support in relation to the provision of sanitation facilities, conditional assessment and guidance on the development and implementation of maintenance plans. Again, the limited support to non-fee-paying schools by the provincial department of education could be ascribed to holding on to centrally inclined tendencies that left the affected schools unable to effectively manage their school infrastructure. The National Development Plan maintains that a strong sense of community ownership should be developed and the need to provide additional support to school governing bodies should be acknowledged (RSA, 2012:311). This called upon the provincial education department to provide adequate support in the management of school infrastructure of non-fee-paying schools, the support which this study found to be lacking.

6.2.3.4 Overwhelming infrastructure problems at the participating schools

Successful teaching and learning depends on the availability of crucial resources, such as learning materials and a teaching and learning environment that is conducive (RSA, 2012:4). The responses by participants indicated that the infrastructure at their schools was of low quality and a concerning matter. The finding in this sub-theme was that the non-fee-paying schools lacked the adequate and quality infrastructure facilities, and, as such, the quality of learning output was compromised. The lack of adequate and quality infrastructure inevitably stifled and deterred the delivery of quality education in non-fee-paying schools. Both interview data and document data suggested that the infrastructure problems experienced by the participating schools were so vast that it had become overwhelming and very difficult to address them effectively. Only a drastic intervention by the government could remedy the situation.

The preceding situation was a manifestation of the underrating of the organising management function by the provincial department of education. Organising is an integral and indispensable component of the management process (Cronje et al., 2006:159). Without it, the successful implementation of plans and strategies is out of the question because of the absence of a systematic allocation of resources and individuals to execute the plans. According to Cronje et al. (2006:159), the following are the reasons why the organising function is important in an organisation: organising entails a detailed analysis of work to be done and resources to be used to accomplish the aims of the organisation. It is through organising that tasks and resources, and methods or procedures, can be systematised; proper organising ensures that the joint and co-ordinated efforts of management have a much greater and more effective result than the sum of individual efforts; organisation promotes the productive deployment and utilisation of resources; the related activities and tasks are grouped together rationally in specialised departments in which experts in their particular fields carry out their given duties; and the development of an organisational structure results in a mechanism which co-ordinates the activities of the whole organisation into complete, uniform, harmonious units. By applying the organising function of the management functions theory, the provincial department of education could overcome the overwhelming infrastructure problems at non-fee-paying schools.

6.2.3.5 Insufficient financial support to the schools

The participants acknowledged that although the provincial education department financially supported the schools for infrastructure maintenance, the budget allocated for infrastructure was not sufficient to address their infrastructural challenges. As finance is essential for implementation of policy, the finding in this sub-theme was, therefore, that the management of infrastructure in non-fee-paying schools was constrained and hindered by the insufficient financial allocations by the provincial education department. Even if plans for infrastructure development and maintenance were in place, the lack of sufficient financial support rendered such plans unrealisable.

This could be attributed to underestimation of the significance of budgeting in the implementation of infrastructure management plans by the provincial department of education. In terms of the management functions theory, as a planning tool, a budget is a financial plan that deals with the future allocation and utilisation of resources over a given period. A budget can be seen as a tool that managers use to translate future plans into quantitative terms such as rands (Smit et al., 2011:146; Lussier, 2015:426). Smit et al. (2011:147), Lussier (2015:427) and Bloom and Boessenkool (2006:188) maintain that although budgeting is an important part of planning, it also serves as a control mechanism for evaluating organisational activities. A budget exercises control in two ways: it sets limits on the number of resources that can be used by a department or unit; and it establishes standards of performance against which future events will be compared. Generally, budgets help managers to co-ordinate resources and projects, and they help to define the standards needed in all control systems. They provide clear guidelines on an organisation's resources and on their utilisation. Bloom and Boessenkool (2006:189) and Weitsz (2008:100) confirm that the budget is one of the most important planning and control mechanisms of an organisation. A complete budgetary system can therefore lead to effective planning, provided it is based on realistic assumptions. It is a means of conveying policy to subordinates who are responsible for implementing policy-specific guidelines. It is an instruction to subordinates and delegates the authority they need in order to act. It provides a means of co-ordination within and among departments (Bloom and Boessenkool,

2006:189). The amount of budget available, for example, becomes a determining factor in any decision to be taken, and should therefore be communicated to the school principals and the SGB chairpersons in due course. The infrastructure management plans which were not anchored on the sufficient budget from the provincial Head Office were therefore tantamount to a futile exercise on the part of school principals and SGBs at the non-fee-paying schools.

6.2.4 How do school governing bodies and school principals perceive the role of the provincial education department in the management of infrastructure of non-fee-paying schools?

This research question was addressed with due consideration of two (2) sub-themes, namely; insufficient interaction between schools and the provincial education department and assurance of safety and security.

6.2.4.1 Insufficient interaction between schools and the provincial education department

The participating school principals and SGB chairpersons explained that there was a communication gap between the schools and the provincial education department in terms of supporting management of school infrastructure. This pointed to the unclear lines of communication between the schools and the department as compounding the effective and efficient management of school infrastructure. The provincial department of education did not instantly respond to the infrastructural needs of the schools, probably on account of the bureaucratic approach it had adopted. This undesirable situation could be ascribed to the undermining of the leading management function by the provincial education department pertaining to communication. Brevis (2008:68) and DuBrin (2009:408) contend that communication is an integral part of all management functions. In order to plan, organise, lead and control, managers have to communicate with their subordinates.

According to DuBrin (2009:408), effective communication is the manager's potent tool for inspiring employees to take responsibility for implementing the vision of the organisation. Decision making necessitates communication, and management by objectives relies heavily on communication skills. Communication can thus be described as the process of transmitting information and meaning to all the essential

stakeholders in an organisation. Robbins, DeCenzo and Coulter (2015:387) contend that the importance of effective communication cannot be overemphasised, as everything the manager does involves communicating. A manager cannot formulate strategy or make a decision, for example, without information, and that information has to be communicated. At a departmental level, in taking decisions about infrastructure projects, the principals and the SGBs have to be informed about the current financial situation and organisational needs as prioritised by top management. Hellriegel et al. (2008:323) contend that the manager's communication role should be purpose-directed and include strategic conversations, and use should be made of different communication methods such as upward, downward and horizontal channels, personal networks, and non-verbal communication.

6.2.4.2 Assurance of safety and security

The participants cited threats to and violation of safety and security measures as a concerning challenge on the effective management of infrastructure at their schools. The safety and security predicaments of non-fee-paying schools were an explicit manifestation of non-compliance by the provincial education department to assist these schools in terms of overcoming the lack of safety and security challenges in managing school infrastructure, as advocated by policy. Therefore, the finding in this sub-theme was that the non-fee-paying schools that were exposed to safety and security threats were systemically failed in terms of being provided with perimeter security and safety infrastructure, and their management of infrastructure was consequently compromised.

This undesirable situation at non-fee-paying schools could be attributed to the undermining of management functions theory pertaining to control, and to clinging to centrally inclined tendencies by the provincial department of education. Smit et al. (2011:439) provide the following reasons for the importance of control: control enables the management to cope with environmental change and uncertainty; control is applied to ensure that the organisation's resources are deployed in such a way that it achieves its goals; control can help to minimise costs and limit the accumulation of errors; and tight control is likely to result in better quality. It could therefore be concluded that no matter how good the school infrastructure goals and plans might be; the attainment of effective infrastructure outputs would be compromised by the

lack of the control management task. With regard to the advocacy for the participatory governance in education, the National Development Plan outlines an objective to “develop a strong sense of community ownership” and acknowledges the need to provide additional support to school governing bodies (RSA, 2012:311). This sense of community ownership encourages community members to assist with a range of tasks, including monitoring learner safety, infrastructure security and preventing crime and vandalism. School management will have to work with communities on an on-going basis to develop and maintain such a sense of ownership (RSA, 2012:311). Needless to say, the active involvement of community members presupposes that the provincial department of education recognises and fosters the principles of the participatory governance theory. Skyline College (2020:1) articulates that participatory governance is based upon individuals having a voice in decisions that affect them. It is designed to lead to effective participation in decision making that unites constituencies, produces an improved work environment, and draws upon the strength of diversity. Wampler and McNulty (2011:3) explain that participatory governance brings new actors into incremental decision-making processes; citizens deliberate over and vote on the allocation of public resources and the use of state authority. The adoption of participatory governance is often based on the perception that representative democracy is able to improve the quality of state performance, educate and empower citizens, and make reasonably good use of scarce public resources.

6.3 RECOMMENDATIONS

Based on the research findings, data analysis and theoretical framework for this study, the following recommendations were made:

- The Department of Basic Education and the provincial departments of education should provide non-fee-paying schools with sufficient funds for the day-to-day maintenance budget, as the non-fee-paying schools are currently struggling to effectively manage the infrastructure of their schools from the limited allocated budget. With insufficient maintenance budget, the devised school infrastructure plans cannot be realised.
- The provincial departments of education should shorten the duration of the business management plan for school infrastructure from two (2) years to a

maximum of six (6) months, as the lengthy, time-consuming, and bureaucratic planning process presently delays the provision and the implementation of the urgently required infrastructure facilities by the non-fee-paying schools. As the involvement of various state agencies such the Department of Public Works and Department of Co-operative Governance and Traditional Affairs in the business management planning process extends the time span for providing infrastructure related services, the management of school infrastructure should be confined within the provincial department of education. The rollout of infrastructure facilities and services is bedevilled by poor coordination between different state agencies and local authorities, who are responsible for providing infrastructure services (RSA, 2012:312).

- Provincial departments of education should as a matter of priority provide the non-fee-paying schools with equipped, adequate, and quality infrastructure facilities such as libraries, laboratories, administration blocks, multi-media centres, classrooms, computer centres, school halls, electricity, water and safety and security services. The absence of the foregoing school infrastructure facilities and services compromises the quality of learning output in non-fee-paying schools and deters the delivery of quality education.
- Provincial departments of education should facilitate the development of a common guiding policy or standards for effective and efficient management of school infrastructure. Data indicated that the non-fee-paying schools follow different infrastructure management structures and processes. The participating schools, as a result, use their own discretion in applying management processes for infrastructure management.
- Provincial departments of education should comply with the safety and security measures to be provided to non-fee-paying schools as stipulated in policy documents by equipping these schools with safety and security infrastructure and services.
- Provincial departments of education should provide timely training to the school principals and SGBs of the non-fee-paying schools on the management of school infrastructure and the day-to-day maintenance budget in order for the latter to attain competence and capacity-building for effective management of school infrastructure.

- For the sake of catapulting the delivery of essentially needed capital infrastructure projects at non-fee-paying schools, the provincial education department should decentralise the management of infrastructure budget to the districts.
- As the non-fee-paying schools are not allowed to charge school fees for the improvement of their school infrastructure, provincial department of education should reverse the clause of allowing the non-fee-paying schools to apply for the allocation of any of the Section 21 functions from the provincial HOD, as this puts a tremendous strain on the financial burden of the non-fee-paying schools.
- For collaboration and cohesion in the management of school infrastructure to exist, the communication gap between the non-fee-paying schools and the provincial education department should be closed.

6.4 STRENGTHS OF THE STUDY

The strengths of this study centred around the wide spread of the districts in which the participants were located. Instead of being confined to one district in a province, the study reached out to four districts for data gathering, the maximum number of districts in the selected province. Also, I did not only gather data from school-based participants such as school principals. Data was also gathered from district officials and community representative members, the SGB chairpersons. In addition, apart from field data, document analysis was conducted to endorse interview data. Therefore, the diversity of data from different sources/participants strengthened the trustworthiness of my findings. It is generally accepted that engaging multiple methods of data collection, such as interviews and document analysis, leads to trustworthiness (Nieuwenhuis, 2007:80).

The research findings unearthed the challenges that inhibit the effective management of school infrastructure in non-fee-paying schools, the overcoming of which could have promising prospects for the delivery of quality education to all South African learners in the province studied. The study highlighted the significance for the provincial department of education to abide by the universally acknowledged management functions theory and participatory governance theory. This is because these fundamental theories are capable of enhancing a balanced and democratically viable approach in any management practice.

6.5 LIMITATIONS OF THE STUDY

The limitation that beset this study centred around English as a communication barrier on the part of some of the SGB chairpersons as they could not understand interview questions posed in English, thus providing irrelevant responses to the questions, nor were they able to answer in English. This was as a result of the SGB chairpersons' low level of education, which also contributed to their low confidence in providing responses. My quest to probe further questions was consequently restrained by this interaction barrier on the part of the SGB chairperson participants. I managed to overcome this challenge of language barrier by securing the services of school principals as interpreters, as both the school principals and SGB chairpersons shared the same interview schedules in this study.

I played an active and leading role in data collection, a situation which might have contributed to subjectivity, selectivity and bias in the reception and acceptance of data and the reporting of findings. This was nevertheless counteracted by transcribing the data as it was and analysing it from the point of view of the participants. I adhered to credibility as a quality assurance strategy in data collection. Credibility in a qualitative enquiry implies that the findings are believable and reflect my participants' lived experiences with a phenomenon (Corbin and Strauss, 2008:108). Furthermore, the total number of my participants was thirty-two (32), which seemed like a limited number for a sample. This deterred the generalisation of the findings to the entire population, the related applicable participants from the rest of the selected South African province. However, sample size does not occupy a significant place in qualitative research and is determined by the data saturation point while collecting data instead of being fixed in advance (Kumar, 2011:213).

6.6 SUGGESTIONS FOR FURTHER RESEARCH

The data was assertive that training for school principals and SGB chairpersons was essential to ameliorate the prevailing challenges in the management of school infrastructure in non-fee-paying schools, particularly the management of ring-fenced maintenance budget. Further research therefore needs to be undertaken regarding the most appropriate training model for capacitating the school principals and SGB chairpersons on the effective and efficient management of school infrastructure.

The communication gap between the provincial department of education, districts and the non-fee-paying schools surfaced as an infrastructure management setback in this study. Research on how effective communication channels can be achieved, can help alleviate the present situation. The non-fee-paying schools of some provinces are allowed to apply to the provincial HOD for allocation of any of the Section 21 functions, yet the same schools are disallowed to charge school fees on account of the quintile ranking status they hold. Research to investigate the feasible and viable implications of this perspective on the financial status of the non-fee-paying schools is suggested. It was apparent in this study that the bureaucratic, lengthy and rigid infrastructure business management process applied by the participating provincial department of education is the core reason for the failure of the same department to provide the capital infrastructure facilities to the non-fee-paying schools as duly required. Research on the alternative and viable ways to achieve the prompt delivery of capital infrastructure facilities to non-fee-paying schools is therefore deemed necessary.

6.7 CONCLUDING REMARKS

It is my conviction that the delivery of quality education to all South African learners inevitably relies on the provision of adequate, functional and quality infrastructure. Education is provided best in a conducive physical environment. The study strove to investigate the contextual factors that influence the effectiveness, or absence thereof, of the management of school infrastructure in non-fee-paying schools. The findings generated from the responses provided by the participants, document analysis and the principles from the theoretical framework for this study about the management of school infrastructure, provided a picture that indicates that many of the obstacles confronting the effective management of infrastructure at non-fee-paying schools are to be found in the management processes that are currently applied. In addition, this study serves as a springboard for further research, which could contribute to ultimately ensuring the provision of equitable, functional and quality education to all South African learners.

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ANNEXURES

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ANNEXURE A



UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
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FACULTY OF EDUCATION Ethics Committee

RESEARCH ETHICS COMMITTEE

CLEARANCE CERTIFICATE

CLEARANCE NUMBER:

EDU200/20

DEGREE AND PROJECT

PhD

selected South African

Management of infrastructure in non-fee-paying schools in a
province

INVESTIGATOR

Mr Gerald Bonga Ngema

DEPARTMENT

Education Management and Policy Studies

APPROVAL TO COMMENCE STUDY

03 December 2020

DATE OF CLEARANCE

CERTIFICATE 08 February 2023

CHAIRPERSON OF ETHICS COMMITTEE: Prof Funke Omidire

Mr Simon Jiane

Dr Andre du Plessis

Prof Nylon Marishane

ANNEXURE B

Permission to conduct research



MPUMALANGA PROVINCE
REPUBLIC OF SOUTH AFRICA

education

Ikhamanga Building. Government Boulevard. Riverside Park.
Mpumalanga Province Private Bag X- 1341, Mbombela, 1200
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Litiko Temfundvo. Umnyango we Fundo

Department van Onderwys

Ndzawuio ya Dyondza

Mr Bonga Ngema

PO Box 1507

Kanyamazane Ext 4

Email: bonganqema4@gmail.com

RE: Management of infrastructure in non-fee-paying schools in a selected South African province

Your application to conduct research study was received and is therefore acknowledged. The title of your research project reads: "Management of infrastructure in non-fee-paying schools in a selected South African province". I trust that the aims and the objectives of the study will benefit the whole department especially the beneficiaries. Your request is approved subject to you observing the provisions of the departmental research policy which is available in the department website. You are requested to adhere to your university's research ethics as spelt out in your research ethics.

In terms of the research policy, data or any research activity can be conducted after school hours as per appointment with affected participants and COVID -19 regulations to be observed. You are also requested to share your findings with the relevant sections of the department so that we may consider implementing your findings if that will be in the best interest of the department. To this effect, your final approved research report (both soft and hard copy) should be submitted to the department so that your recommendations could be implemented. You may be required to prepare a presentation and present at the departments' annual research dialogue.

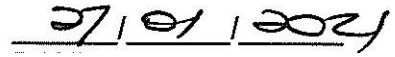
For more information, kindly liaise with the department's research unit @ 013 766 5124/5148 Or

n.madihlaba@education.mau.gov.za

The department wishes you well in this important project and pledges to give you the necessary support you may need.



MR JR NKOSI



DATE

[A] HEAD: EDUCATION

ANNEXURE C



UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Faculty of Education

CONSENT FORM

VOLUNTARY PARTICIPATION IN THE RESEARCH PROJECT ENTITLED

**MANAGEMENT OF INFRASTRUCTURE IN NON-FEE-PAYING SCHOOLS IN A SELECTED
SOUTH AFRICAN PROVINCE**

I confirm that I have been informed about the nature of the research and that my rights have been explained to me. I have discussed the project with the researcher, Bonga Ngema, who is conducting the project for his PhD degree being supervised by Dr André du Plessis in the Department of Education Management and Policy Studies at the University of Pretoria. I understand that if I consent to participate in this project, I will be interviewed. I understand that the interviews will be audio-recorded, and the Covid-19 protocols will be adhered to by both researcher and the participant.

I understand that my participation is dependent on granting permission for my participation by the Mpumalanga Department of Education. I further declare that I understand the aim of the study and methods of data collection, as they were explained to me by the researcher.

I understand that if I participate in this study my contribution will be kept confidential and will not be identifiable in any research report. I also understand that there are minimal risks associated with this study. I understand that I will remain anonymous and that my participation in this study is voluntary and undertaken willingly. I have the right to withdraw from the project at any time during the research project. My withdrawal will not affect me in any way.

I understand that by signing the consent form I am agreeing to participate in this

study. I also understand that my contribution will be used primarily for a Research Project for the Ph.D. (Education Management and Policy Studies) degree. I also understand that the data I provide can also be used confidentially and anonymously, for further research purposes, as the data sets are the intellectual property of the University of Pretoria. Further research may include secondary data analysis using the data for research purposes. The confidentiality and privacy applicable to this study will be binding on education management and future research studies.

Participant's name: _____

Signature: _____

Date: _____

ANNEXURE D



UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Faculty of Education

Letter to the participants

Dear Mr/Ms/Dr

PARTICIPATION IN THE STUDY: MANAGEMENT OF INFRASTRUCTURE IN NON-FEE-PAYING SCHOOLS IN A SELECTED SOUTH AFRICAN PROVINCE

I am currently enrolled for a Doctor of Philosophy (Ph.D.) degree in Education Management and Policy Studies at the University of Pretoria. Part of the requirements for the conferring of this degree is the successful completion of a significant research project in the field of education.

I consider it a privilege and a great honour to invite you to become a voluntary participant in this research project. The title of my approved research study is **Management of infrastructure in non-fee-paying schools in a selected South African province.** This study will be conducted at 6 primary and 6 secondary non-fee-paying schools across 4 districts of Mpumalanga Department of Education.

The primary aim of this research study is to explore how school infrastructure is managed in non-fee-paying schools, as categorised in the South African Schools Act.

I obtained permission from the Mpumalanga Department of Education to conduct this research. As part of this research, I need to conduct interviews which should take approximately one hour. The interviews will be conducted after school hours at a time and venue convenient to you. Each of the participants has had different experiences within their working environment. As a participant in this project, your role will be to respond to questions put to you during the interview, and you may also ask questions of your own to clarify any issue concerning the interview or a matter that may arise

during the interview. The interviews will be audio-recorded for data analysis purposes. During the interview sessions, the researcher and the participants will adhere to Covid-19 protocols.

As a participant, you will not be asked to reveal information that will allow your identity or that of your school to be known. Neither you as an individual, nor your school, shall be mentioned by name or indeed be allowed to be identified by any manner or means whatsoever in the research report. Where appropriate, pseudonyms will be used. To ensure that you are comfortable with the information you give, you will be provided with a confidential electronic or written transcript of your own interview and will have final approval of both its accuracy and its content. Please allow another hour for this process. Follow-up interviews might be required to clarify some matters but this will also be voluntary and confidentiality will be guaranteed. I have included herewith, for your information, a schedule of the interview questions as part of the information gathering process.

Please be assured that all the data collected from this study will be kept strictly confidential, with not even the Department of Basic Education having access to the raw data obtained from the interviews. In addition, the data collected will be used for research purposes only. Furthermore, if you decide to participate in this study, you have the right to withdraw at any time during the data collection process without any penalty. Please understand that the choice for you to participate is entirely voluntary.

At the end of the research study you will be provided with a copy of the research report containing both the findings of the study and recommendations on how infrastructure ought to be managed in South African non-fee-paying schools. At no time will I be questioning or purposefully interacting with the teachers and learners at your school for either personal or research reasons. The research study presents a unique opportunity for you to get involved in the process of research to investigate how infrastructure is managed in South African non-fee-paying schools.

The findings of this study could be useful to education policy-makers and practitioners in future. The research study has the potential to provide insight into the manner in which infrastructure is managed in South African non-fee-paying schools.

We also would like to request your permission to use your data, confidentially and anonymously, for further research purposes, as the data sets will be the intellectual property of the University of Pretoria. Further research may include secondary data analysis and using the data for school infrastructure management purposes. The confidentiality and privacy applicable to this study will be binding on future research studies.

If you decide to participate in this research study, kindly indicate this by completing the consent form at the end of this letter.

Yours sincerely

Bonga Ngema

Dr André du Plessis

Student researcher

Supervisor

072 171 5066

012 420 2929

Bongangema4@gmail.com

duplessis.andre@up.ac.za

PERMISSION FOR RESEARCH PARTICIPATION
I, _____, hereby give permission to Bonga Ngema to include me as a participant in his research study on <u>Management of infrastructure in non-fee-paying schools in a selected South African province.</u> Signature: _____ Date: _____

ANNEXURE E

SCHOOL PRINCIPAL AND SGB CHAIRPERSON INTERVIEW PROTOCOL

PURPOSE OF THE STUDY

The study seeks to explore how school infrastructure is managed in non-fee-paying schools in a selected South African province, as categorised in the South African Schools Act.

SOURCES OF DATA TO BE COLLECTED:

The data collection will be in the form of semi-structured interviews and document analysis. Interviews will be conducted with school principals and SGB chairpersons from 6 Primary and 6 Secondary non-fee-paying Schools. Interviews will also be conducted with 8 infrastructure-attached officials, 2 from each of the 4 district offices of Mpumalanga. This will amount to a total of 32 participants from across 4 districts of Mpumalanga Province. During the document analysis process, I will systematically review and evaluate specific documents relevant to my study, both printed and electronic.

PROTECTION OF CONFIDENTIALITY:

You can be certain that you will not be harmed in any way by participating in this research. I will make use of pseudo names throughout the study to ensure that your identity will be kept confidential. Your personal details will be protected and will not be available to any unauthorised individual(s). Be aware that you are allowed to withdraw at any stage during this study without any repercussions. You will have the opportunity to review the transcriptions of our interview.

DURATION OF INTERVIEW:

The semi-structured interview will not exceed an hour. During the interview I will have predetermined questions, but I could ask you to explain your answers or give an example.

The entire interview will be audio-recorded and then transcribed. After I have transcribed the interview, I will arrange a meeting to discuss the findings, email you

the transcript or arrange a meeting during a time that will suit the participant. During the interview I will also be making notes as the discussion progresses.

BIOGRAPHICAL AND DEMOGRAPHIC INFORMATION:

SECTION A: PARTICIPANT INFORMATION - Principal

1.

Academic qualification	

2.

Year in which degree/ diploma was obtained	

3.

Years' experience as principal	

4.

Years involved at current school	

SECTION B – Management of infrastructure in non-fee-paying schools in a selected South African province.

SEMI-STRUCTURED INTERVIEW SCHEDULE – school principal and SGB chairperson.

1. According to your knowledge, what does the concept “school infrastructure” mean to you?
2. Which processes do you follow in management of infrastructure in your school? Please explain how you follow them.
3. What do you regard as your school’s greatest infrastructural needs. Give reasons for your response.

4. Based on your experience in management of school infrastructure, would you view infrastructure in your school as of a quality and adequate? Please substantiate your response.
5. Why would you view quality and adequate infrastructure as important in your school?
6. What are the key challenges in management of infrastructure in your school?
7. How do inadequacies in infrastructural provision affect teaching and learning in your school?
8. In your opinion, what do you think could be better ways to deal with infrastructure challenges in your school?
9. In which way does the provincial department support you in management of infrastructure in your school? Please elaborate your response.
10. What would you like, as a priority, the provincial department to assist you with in management of infrastructure in your school? Please motivate your response.
11. Do you receive sufficient financial support from the provincial department to manage infrastructure in your school? Please explain your answer.
12. How do you deal with a situation where the funds allocated to your school by the provincial department are not sufficient to carry out maintenance?

ANNEXURE F

INFRASTRUCTURE ATTACHED DISTRICT OFFICIALS INTERVIEW PROTOCOL:

The study seeks to explore how school infrastructure is managed in non-fee-paying schools in a selected South African province, as categorised in the South African Schools Act.

SOURCES OF DATA TO BE COLLECTED:

The data collection will be in the form of semi-structured interviews and document analysis. Interviews will be conducted with school principals and SGB chairpersons from 6 Primary and 6 Secondary non-fee-paying Schools. Interviews will also be conducted with 8 infrastructure-attached district officials, 2 from each of the 4 district offices of Mpumalanga. This will amount to a total of 32 participants from across 4 districts of Mpumalanga Province. During the document analysis process, I will systematically review and evaluate specific documents relevant to my study, both printed and electronic.

PROTECTION OF CONFIDENTIALITY:

You can be certain that you will not be harmed in any way by participating in this research. I will make use of pseudo names throughout the study to ensure that your identity will be kept confidential. Your personal details will be protected and will not be available to any unauthorised individual(s). Be aware that you are allowed to withdraw at any stage during this study without any repercussions. You will have the opportunity to review the transcriptions of our interview.

DURATION OF INTERVIEW:

The semi-structured interview will not exceed an hour. During the interview I will have predetermined questions, but I could ask you to explain your answers or give an example.

The entire interview will be audio-recorded and then transcribed. After I have transcribed the interview, I will arrange a meeting to discuss the findings, email you the transcript or arrange a meeting during a time that will suit the participant. During the interview I will also be making notes as the discussion progresses.

SECTION B – Management of infrastructure in non-fee-paying schools in a selected South African province.

SEMI-STRUCTURED INTERVIEW SCHEDULE – infrastructure- attached district officials.

1. According to your knowledge, what does the concept “school infrastructure” mean to you?
2. Which processes do you follow in providing for management of infrastructure in non-fee-paying schools? Please explain how you follow them.
3. What do you regard as the non-fee-paying schools’ greatest infrastructural needs. Give reasons for your response.
4. Based on your experience in supporting the management of school infrastructure, would you view infrastructure in non-fee-paying schools as of a quality and adequate? Please substantiate your response.
5. Why would you view quality and adequate infrastructure as important for non-fee-paying schools?
6. What are the key challenges you encounter in supporting schools in the management of infrastructure in non-fee-paying schools?
7. How do inadequacies in infrastructural provision affect teaching and learning in non-fee-paying schools?
8. In your opinion, how could the management of infrastructure in non-fee-paying schools be improved?
9. In which way does the district infrastructure section support management of infrastructure in non-fee-paying schools? Please elaborate your response.
10. What would you identify to be a priority by your office in management of infrastructure in non-fee-paying schools? Please motivate your response.
11. How does your office financially support management of infrastructure in non-fee-paying schools?

12. How do you deal with a situation where the funds allocated to a non-fee-paying school are not sufficient to carry out maintenance?