EXPERIENCES OF THE SCHOOL MANAGEMENT TEAMS IN MANAGING THE CURRICULUM OF MATHEMATICS IN PRIMARY SCHOOLS IN OR TAMBO COASTAL IN THE EASTERN CAPE PROVINCE

by

Nkosinati Kennedy Zide

(Student Number: 50289969)

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Supervisor: Prof R.I. Lumadi

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DECLARATION

I, Nkosinati Kennedy Zide, hereby declare that this dissertation, "Experiences of School Management Teams in Managing the Curriculum of Mathematics in Primary Schools in the OR Tambo Coastal in the Eastern Cape Province," is my own work and that all the sources I used or quoted have been indicated and acknowledged by means of complete references. I further declare that I submitted this dissertation to originality checking software, and it falls within the accepted requirements for originality. I further declare that I have not previously submitted this work, or part of it, for examination at Unisa for another qualification or at any other higher education institution.

Student number: 50289969

_____ **21-09-2024**

(NKOSINATI KENNEDY ZIDE) **DATE**

DEDICATION

This study is dedicated to my beloved son, Lunathi Zide, who passed away in 2014 due to cancer. His passion for learning continues to inspire me. I also dedicate this work to my late Grandmother, No-Iron Zide; my late mother, Nowetu Z. Zide; and my late father, J.K. Zide. Their unwavering guidance has been instrumental in helping me write this dissertation.

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ABSTRACT

This study explored School Management Teams' (SMTs') experiences of managing the mathematics curriculum in primary schools within the OR Tambo Coastal District of the Eastern Cape Province, South Africa. The study was motivated by persistent learner underperformance in Mathematics and the increasing expectation that SMTs should provide effective instructional leadership and curriculum management within challenging rural school contexts.

The study was underpinned by an integrated theoretical framework comprising Instructional Leadership Theory, Curriculum Management Theory, Systems Theory, and Constructivist Theory. These theories provided complementary lenses for understanding SMTs as instructional leaders, curriculum managers, participants within broader educational systems, and interpretive agents who construct meaning from their curriculum management experiences.

The study adopted an interpretivist paradigm and employed a qualitative case study design to gain an in-depth understanding of SMTs' lived experiences of managing the mathematics curriculum. Purposive sampling was used to select sixteen SMT members, comprising principals, deputy principals, and heads of department from six primary schools in the OR Tambo Coastal District. Data were generated through semi-structured individual interviews, focus group discussions, document analysis, and researcher field notes. The data were analysed using thematic analysis involving transcription, coding, categorisation, theme development, and interpretation.

The findings revealed that SMTs experience Mathematics curriculum management as a complex and demanding responsibility shaped by limited Mathematics-specific expertise, staffing shortages, workload pressures, curriculum demands, and contextual learner challenges. Additional barriers included inadequate human resource capacity, limited parental and community support, insufficient resources, and inconsistent district support. The study further found that existing support structures were largely administrative and compliance-oriented, with limited emphasis on instructional leadership development and Mathematics curriculum strengthening. Collectively, the findings indicate that challenges in Mathematics curriculum management are shaped by both school-level leadership capacity and broader systemic conditions.

Despite these challenges, SMTs employed adaptive strategies such as curriculum supervision, instructional modelling, collaborative practices, peer support mechanisms, assessment monitoring, and the use of Annual Teaching Plans (ATPs) to support Mathematics teaching and learning.

The study proposes an SMT Mathematics Curriculum Management Empowerment Framework that integrates instructional leadership development, curriculum management support, teacher capacity strengthening, and systemic support mechanisms to enhance Mathematics curriculum management in rural primary schools.

The study concludes that effective Mathematics curriculum management is a multidimensional process influenced by instructional leadership, organisational capacity, contextual realities, and systemic support. It recommends Mathematics-focused professional development for SMTs, strengthened district support, improved staffing and resource provision, and enhanced collaboration among schools, communities, and education stakeholders to improve curriculum management and learner outcomes in Mathematics.

Keywords: Curriculum management; Experiences; Mathematics; Primary Schools; School Management Teams.

ISISHWANKATHELO

Olu phando luhlolisise amava amaQela oLawulo lweZikolo (SMTs) ekulawuleni ikharityhulam yeMathematika kwizikolo zamabanga aphantsi kwiSithili sase-OR Tambo Coastal, kwiPhondo leMpuma Koloni, eMzantsi Afrika. Olu phando lukhuthazwe kukungaphumeleli okuphindaphindiweyo kwabafundi kwiMathematika kunye nokwanda kwemfuno yokuba ii-SMTs zinike ubunkokeli obusebenzayo bokufundisa nolawulo lwekharityhulam kwiimeko ezinzima zezikolo zasemaphandleni.

Olu phando lusekelwe kwisiseko sethiyori esidibeneyo esiquka iThiyori yoBunkokeli boKufundisa (Instructional Leadership Theory), iThiyori yoLawulo lweKharityhulam (Curriculum Management Theory), iThiyori yeSystems (Systems Theory), kunye neThiyori yeConstructivism. Ezi thiyori zanceda ukuqonda ii-SMTs njengabakhokheli bokufundisa,

abalawuli bekharityhulam, abantu abasebenza ngaphakathi kweenkqubo zemfundo ezibanzi, kunye nabantu abenza intsingiselo yamava abo olawulo lwekharityhulam.

Olu phando lusebenzise indlela ye-interpretivist kunye noyilo lwesifundo esisemgangathweni (qualitative case study) ukuze kuqondwe ngokunzulu amava aphilwayo e-SMTs ekulawuleni ikharityhulam yeMathematika. Kwasetyenziswa i-purposive sampling ukukhetha amalungu e-SMT alishumi elinesithandathu (16), aquka iinqununu, abaphathiswa, kunye neentloko zamasebe kwizikolo ezithandathu kwiSithili sase-OR Tambo Coastal. Idatha yaqokelelwa kusetyenziswa udliwanondlebe olusemi-structured, iingxoxo zamaqela (focus group discussions), uhlalutyo lwamaxwebhu, kunye namanqaku ophando. Idatha yahlaziywa kusetyenziswa i-thematic analysis equka ukubhala, ukufaka iikhowudi, ukucwangcisa iindidi, ukwakha imixholo, kunye nokutolika.

Iziphumo zophando zibonise ukuba ii-SMTs zijongene nolawulo lwekharityhulam yeMathematika njengomsebenzi onzima ochaphazeleka kukungabikho kolwazi olwaneleyo lweMathematika, ukunqongophala kwabasebenzi, umthwalo omkhulu womsebenzi, iimfuno zekharityhulam, kunye neemeko zabafundi. Eminye imiqobo ibandakanya ukunqongophala kwezixhobo, inkxaso engaguqukiyo evela kwizithili, kunye nokungabikho kwenkxaso eyaneleyo evela kubazali noluntu. Iziphumo zikwabonise ukuba inkxaso ekhoyo igxile kakhulu kulawulo nolawulo lokuthotyelwa kwemigaqo kunokuphuhlisa ubunkokeli bokufundisa.

Ngaphandle kwale mingeni, ii-SMTs zisebenzise iindlela zokulawula eziguqukayo ezifana nokubeka iliso kwikharityhulam, ukulinganisa ukufundisa, intsebenziswano phakathi kootitshala, inkxaso yoontanga, kunye nokusebenzisa ii-Annual Teaching Plans (ATPs) ukuxhasa ukufundisa nokufunda kweMathematika.

Olu phando lucebisa isikhokelo sokuphuhlisa ii-SMT (SMT Mathematics Curriculum Management Empowerment Framework) esidibanisa ukuphuhliswa kobunkokeli bokufundisa, inkxaso yolawulo lwekharityhulam, ukomeleza ootitshala, kunye nenkxaso yenkqubo yemfundo ukuze kuphuculwe ulawulo lweMathematika kwizikolo zasemaphandleni.

Olu phando lugqiba ukuba ulawulo lwekharityhulam yeMathematika luyinkqubo enezinto ezininzi ezixhomekeke kubunkokeli, izibonelelo, imeko yesikolo, kunye nenkqubo yemfundo. Licebisa uqeqesho olukhethekileyo lweMathematika kuma-SMT, inkxaso eyomeleleyo yezithili, ukuphuculwa kwabasebenzi nezixhobo, kunye nentsebenziswano phakathi

kwezikolo, uluntu, kunye nabachaphazelekayo kwezemfundo ukuze kuphuculwe iziphumo zabafundi.

Amagama angundoqo: Ikharityhulam; Amava; iMathematika; Izikolo zamabanga aphantsi; amaQela oLawulo lweZikolo.

KAKARETSO

Phuputso ena e hlahlobile maiphihlelo a Lihlopha tsa Tsamaiso ea Likolo (SMTs) taolong ea kharikhulamo ea Mathematics likolong tsa mathomo Seterekeng sa OR Tambo Coastal, Profinseng ea Kapa Botjhabela, Afrika Borwa. Phuputso ena e susumelitsoe ke ho se sebetse hantle ha baithuti ho Mathematics le tlhokahalo e ntseng e eketseha ea hore SMTs li fane ka boetapele bo sebetsang ba thuto le taolo ea kharikhulamo maemong a thata a likolo tsa mahaeng.

Phuputso e thehiloe ho moralo oa likhopolo o kopaneng o kenyelletsang Instructional Leadership Theory, Curriculum Management Theory, Systems Theory le Constructivist Theory. Likhopolo tsena li thusitse ho utloisisa SMTs e le baetapele ba thuto, batsamaisi ba kharikhulamo, karolo ea tsamaiso e pharalletseng ea thuto, le batoloki ba maiphihlelo a bona a taolo ea kharikhulamo.

Phuputso e sebelisitse paradigm ea interpretivist le moralo oa thuto ea boleng (qualitative case study) ho utloisisa ka botebo maiphihlelo a SMTs taolong ea kharikhulamo ea Mathematics. Ho ile ha sebelisoa purposive sampling ho khetha litho tse leshome le metso e tšeletseng (16) tsa SMT, ho kenyeletsa lihlooho tsa likolo, batlatsi ba bona, le lihlooho tsa mafapha likolong tse tšeletseng Seterekeng sa OR Tambo Coastal. Lintlha li ile tsa bokelloa ka lipuisano tse hlophisitsoeng ka mokhoa o bonolo (semi-structured interviews), lipuisano tsa lihlopha (focus groups), tlhahlobo ea litokomane, le lintlha tsa mofuputsi. Lintlha li ile tsa hlahlojoa ka thematic analysis e kenyeletsang ho ngola, ho khouta, ho hlophisa lihlopha, ho theha lihlooho le ho toloka.

Liphuputso li bontšitse hore SMTs li tobane le taolo ea kharikhulamo ea Mathematics e rarahaneng e susumetsoang ke ho hloka tsebo e lekaneng ea Mathematics, khaello ea matichere, moroalo o moholo oa mosebetsi, litlhoko tsa kharikhulamo le mathata a baithuti. Litšitiso tse

ling li kenyeletsa khaello ea lisebelisoa, tšehetso e sa tsitsang ea setereke, le tšehetso e fokolang ea batsoali le sechaba. Liphuputso li boetse li bontšitse hore tšehetso e teng e shebane haholo le taolo ea tsamaiso ho e-na le ho matlafatsa boetapele ba thuto.

Leha ho le joalo, SMTs li sebelisitse maano a feto-fetohang a kang tlhokomelo ea kharikhulamo, mohlala oa thuto, tšebelisano-'moho, tšehetso ea basebetsi-'moho, le tšebeliso ea Annual Teaching Plans (ATPs) ho tšehetsa ho ruta le ho ithuta Mathematics.

Phuputso ena e sisinya moralo oa matlafatso oa SMT bakeng sa taolo ea kharikhulamo ea Mathematics o kopanyang nts'etsopele ea boetapele ba thuto, tšehetso ea tsamaiso ea kharikhulamo, ntlafatso ea bokhoni ba matichere, le tšehetso ea tsamaiso ea thuto.

Phuputso e phethela ka hore taolo e atlehileng ea kharikhulamo ea Mathematics ke ts'ebetso e rarahaneng e susumetsoang ke boetapele, mokhatlo, maemo a sekolo, le tšehetso ea tsamaiso. E khothaletsa koetliso e shebaneng le Mathematics bakeng sa SMTs, tšehetso e matla ea litereke, ntlafatso ea basebetsi le lisebelisoa, le tšebelisano pakeng tsa likolo, sechaba le ba amehang ho ntlafatsa liphetho tsa baithuti.

Mantsoe a sehlooho: Kharikhulamo; Maiphihlelo; Mathematics; Likolo tsa mathomo; Lihlopha tsa Tsamaiso ea Likolo.

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ACRONYMS AND ABBREVIATIONS

ATP	Annual Teaching Plan
CAPS	Curriculum and Assessment Policy Statement
DH	Departmental Head
EC	Eastern Cape
ECDoE	Eastern Cape Department of Education

GET	General Education and Training
HoD	Head of Department
I & FGD	Interviews and Focus Group Discussion
ICT	Information and Communication Technology
Intersen	Intermediate and senior phase
IQMS	Integrated Quality Management System
NASA	National Aeronautics Space Administration
OLR	Online Learning Resource
SASA	South African Schools Act
SA-SAMS	South African School Administration and Management System
SMTs	School Management Teams
QMS	Quality Management System

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CHAPTER ONE
INTRODUCTION AND BACKGROUND TO THE STUDY

1.1 INTRODUCTION

Effective curriculum management is fundamental to improving the quality of mathematics teaching and learning in primary schools. Mathematics remains a critical subject for learner progression and national development, yet learner performance continues to be a concern in many South African primary schools (Department of Basic Education [DBE], 2023). The successful implementation of the mathematics curriculum depends largely on the leadership and management practices of School Management Teams (SMTs), who are tasked with overseeing curriculum planning, implementation, monitoring, and evaluation at school level.

In South Africa, SMTs are mandated by the DBE to provide instructional leadership that supports teachers and enhances learner achievement. This includes ensuring curriculum coverage, supporting assessment practices, monitoring learner performance, and facilitating professional development opportunities for teachers (DBE, 2021). Recent studies emphasise that effective curriculum management by SMTs contributes positively to instructional quality and learner outcomes, particularly in foundational subjects such as mathematics (Bush & Glover, 2022; Hoadley, 2020).

Despite these expectations, SMTs often operate within complex and challenging contexts that influence their ability to manage the curriculum effectively. Rural and coastal areas, such as the O.R. Tambo Coastal region in the Eastern Cape Province, are characterised by persistent socio-economic challenges, resource constraints, and limited access to continuous professional development (Spaull & Pretorius, 2021). These conditions place increased pressure on SMTs to balance administrative responsibilities with curriculum leadership, often without adequate support.

Recent research highlights that SMT members' experiences, leadership practices, and contextual realities play a significant role in shaping how the mathematics curriculum is managed at school level (Naidoo & Petersen, 2021). Understanding these experiences is essential for identifying gaps in policy implementation and for developing contextually relevant strategies that strengthen curriculum management and instructional leadership in primary schools.

This study therefore seeks to explore the experiences of School Management Teams in managing the mathematics curriculum in primary schools in the O.R. Tambo Coastal area of the Eastern Cape Province. By foregrounding the voices and experiences of SMT members, the study aims to contribute to contemporary scholarship on curriculum leadership and to inform policy and practice aimed at improving mathematics education in primary schools.

1.2 BACKGROUND OF THE STUDY

Effective curriculum management constitutes a cornerstone of quality education and instructional leadership, particularly within primary schooling contexts where foundational subjects such as Mathematics shape learners' cognitive development and future academic trajectories (Suthish & Venkatesan, 2025). In the South African education system, School Management Teams (SMTs) play a pivotal role in ensuring that national policy frameworks such as the Curriculum and Assessment Policy Statement (CAPS) are meaningfully interpreted and implemented at the school level (Monyeke, 2023). The leadership functions of SMTs encompass planning, monitoring, supervising, and supporting teachers to enact the curriculum effectively, thereby influencing classroom practices and learner outcomes (Maphalala, Govender & Khumalo, 2023).

Despite progressive education policies, learner performance in Mathematics remains a central concern across South Africa, with numerous studies highlighting systemic underachievement and uneven instructional quality (Mokgwathi, 2025). Persistent challenges include limited teacher support, inadequate curriculum monitoring structures, and resource constraints that undermine effective curriculum enactment (Buabeng & Amo-Darko, 2025). Recent research indicates that SMTs often lack the expertise or instructional leadership capacity necessary to fully support teachers in navigating these issues, which negatively affects curriculum delivery and the realisation of intended learning outcomes (Day & Sammons, 2016). Ntseto (2015) emphasizes that SMTs must employ both management and leadership constructs to manage curriculum implementation effectively, yet many struggle with these dual responsibilities in practice.

The OR Tambo Coastal district of the Eastern Cape Province illustrates the contextual complexities confronting school leaders in under-resourced and rural environments. Schools in this district routinely operate within conditions marked by socio-economic disadvantage,

infrastructural deficits, and limited access to professional development opportunities. These contextual factors heighten the managerial demands placed upon SMTs, who must balance compliance with policy mandates and the practical realities of ensuring curriculum coverage, instructional quality, and learner support under constrained conditions. Research across South African districts suggests that leadership practices are often compliance-driven rather than support-oriented, which further limits the capacity of SMTs to facilitate sustainable instructional improvements (Maphalala, Govender & Khumalo, 2023).

The literature also highlights a broader shift in educational leadership scholarship towards understanding instructional leadership and curriculum management as dynamic, contextually mediated processes (Madonsela, Jita & Badmus, 2025). Moreover, Ralebese, Jita, and Badmus (2025) also demonstrate that primary school principals actively shape curriculum reform and instructional practices through structured engagement with teachers and reflective leadership practices, yet gaps persist between perceived leadership roles and enacted behaviours. These findings underscore the necessity of examining the lived experiences of SMTs beyond surface-level descriptions of roles, particularly in contexts where leadership is expected to reconcile policy demands with complex on-the-ground realities.

Although prior studies have investigated aspects of curriculum management, instructional leadership, and SMT roles in diverse South African contexts, there remains a significant gap in empirical research that foregrounds the nuanced experiences of School Management Teams specifically in managing the mathematics curriculum in primary schools within the OR Tambo Coastal district. This study therefore seeks to critically explore SMTs' experiences of Mathematics curriculum management, aiming to generate contextually grounded insights that contribute to theoretical and practical understandings of instructional leadership and curriculum enactment in challenging educational environments.

1.3 RATIONALE FOR THE STUDY

The study contributes to the growing body of knowledge on curriculum leadership and Mathematics curriculum management in South African primary schools. It seeks to provide insight into the experiences of School Management Teams in managing the mathematics curriculum within rural and under-resourced contexts.

The findings may assist policymakers, district officials, and school leaders in developing contextually responsive support strategies aimed at strengthening instructional leadership, curriculum management practices, professional development initiatives, and resource provision. The study may further contribute to the improvement of Mathematics teaching and learning through the development of targeted interventions that enhance SMT capacity to support effective curriculum implementation.

In addition, the study may inform the use of appropriate technological and administrative support systems that facilitate curriculum planning, monitoring, communication, and reporting processes in schools. Ultimately, the study seeks to contribute towards improving Mathematics curriculum management and learner achievement in rural primary school contexts.

1.4 LITERATURE REVIEW

The study explores the experiences of SMTs in managing the mathematics curriculum in primary schools. This leads to the discussion of the following key concepts to review the literature better: Conceptualisation and Roles of School Management Teams in Curriculum Management; Instructional Leadership and Curriculum Management in Primary Schools, Mathematics Education in South African Primary Schools; Management of the Mathematics Curriculum in the Intermediate and Senior Phases; Challenges Experienced by SMTs in Managing the Mathematics Curriculum; Inequality and Resource Disparities in Mathematics Curriculum Implementation; Empirical Studies on SMTs' Experiences in Curriculum Management and Summary of Literature and Identification of Research Gaps**.**

1.4.1 Conceptualisation and Roles of School Management Teams in Curriculum Management

School Management Teams (SMTs) are pivotal in translating national curriculum policy into effective school practice. In South African primary schools, SMTs are expected to coordinate curriculum delivery, monitor teaching quality, and support professional development (Sandhleni, 2021). From a **theoretical standpoint**, the **Instructional Leadership Theory** frames SMTs as actors who influence teaching and learning through curriculum coordination,

resource allocation, and teacher support. Instructional leadership extends beyond administrative tasks to emphasize enhancing instructional quality and curriculum coherence (Ralebese, Jita, & Badmus, 2025). SMTs also function within a **Distributed Leadership** perspective, where leadership tasks are shared across leaders and teachers to improve curriculum outcomes (Distributed leadership, n.d.; Sandhleni, 2021).

1.4.2 Instructional Leadership and Curriculum Management in Primary Schools

Instructional leadership refers to leaders' actions that directly influence curriculum implementation and instructional quality. It foregrounds principals and SMTs as leaders who define school vision, manage instructional programs, and foster a positive teaching and learning climate (Ralebese et al., 2025). Empirical studies illustrate that where SMTs enact strong instructional leadership, teacher practices and learner outcomes improve, yet many SMTs exhibit limited instructional leadership competencies, particularly in impoverished or resource-constrained contexts (Mestry & Govindasamy, 2021; Mestry, 2019). Instructional leadership in primary schools involves classroom supervision, feedback, and targeted professional development — critical in mathematics curriculum management where curriculum demands are high.

1.4.3 Mathematics Education in South African Primary Schools

Mathematics remains a key focus of South African education due to persistently low learner performance, particularly at primary level. Challenges documented in recent literature include inadequate teacher content knowledge, limited pedagogical support, and disparities in curriculum implementation across contexts (Zikalala & Ntshangase, 2025). Mathematics curriculum demands conceptual understanding and sequential progression, requiring effective leadership from SMTs to coordinate pacing, assessment practices, and intervention strategies that support learner attainment.

1.4.4 Management of the Mathematics Curriculum in the Intermediate and Senior Phases

Managing the mathematics curriculum in the intermediate and senior phases requires SMTs to ensure coherent progression across grades and to support teachers' instructional decision-

making. Studies in Limpopo and other provinces show that SMTs' role in curriculum management is influenced by resource availability, training, and subject-specific leadership capacities (Neluheni, 2023). SMTs are responsible for daily curriculum implementation, monitoring of learner progress, and responding to contextual challenges that affect mathematics teaching, highlighting the need for leadership models that integrate instructional and managerial functions.

1.4.5 Challenges Experienced by SMTs in Managing the Mathematics Curriculum

SMTs face numerous challenges that impede effective curriculum management, including heavy administrative workloads, limited time for instructional supervision, and insufficient subject knowledge among SMT members. Research indicates that SMT members often lack structured professional development opportunities focused specifically on mathematics leadership (Mestry & Govindasamy, 2021). Contextual factors such as learner absenteeism, socio-economic constraints, and minimal parental engagement further complicate SMTs' efforts to improve mathematics outcomes, reinforcing systemic barriers to instructional leadership effectiveness.

1.4.6 Inequality and Resource Disparities in Mathematics Curriculum Implementation

South African education continues to be shaped by deep inequalities, with rural and low-quintile schools disproportionately affected by limited teaching and learning resources. SMTs in resource-constrained contexts struggle to access textbooks, manipulatives, and professional support, undermining their ability to manage the mathematics curriculum effectively (Zikalala & Ntshangase, 2025). These resource disparities exacerbate inequities in instructional quality and learner performance, situating curriculum management within broader socio-economic and policy constraints.

1.4.7 Empirical Studies on SMTs' Experiences in Curriculum Management

Despite extensive literature on instructional leadership and curriculum implementation, there is limited empirical focus on SMTs' lived experiences of managing the mathematics curriculum in primary schools, particularly within disadvantaged contexts. Recent studies

investigate instructional leadership practices and perceptions among principals and SMTs, revealing gaps between perceived and enacted leadership roles (Ralebese et al., 2025; Mestry & Govindasamy, 2021). However, few studies foreground SMT members' firsthand experiences of navigating curriculum management challenges in rural coastal districts like O.R. Tambo.

1.4.8 Summary of Literature and Identification of Research Gaps

The literature underscores the centrality of SMTs in curriculum management and instructional leadership, with relevance to mathematics education in primary schools. However, there remains a theoretical and empirical gap in understanding how SMTs in rural, under-resourced contexts experience the management of the mathematics curriculum. While instructional leadership theory elucidates SMTs' expected roles, existing research emphasises perceptions and broad leadership functions without deeply exploring lived experiences within specific contexts such as the O.R. Tambo Coastal District. This study therefore responds to the need for context-specific insight into SMTs' experiences of curriculum leadership and the systemic conditions that shape their practice.

1.5 PROBLEM STATEMENT

Persistent underperformance in mathematics at primary school level remains a significant concern within the South African education system, particularly in rural and under-resourced provinces such as the Eastern Cape. Despite the centrality of mathematics to learners' cognitive development and future educational success, learner achievement in the subject continues to reflect systemic weaknesses in curriculum implementation and instructional leadership (Department of Basic Education [DBE], 2023). These systemic weaknesses include inadequate instructional support, shortages of teaching and learning resources, limited curriculum monitoring capacity, and contextual challenges that affect effective mathematics curriculum implementation.These pressing concerns necessitate instructional leaders to oversee the mathematics curriculum implementation process.

School Management Teams (SMTs) are formally mandated to act as curriculum leaders and managers responsible for planning, coordinating, monitoring, and supporting curriculum delivery within schools (Mehlape, 2021). In the context of mathematics education, this responsibility includes ensuring curriculum coverage, monitoring learner performance,

supporting teachers pedagogically, and responding to identified instructional challenges. However, evidence suggests that SMTs often experience difficulties in fulfilling these roles effectively, resulting in fragmented curriculum management practices and inconsistent support for mathematics teaching.

These challenges are particularly pronounced in rural coastal contexts such as the O.R. Tambo Coastal area of the Eastern Cape Province, where persistent low learner achievement in mathematics points to deeper systemic and leadership-related issues. This concern was highlighted during a South African Democratic Teachers Union (SADTU) teacher award ceremony in the O.R. Tambo Coastal District,

where no mathematics teacher met the minimum learner achievement threshold of 70% required for recognition (SADTU, 2022). Such outcomes raise critical questions about the effectiveness of curriculum management practices at school level and the capacity of SMTs to lead mathematics instruction meaningfully.

Although national and provincial policies emphasise the role of SMTs in curriculum leadership, there is a notable lack of empirical research that examines how SMT members themselves experience the management of the curriculum of mathematics in primary schools, particularly within rural and marginalised contexts. Existing studies tend to focus on learner performance or teacher practices, with limited attention given to SMTs' lived experiences, contextual challenges, and leadership practices that shape curriculum implementation. This gap in the literature constrains the development of contextually responsive support strategies aimed at strengthening curriculum management and improving mathematics outcomes.

In response to this gap, the purpose of this study is to explore the experiences of School Management Teams in managing the curriculum of mathematics in primary schools in the O.R. Tambo Coastal area of the Eastern Cape Province. Specifically, the study seeks to examine how SMTs understand and enact their curriculum management roles, the challenges they encounter, and the strategies they employ to support effective mathematics teaching and learning. By foregrounding SMT members' experiences, the study aims to contribute to scholarly knowledge on curriculum leadership and to inform policy and practice aimed at improving mathematics education at primary school level.

1.6 AIM AND OBJECTIVES OF THE STUDY

1.6.1 Aim

This study aimed to explore the lived experiences of School Management Teams in managing the mathematics curriculum in primary schools within the OR Tambo Coastal District of the Eastern Cape Province

1.6.2 Objectives

- To identify the experiences of school management teams in managing the mathematics curriculum in OR Tambo Coastal district primary schools in Eastern Cape?
- To explore the intervention strategies to implement to ensure adequate management of the mathematics curriculum in OR Tambo Coastal district primary schools in Eastern Cape.
- To recommend how the school management teams can be empowered to manage the mathematics curriculum in OR Tambo Coastal district primary schools in Eastern Cape.

1.7 RESEARCH QUESTIONS

1. What are the experiences of the school management teams in managing the mathematics curriculum in OR Tambo Coastal district primary schools in Eastern Cape?
2. Which intervention strategies can be implemented to ensure adequate management of the mathematics curriculum in OR Tambo Coastal district in Eastern Cape?
3. What recommendations can be made on how the school management teams can be empowered to manage the mathematics curriculum in OR Tambo Coastal district?

1.8 THEORETICAL FRAMEWORK

1.8 Theoretical Framework

This study is guided by an integrated theoretical framework comprising Instructional Leadership Theory, Curriculum Management Theory, Systems Theory, and Constructivist Theory. These theories collectively provide a lens for understanding how School Management Teams manage the mathematics curriculum, support teachers, respond to contextual challenges, and enact curriculum leadership responsibilities within primary schools. A detailed discussion of the theoretical framework is presented in Chapter Three

1.8.1 Application of the Theoretical Framework to the study

The theoretical framework assumes that effective instructional leadership and sound curriculum management practices by SMTs contribute to improved implementation of the mathematics curriculum (Hallinger, 2011). It further recognises that SMTs' experiences are shaped by both internal school factors and external contextual conditions (Fullan, 2014).

The framework guides the study in exploring:

- How SMTs understand and experience their role in managing the mathematics curriculum
- The challenges they encounter in fulfilling their curriculum management responsibilities
- The influence of contextual factors on Mathematics curriculum management

In addition, the following theories are applied in the study.

1.8.1.1 Instructional Leadership Theory

Instructional Leadership Theory emphasises the role of school leadership in promoting effective teaching and learning. The theory posits that school leaders play a central role in defining the school's instructional mission, managing the instructional programme, and promoting a positive learning climate (Hallinger, 2011; Bush, 2013).

Within the context of this study, SMTs are expected to provide leadership in:

- The implementation of the mathematics curriculum in line with the Curriculum and Assessment Policy Statement (CAPS)
- Monitoring teaching and learning activities

- Supporting mathematics teachers through supervision, mentoring, and professional development

Instructional leadership is particularly relevant to curriculum management, as effective leadership has been linked to improved teaching practices and learner achievement (Leithwood, Harris & Hopkins, 2020). This theory therefore provides a framework for understanding how SMTs' leadership roles influence their experiences in managing the mathematics curriculum in primary schools.

1.8.1.2 Curriculum Management Theory

Curriculum Management Theory focuses on the processes involved in planning, implementing, monitoring, and evaluating the curriculum at school level (Ornstein & Hunkins, 2018). Effective curriculum management requires coordination, systematic planning, monitoring of curriculum coverage, and evaluation of learner performance to ensure that curriculum objectives are achieved.

In relation to this study, SMTs are responsible for:

- Coordinating Mathematics curriculum planning;
- Ensuring compliance with CAPS requirements;
- Monitoring assessment practices and learner progress; and
- Addressing challenges related to curriculum coverage and pacing.

According to Fullan (2014), curriculum implementation is influenced by leadership capacity and school context. This theory therefore enables the study to examine the practical challenges and experiences of SMTs in managing the mathematics curriculum in primary schools.

1.8.1.3 Constructivism

In this study, Constructivism is used to understand how SMT members make meaning of their experiences in managing the mathematics curriculum. SMTs interpret curriculum policies, respond to contextual challenges, and develop local strategies based on their professional experiences and interactions with teachers, learners, parents, and district officials. Through reflection and experience, SMT members construct practical understandings of curriculum leadership and adapt their management practices to the realities of their school contexts. Constructivism therefore provides a useful lens for exploring how SMTs understand, interpret, and respond to the challenges associated with mathematics curriculum management.

1.8.1.4 Systems Theory

Systems Theory views a school as an interconnected system composed of various elements, including SMTs, teachers, learners, resources, policies, and the broader community (Bertalanffy, 1968). The theory suggests that changes or challenges in one part of the system affect the functioning of the entire system.

This theory is applicable to the study as it highlights how contextual factors such as socio-economic conditions, availability of resources, teacher competence, learner backgrounds, and departmental support influence SMTs' experiences in managing the mathematics curriculum (Senge, 2006). In the OR Tambo Coastal context, systemic challenges may impact the effectiveness of curriculum management practices.

1.9 RESEARCH METHODOLOGY AND DESIGN

1.9.1 Research paradigm

The study is located within the interpretivist research paradigm, which seeks to understand social phenomena through the meanings individuals assign to their experiences (Creswell, 2014). This paradigm influences how knowledge is studied and interpreted (Denzin & Lincoln, 2018: n.p.). Therefore, the interpretivist paradigm is appropriate for this study as it allows the researcher to explore SMTs' subjective experiences, perceptions, and interpretations regarding the management of the mathematics curriculum in primary schools.

1.9.2 Research approach

A qualitative research approach was adopted for this study. Qualitative research focuses on gaining an in-depth understanding of participants' lived experiences within their natural contexts (Denzin & Lincoln, 2018). This approach is suitable for the study as it enables the researcher to capture rich, detailed accounts of SMTs' experiences in managing the mathematics curriculum.

1.9.3 Research design

Maree (2016:72) defines a research design as a plan or strategy that guides the research process by specifying the philosophical assumptions, selection of participants, data collection methods, and data analysis procedures to be employed.

The study employed a phenomenological research design. Phenomenology seeks to understand and describe the essence of participants' lived experiences of a particular phenomenon (Creswell & Poth, 2018). In this study, phenomenology was used to explore how SMT members experience and make sense of their roles and responsibilities in managing the mathematics curriculum in primary schools.

1.9.4 Population and sampling

1.9.4.1 Population

According to Asiamah, Mensah and Onteg-Abayie (2017:61), population refers to the entire group of persons or objects the researcher wants to explore and understand. The population for the study comprised School Management Team members, including principals, deputy principals, and heads of department, from primary schools in the OR Tambo Coastal area.

1.9.4.2 Sampling

Asiamah et al., (2017:67) assert that sampling involves selecting research participants from the entire population or the process by which a sample is drawn. As the results of the qualitative nature of the study and the need to access the rich data relevant to the research question and objectives, the non-probability sample method will be employed to select the participants. Non-probability sampling is any kind of sampling where the selection of research participants is not determined by the statistical principle of randomness (Alvi, 2016:29).

The study will focus on six schools. This is so because these six schools are within the best reach of the researcher. The researcher also considered technological infrastructure and overall development of primary schools. The researcher considered that the aforementioned criteria is essential in all primary schools. In this study, a purposive sampling technique was employed to select participants who were directly involved in managing the mathematics curriculum (Creswell, 2014). Participants were selected based on their roles and experience within the

SMT. The final sample size was determined by data saturation, which occurs when no new themes emerge from the data (Guest, Namey & Saldaña, 2014).

1.9.5 Instrumentation and data collection techniques

1.9.5.1 Semi-structured interviews

According to DeJonckheere and Vaughn (2019:3), semi-structured interviews provide depth of information which the researcher can probe to understand perspectives and experiences. DeJonckheere and Vaughn (2019:3), maintain that the interview guide ensures that a core list of questions is asked in each interview, and because the order of questions is not fixed, the flow and sharing of views are more natural.

Data were collected through semi-structured interviews. Semi-structured interviews allow for flexibility while ensuring that key topics relevant to the research objectives are addressed (Kvale & Brinkmann, 2009). An interview guide was used to explore participants' experiences, challenges, and strategies related to the management of the mathematics curriculum. Interviews were conducted at times convenient to the participants and were audio-recorded with their consent.

1.9.5.2 Focus group discussion

Focus Group Discussion (FGD) was utilised as a qualitative data collection method to explore the experiences of School Management Teams (SMTs) in managing the mathematics curriculum in primary schools in OR Tambo Coastal, Eastern Cape Province. FGDs enable interaction among participants, allowing them to share experiences, reflect collectively, and build on one another's responses (Krueger & Casey, 2015). This method was appropriate for the study as it facilitated in-depth discussion of shared curriculum management experiences among SMT members.

FGDs are particularly suitable for studies that seek to explore participants' perceptions, experiences, and meanings attached to a specific phenomenon (Creswell & Poth, 2018). In this study, FGDs provided an opportunity for SMT members to collectively discuss challenges, strategies, and contextual factors influencing the management of the mathematics curriculum.

The focus group comprised School Management Team members, including principals, deputy principals, and heads of department responsible for curriculum management in primary schools. Participants were purposively selected based on their direct involvement in the management of the mathematics curriculum.

The size of the focus group ranged between six and eight participants, which is considered optimal for generating meaningful interaction while allowing all participants the opportunity to contribute (Krueger & Casey, 2015).

The FGD was conducted at a neutral and convenient venue within the OR Tambo Coastal area to ensure participant comfort and accessibility. Prior to the discussion, participants were briefed on the purpose of the study and ethical considerations, including confidentiality and voluntary participation.

A semi-structured focus group guide was used to facilitate discussion. Open-ended questions were designed to explore:

- SMTs' roles in managing the mathematics curriculum
- Challenges encountered in curriculum planning, implementation, and monitoring
- Support strategies used to improve Mathematics teaching and learning
- Contextual factors affecting curriculum management

The discussion was moderated by the researcher, who ensured that all participants had an opportunity to contribute. The session lasted approximately 60–90 minutes and was audio-recorded with the consent of the participants.

1.9.6 Data analysis and interpretation

Data collection paves the way for data analysis and interpretation to take place. Ravindran (2019:40) refers to data analysis as an iterative and complex process to bring out meanings that people attach to their actions and responses related to a phenomenon. A thematic data analyusis was used to analysis to analyse data collected during the study. According to Denzin and Lincoln (2018), thematic data analysis is used to identify, analyse and report themes within a data set in order to uncover underlying ideas, patterns, as well as concepts that provide insights into the research question.

1.10 TRUSTWORTHINESS

In qualitative research, trustworthiness is used to establish the rigour and quality of a study. It refers to the extent to which findings are credible, dependable, confirmable, and transferable

(Lincoln & Guba, 1985). In this study, trustworthiness was ensured through the application of these four criteria to ensure that the findings accurately reflect the experiences of School Management Teams (SMTs) in managing the mathematics curriculum in primary schools in the OR Tambo Coastal District of the Eastern Cape Province.

1.10 RESEARCH ETHICS

Ethical clearance was obtained from the university of South Africa (UNISA) ethics committee. Permission to conduct the study was also obtained from the Eastern Cape Department of Education and the participating schools. Ethical principles observed in the study included:

- Informed consent
- Voluntary participation
- Confidentiality and anonymity
- The right to withdraw from the study at any time

Participants' identities were protected through the use of pseudonyms.

1.11 LIMITATIONS AND DELIMITATION OF THE STUDY

Limitations

Limitations

This study has several limitations that should be considered when interpreting the findings. Firstly, the study involved a relatively small sample of School Management Team members drawn from selected primary schools in the OR Tambo Coastal District. Consequently, the findings cannot be statistically generalised to all primary schools in the Eastern Cape Province or South Africa.

Secondly, the study relied primarily on self-reported data obtained through interviews. Participants may have unintentionally provided incomplete accounts of their experiences or may have presented socially desirable responses, which could have influenced the findings.

Thirdly, the study focused mainly on SMT members' descriptions of their experiences and included limited direct observation of curriculum management practices within schools and

classrooms. As a result, the findings reflect participants' perceptions and interpretations rather than direct observation of all curriculum management activities.

In addition, document analysis was limited to the records and documents that were available and accessible at the participating schools. Variations in the quality, completeness, and availability of documents may have restricted the depth of documentary evidence obtained.

Despite these limitations, the study provides valuable insights into the experiences of SMTs in managing the mathematics curriculum within rural primary school contexts. Although the findings cannot be statistically generalised, they may offer useful insights for schools in similar rural and under-resourced contexts where SMTs are expected to manage the mathematics curriculum under conditions of limited staffing, resources, and subject-specific support.

Deliminations of the study

The delimitations of this study were deliberately established by the researcher to maintain a clear focus and ensure the study remained manageable.

Firstly, the study was confined to selected primary schools in the OR Tambo Coastal District of the Eastern Cape Province. Schools located outside this district, as well as secondary schools, were excluded from the study.

Secondly, the study focused exclusively on School Management Team members, namely principals, deputy principals, and heads of department. Other stakeholders, including teachers, learners, parents, and district officials, were not included because the study sought specifically to explore SMTs' experiences in managing the mathematics curriculum.

Thirdly, the study concentrated solely on the management of the mathematics curriculum. Other learning areas were excluded to enable an in-depth exploration of issues specifically related to Mathematics curriculum management.

Finally, the study adopted a qualitative phenomenological research design to explore and understand the lived experiences of SMT members. Quantitative approaches, statistical analyses, and learner achievement measures were therefore beyond the scope of the study.

1.11 DEFINITIONS OF KEY CONCEPTS

1.11.1 School management team

A School Management Team (SMT) refers to a formally constituted group of senior school leaders responsible for the management and leadership of teaching and learning within a school. In the South African education context, the SMT typically comprises the principal, deputy principal(s), and heads of department (HoDs), who collectively oversee curriculum implementation, instructional leadership, staff development, and learner performance (Department of Basic Education, 2016). Thus, in the context of this study, a School Management Team is understood as the school-based leadership structure that collectively experiences and enacts the management of the mathematics curriculum in primary schools in the OR Tambo Coastal area of the Eastern Cape Province.

1.11.2 Mathematics

Mathematics is a form of expression or language that uses symbols and notations to describe numeric, geometric, and graphical relationships. It involves observing, representing, and investigating patterns and quantitative relationships between mathematical objects in physical and social phenomena. It helps to develop mental processes that enhance logical and critical thinking, accuracy, and problem-solving, which can contribute to decision-making (DBE, 2016:36).

1.11.3 Curriculum

A curriculum is defined as the “programme of education” that carries the beliefs, values, attitudes, skills, knowledge, and overall content that education aims to impart (Mulenga, 2018:3).

1.11.4 Experiences

In qualitative research, the term experiences refer to the subjective meanings, perceptions, feelings, interpretations, and understandings that individuals construct through their

involvement in a particular phenomenon within a specific context (Creswell & Poth, 2018). Experiences are shaped by individuals' roles, interactions, and contextual realities, and are expressed through their reflections on practice and lived situations.

Within the context of this study, experiences refer to the ways in which School Management Team (SMT) members perceive, interpret, and make sense of their roles and responsibilities in managing the mathematics curriculum in primary schools. These experiences include SMTs' perceptions of challenges, strategies, successes, and contextual influences related to curriculum planning, implementation, monitoring, and support of mathematics teaching and learning in the OR Tambo Coastal area of the Eastern Cape Province.

1.11.5 Primary school

According to the DBE (2016:39), the current South African schooling system and formal learning institutions are classified as follows:

- Pre-school: catering for children aged three to five years.
- Primary school: catering for learners from Grades R-7, aged six to 13 years.

1.12 THESIS OUTLINE

The study is included six chapters structured as follows:

Chapter One: Introduction and Background

The chapter presents the background to the study and the related components, namely, the problem statement, aims and objectives of the study, significance of the study, and definitions of key terms used in the study.

Chapter Two: Theoretical Framework

This chapter reviews the relevant theories related to the study.

Chapter Three: Literature Review

This chapter reviews literature related to the study.

Chapter Four: Research Methodology and Design

The chapter discusses the research methodology followed in undertaking the study, the research methods, procedures, and sampling techniques used to obtain and process data.

Chapter Five: Data Analysis and Interpretation

This chapter is devoted to analysing, interpreting, and discussing the findings that emerged from the data collected.

Chapter Six: Conclusion and Recommendations

In this final chapter, the conclusions of the study are drawn, and recommendations intended to improve the practice in relation to the study problem are proposed.

1.14 SUMMARY

This chapter presented the introduction and background to the study. It stated the problem statement, aim, and objectives of the study. The study's core concepts, namely, SMT, mathematics, curriculum and primary school, were defined. The qualitative research methodology and the case study design employed for the study were explained briefly. The chapter concluded with a detailed outline of the assumptions, demarcation, and limitations of the study, as well as an overview of the organisation of the study in terms of each chapter.

CHAPTER TWO
THEORETICAL FRAMEWORK

2.1 Introduction

A theoretical framework provides the conceptual foundation for a study by explaining the key concepts under investigation and guiding the interpretation of findings. This study explores the experiences of School Management Teams (SMTs) in managing the mathematics curriculum in primary schools within the OR Tambo Coastal District of the Eastern Cape Province. Given the complexity of curriculum management, no single theory is sufficient to explain all aspects of SMTs' experiences. Consequently, the study is underpinned by four complementary theoretical perspectives, namely Curriculum Management Theory, Instructional Leadership Theory, Systems Theory, and Constructivism.

Curriculum Management Theory serves as the central framework for understanding the processes involved in planning, organising, implementing, monitoring, and evaluating the mathematics curriculum at school level. The theory highlights the responsibilities of SMTs in ensuring effective curriculum delivery and learner achievement.

Instructional Leadership Theory complements Curriculum Management Theory by explaining how SMTs provide leadership and support for teaching and learning. The theory is particularly useful for understanding SMT practices related to curriculum coverage, assessment management, moderation, teacher support, learner performance monitoring, and intervention strategies aimed at improving Mathematics achievement.

Systems Theory provides a broader perspective by recognising that curriculum management occurs within an interconnected system comprising teachers, learners, parents, district officials, policies, resources, infrastructure, and socio-economic conditions. The theory assists in explaining how contextual factors shape SMTs' experiences and influence their capacity to manage the mathematics curriculum effectively.

Constructivism contributes an interpretive perspective by explaining how SMT members make sense of their experiences, interpret curriculum policies, learn from practice, and develop context-specific approaches to curriculum management. Within this study, Constructivism is not used to explain how learners acquire mathematical knowledge, but rather how SMTs construct meaning from their curriculum management experiences.

Together, these four theoretical perspectives provide a comprehensive framework for understanding the leadership practices, curriculum management processes, contextual influences, and meaning-making experiences associated with SMTs' management of the mathematics curriculum. The theories also provide the analytical lenses through which the findings of the study will be interpreted and discussed in subsequent chapters.

2.1 Theoretical Framework and Diagrammatic Overview

The theoretical framework discusses the theories that are utilised and guided the study. The diagram underneath (i.e. Figure 2.1) has no sequential discussion in its presentations. The following Figure 2.1. diagrammatic overview framework is outlined underneath:

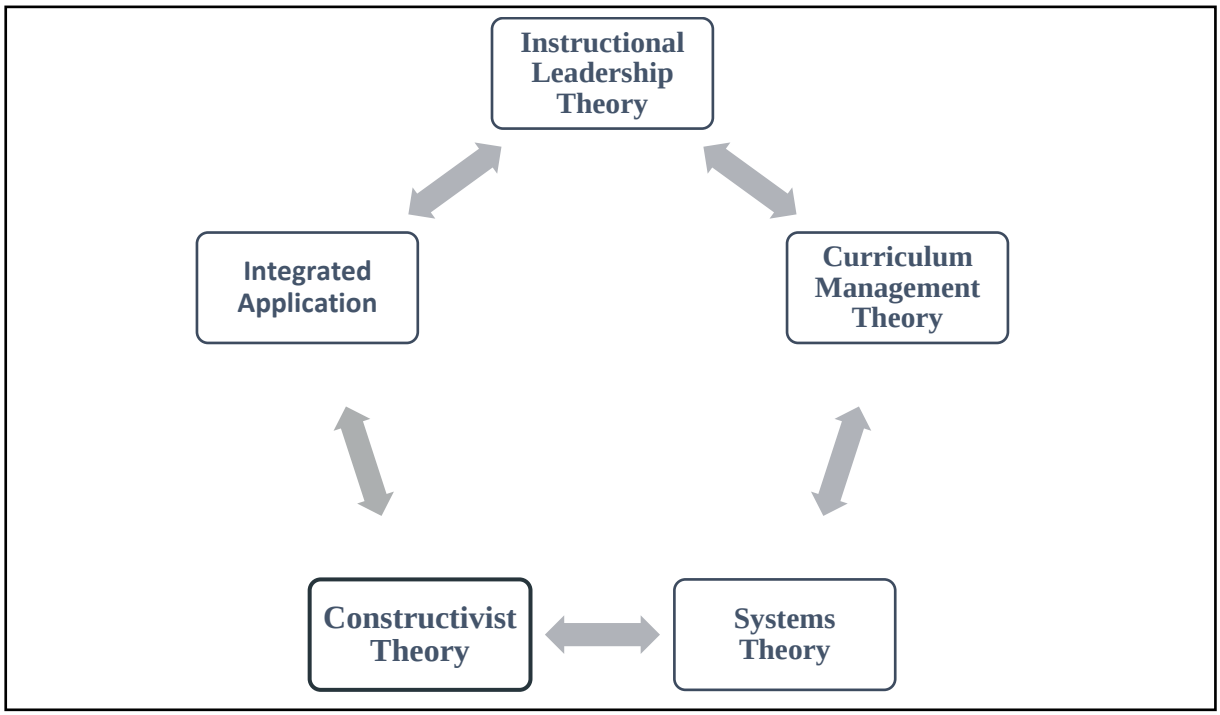

Figure 2.1: Diagrammatic overview of the framework

2.1.1 Instructional Leadership Theory

Instructional Leadership Theory positions School Management Teams (SMTs) as key leaders of teaching and learning who are responsible for promoting effective curriculum implementation, improving instructional quality, and enhancing learner achievement. The theory emphasises that school leadership influences learner outcomes indirectly through its

impact on teachers' instructional practices, curriculum delivery, assessment processes, and the overall learning environment (Hallinger, 2020; Liu & Hallinger, 2023). Rather than functioning primarily as administrative managers, SMTs are expected to provide direction, support, and monitoring of teaching and learning activities to ensure that curriculum goals are achieved.

Within the South African education context, SMTs are entrusted with a range of instructional leadership responsibilities that include curriculum planning, monitoring curriculum coverage, ensuring appropriate pacing of content, overseeing assessment and moderation practices, supporting teacher development, and tracking learner performance. These responsibilities are particularly important in Mathematics, where effective curriculum management is essential for improving learner achievement and addressing persistent underperformance.

In this study, Instructional Leadership Theory provides a lens for understanding how SMT members experience and enact their curriculum management responsibilities in Mathematics. Specifically, the theory assists in examining how SMTs:

• Interpret and enact their instructional leadership responsibilities in Mathematics curriculum management;

• Facilitate curriculum planning and monitor curriculum coverage and pacing;

• Oversee assessment, moderation, and learner performance tracking processes;

• Support and develop Mathematics teachers through supervision, mentoring, and professional development initiatives; and

• Implement intervention strategies aimed at improving Mathematics teaching and learner achievement.

Recent studies suggest that the enactment of instructional leadership in under-resourced schools is frequently constrained by competing administrative demands, limited resources, inadequate subject-specific support, and increasing accountability pressures (Bush & Glover, 2021; Naicker & Mestry, 2023). Consequently, SMTs often experience tensions between policy expectations and the realities of their school contexts. This study therefore adopts a contextualised understanding of Instructional Leadership Theory, recognising that SMTs

exercise instructional leadership within environments characterised by varying levels of support, resources, and capacity.

The theory is particularly relevant to this study because it provides an analytical framework for interpreting SMTs' experiences of managing the Mathematics curriculum. It enables the study to explore how SMTs support teaching and learning, monitor curriculum implementation, respond to curriculum management challenges, and strive to improve learner performance in Mathematics. Furthermore, the theory will be used in Chapters 5 and 6 to interpret findings relating to curriculum planning, curriculum coverage, assessment management, moderation practices, teacher support, and learner performance monitoring. In this way, Instructional Leadership Theory serves not only as a conceptual framework but also as an explanatory lens for understanding SMTs' experiences of managing the Mathematics curriculum in rural primary schools.

2.1.2 Curriculum Management Theory

Curriculum Management Theory provides a framework for understanding the processes through which curricula are planned, organised, implemented, monitored, and evaluated within educational institutions (Van der Westhuizen, 2019; Ornstein & Hunkins, 2020). The theory emphasises the systematic alignment of curriculum goals, teaching and learning activities, assessment practices, and learner outcomes to ensure effective curriculum implementation. It further recognises curriculum management as a continuous process that requires coordination, monitoring, evaluation, and adaptation to meet educational objectives.

Within the school context, Curriculum Management Theory positions School Management Teams (SMTs) as key agents responsible for ensuring that curriculum policies are translated into meaningful classroom practices. SMTs are expected to coordinate curriculum delivery, monitor curriculum coverage, oversee assessment processes, evaluate learner performance, and implement strategies that promote effective teaching and learning. Effective curriculum management therefore requires both compliance with policy requirements and responsiveness to the contextual realities within which schools operate.

In this study, Curriculum Management Theory serves as a central framework for understanding SMTs' experiences in managing the mathematics curriculum in primary schools. Specifically, the theory provides a lens for examining how SMTs:

• Translate the Curriculum and Assessment Policy Statement (CAPS) for Mathematics into school-based plans and implementation strategies (DBE, 2011; DBE, 2023);

• Coordinate and manage Mathematics curriculum delivery across different grades and phases;

• Monitor curriculum coverage, lesson pacing, assessment practices, and learner performance;

• Evaluate the effectiveness of curriculum implementation and identify areas requiring intervention; and

• Respond to curriculum challenges such as learner underachievement, resource shortages, and curriculum coverage pressures.

The theory is particularly relevant within the South African schooling context, where SMTs are required to balance national curriculum expectations with the realities of diverse school environments. In rural and under-resourced schools, curriculum management often extends beyond policy implementation and involves addressing contextual challenges that may hinder effective curriculum delivery. Consequently, SMTs are frequently required to make adaptive decisions aimed at sustaining curriculum implementation despite limitations in staffing, resources, infrastructure, and professional support.

Research indicates that curriculum management in many rural and disadvantaged schools is often characterised by reactive and compliance-driven practices rather than strategic and developmental approaches (Jita & Mokhele, 2019; Mthiyane & Grant, 2022). Curriculum Management Theory therefore provides a useful framework for understanding how SMTs navigate these challenges while attempting to ensure effective mathematics curriculum delivery.

The theory is particularly valuable for interpreting the findings of this study because it focuses on the core functions of curriculum management. It will be used in Chapters 5 and 6 to analyse findings related to curriculum planning, curriculum implementation, curriculum monitoring, curriculum coverage, assessment management, learner performance tracking, and intervention strategies implemented by SMTs. Through this lens, the study seeks to understand how SMT members experience and manage the processes associated with mathematics curriculum delivery in rural primary schools.

2.1.3 System Theoary

Systems Theory, originally developed by Bertalanffy (1968), views organisations as interconnected systems composed of interdependent parts that interact to achieve common goals. Within educational settings, schools function as open systems in which teaching and learning processes are influenced by continuous interactions among internal and external stakeholders and environmental factors. The theory emphasises that outcomes cannot be understood solely by examining individual actors, but rather by considering the relationships and interactions among the various components of the system (Senge, 2006; Fullan, 2021).

In the context of curriculum management, Systems Theory recognises that School Management Teams (SMTs) do not operate in isolation. Their ability to manage the Mathematics curriculum is influenced by a range of interconnected factors, including teachers, learners, parents, district officials, curriculum policies, available resources, school infrastructure, and broader socio-economic conditions. Consequently, curriculum management outcomes are shaped not only by SMT leadership practices but also by the functioning of the wider educational system within which schools are situated.

Within this study, Systems Theory provides a framework for understanding how contextual and systemic factors influence SMTs' experiences of managing the Mathematics curriculum. Specifically, the theory assists in examining:

• The relationships and interactions between SMTs, teachers, learners, parents, district officials, and other educational stakeholders;

• The influence of curriculum policies and accountability requirements on Mathematics curriculum management;

• The impact of resource availability, staffing levels, learning materials, and school infrastructure on curriculum implementation;

• The effects of socio-economic conditions and community circumstances on learner participation, attendance, and academic performance; and

• The feedback processes through which learner performance data informs curriculum planning, intervention strategies, and management decisions.

The relevance of Systems Theory is particularly evident within rural and under-resourced school contexts, where SMTs often operate under challenging conditions characterised by limited resources, inadequate infrastructure, teacher shortages, and varying levels of external support. Recent South African studies indicate that the effectiveness of curriculum management is significantly influenced by these systemic conditions, which can either support or constrain SMTs' efforts to improve teaching and learning outcomes (Spaull & Pretorius, 2019; Mestry, 2022).

Rather than attributing curriculum management challenges solely to individual SMT members, Systems Theory provides a broader perspective that recognises the interconnected nature of educational processes. The theory therefore enables this study to examine how structural and contextual factors shape SMTs' experiences and influence their capacity to manage the mathematics curriculum effectively.

Furthermore, Systems Theory will be used in Chapters 5 and 6 to interpret findings related to resource constraints, teacher shortages, district support, parental involvement, infrastructure challenges, policy implementation demands, and socio-economic factors affecting curriculum management. Through this lens, the study seeks to understand how SMTs navigate complex and interconnected systems while striving to improve Mathematics curriculum delivery and learner performance in primary schools.

2.1.4 Constructivist Theory

Constructivist Theory is founded on the assumption that individuals actively construct knowledge and meaning through their experiences, interactions, and reflections rather than passively receiving information (Vygotsky, 1978; Illeris, 2018; Hoadley, 2022). Knowledge is therefore viewed as socially and contextually constructed, shaped by individuals' engagement with their environment and the challenges they encounter. Within educational settings, Constructivism provides a useful lens for understanding how professionals develop understandings, interpret experiences, and adapt their practices over time.

In the context of this study, Constructivist Theory is not used to explain how learners acquire mathematical knowledge. Rather, it is employed to understand how School Management Team (SMT) members make meaning of their experiences in managing the Mathematics curriculum.

SMTs operate within complex school environments where they are required to interpret curriculum policies, respond to changing educational demands, address contextual challenges, and develop practical approaches to curriculum management. Through these experiences, SMT members continuously construct and reconstruct their understanding of effective curriculum leadership.

The theory provides a framework for examining how SMTs:

• Interpret curriculum policies, leadership responsibilities, and expectations related to Mathematics curriculum management;

• Develop curriculum management knowledge and skills through experience, reflection, and professional practice;

• Learn from successes, challenges, and previous curriculum management experiences;

• Adapt and refine curriculum management strategies in response to changing school conditions and contextual realities; and

• Engage in collaborative learning and reflective practices with colleagues, teachers, and other stakeholders to improve curriculum management processes.

Constructivism is particularly relevant to this study because SMT members do not simply implement curriculum policies as prescribed. Rather, they interpret policy requirements within their specific school contexts and develop localised responses to curriculum management challenges. Their decisions and actions are influenced by their professional experiences, interactions with colleagues, reflections on practice, and understanding of the realities within their schools.

The theory is especially useful in understanding curriculum management within rural and under-resourced contexts, where SMTs are often required to develop innovative and contextually appropriate solutions to challenges associated with staffing, resources, curriculum coverage, learner performance, and teacher support. Constructivism therefore recognises SMTs as active agents who continuously construct knowledge and adapt their practices in response to evolving circumstances.

Furthermore, Constructivist Theory will be used in Chapters 5 and 6 to interpret findings relating to SMTs' perceptions, experiences, decision-making processes, policy interpretation, professional learning, and adaptive curriculum management practices. Through this lens, the study seeks to understand how SMT members make sense of and respond to the realities of managing the Mathematics curriculum within their schools.

2.1.5 Integrated Application of the Theoretical Framework

- The combined application of Instructional Leadership Theory, Curriculum Management Theory, Constructivist Theory, and Systems Theory provides a comprehensive framework for understanding School Management Teams' (SMTs') experiences in managing the Mathematics curriculum in primary schools within the OR Tambo Coastal District. The complexity of curriculum management requires multiple theoretical perspectives because SMTs' experiences are shaped not only by their leadership practices and curriculum responsibilities but also by their interpretations of those experiences and the broader contexts within which they operate. Together, these theories provide complementary lenses for examining the multifaceted nature of Mathematics curriculum management.
- **Instructional Leadership Theory** positions SMTs as leaders of teaching and learning who influence instructional quality and learner achievement through curriculum supervision, teacher support, assessment oversight, moderation, curriculum coverage monitoring, and learner performance tracking (Hallinger, 2020; Robinson et al., 2008). Within this study, the theory provides a lens for understanding how SMTs enact their instructional leadership responsibilities in relation to the Mathematics curriculum.
- **Curriculum Management Theory** focuses on the organisational, administrative, and procedural aspects of curriculum implementation (Ornstein & Hunkins, 2020; Van der Westhuizen, 2019). The theory explains how SMTs plan, coordinate, implement, monitor, and evaluate Mathematics curriculum delivery within their schools. It further assists in understanding how SMTs translate curriculum policies into practical school-based actions and interventions aimed at improving learner performance.
- **Constructivist Theory** contributes an interpretive perspective by explaining how SMT members construct meaning from their experiences, interpret curriculum policies, learn

from practice, and develop contextually appropriate approaches to curriculum management (Vygotsky, 1978; Illeris, 2018). The theory recognises SMTs as active agents who continuously adapt their leadership and management practices in response to challenges and opportunities encountered within their schools.

- **Systems Theory** situates SMTs' experiences within broader educational, social, economic, and policy environments (Bertalanffy, 1968; Fullan, 2021). The theory highlights how interactions among teachers, learners, parents, district officials, resources, infrastructure, and socio-economic conditions influence curriculum management processes and outcomes. It therefore provides a framework for understanding the contextual factors that enable or constrain SMTs' efforts to manage the mathematics curriculum effectively.
- The integration of these theories enables the study to examine SMTs' experiences from multiple but interconnected perspectives. Curriculum Management Theory explains the curriculum management processes undertaken by SMTs; Instructional Leadership Theory explains how SMTs provide leadership and support for teaching and learning; Constructivist Theory explains how SMTs interpret and make meaning of their experiences; and Systems Theory explains how contextual and environmental factors shape those experiences. Collectively, the theories provide a coherent framework for analysing and interpreting the findings of the study.
- The theoretical framework will guide both data analysis and interpretation in Chapters 5 and 6. Findings related to curriculum planning, implementation, monitoring, assessment, and intervention strategies will be interpreted through Curriculum Management Theory. Findings concerning teacher support, curriculum supervision, assessment oversight, learner performance tracking, and instructional improvement will be interpreted through Instructional Leadership Theory. Findings relating to SMTs' perceptions, experiences, decision-making, professional learning, and adaptation of practices will be interpreted through Constructivist Theory. Findings associated with resource constraints, district support, parental involvement, infrastructure, policy demands, and socio-economic challenges will be interpreted through Systems Theory. In this way, the four theories collectively provide an integrated analytical framework for understanding SMTs' experiences of managing the mathematics curriculum in primary schools.

Together, Instructional Leadership Theory, Curriculum Management Theory, Constructivist Theory, and Systems Theory provide an integrated framework for understanding SMTs' experiences of managing the mathematics curriculum in primary schools. Collectively, these theories conceptualise curriculum management as an instructional, organisational, interpretive, and contextually influenced process. The framework is particularly relevant to the realities of OR Tambo Coastal primary schools, where SMTs are required to manage curriculum implementation within complex and often resource-constrained environments.

The integrated theoretical framework provides a foundation for exploring the research questions and guides the collection and analysis of data from interviews, observations, and document analysis. More importantly, it provides complementary analytical lenses through which the findings of the study will be interpreted. Curriculum Management Theory explains curriculum planning, implementation, monitoring, and evaluation processes; Instructional Leadership Theory explains SMTs' leadership practices in supporting teaching and learning; Constructivist Theory explains how SMT members interpret and make meaning of their experiences; and Systems Theory explains how contextual and systemic factors influence curriculum management. The integrated application of these theories therefore ensures that SMTs are understood as active agents who interpret, adapt, and respond to curriculum management challenges within dynamic educational contexts rather than as passive implementers of policy (Mestry, 2022; Spaull & Pretorius, 2019).

2.2 Summary

This chapter discussed the theoretical framework underpinning the study, drawing on Instructional Leadership Theory, Curriculum Management Theory, Constructivist Theory, and Systems Theory to provide a comprehensive understanding of School Management Teams' (SMTs') experiences in managing the Mathematics curriculum. Curriculum Management Theory provided a framework for understanding the processes of curriculum planning, implementation, monitoring, and evaluation. Instructional Leadership Theory highlighted SMTs' roles in supporting teaching and learning through curriculum supervision, teacher support, assessment oversight, and learner performance monitoring. Constructivist Theory explained how SMT members interpret their experiences, make meaning of curriculum management challenges, and develop contextually relevant practices. Systems Theory situated SMTs' experiences within broader educational, social, economic, and policy contexts that influence curriculum management.

The integration of these theories provides a coherent and context-sensitive framework for understanding the leadership practices, curriculum management processes, meaning-making experiences, and contextual influences that shape Mathematics curriculum management in primary schools. The theoretical framework not only informed the design of the study and the development of data collection instruments, but also provides the analytical lenses through which the findings will be interpreted and discussed in subsequent chapters. The next chapter reviews the empirical literature related to School Management Teams and the management of the mathematics curriculum in primary schools.

CHAPTER THREE
LITERATURE REVIEW

3.1 Introduction

This chapter reviews literature relevant to the experiences of School Management Teams (SMTs) in managing the mathematics curriculum in primary schools. The review begins with the South African curriculum context and the Curriculum and Assessment Policy Statement (CAPS), followed by a discussion of SMT responsibilities in curriculum management. Thereafter, literature on instructional leadership, mathematics curriculum management, and curriculum implementation in rural and under-resourced contexts is examined. The chapter concludes with empirical studies on SMT experiences and identifies the research gap addressed by this study.

3.2 South African Curriculum Context

3.2.1 CAPS and the Mathematics Curriculum

The introduction of the Curriculum and Assessment Policy Statement (CAPS) represented a significant attempt by the Department of Basic Education to standardise curriculum implementation and improve educational quality across South African schools (DBE, 2011). CAPS was designed to provide explicit guidance regarding curriculum content, sequencing, pacing, and assessment requirements, thereby reducing ambiguities that characterised previous curriculum reforms. Within the primary school sector, mathematics occupies a strategic position because it serves as a foundation for scientific literacy, logical reasoning, problem-solving ability, and future participation in science, technology, engineering and mathematics-related disciplines.

Despite the structured nature of CAPS, learner performance in mathematics continues to reflect persistent inequalities and implementation challenges across South African schools. National and international assessment studies consistently demonstrate lower mathematics achievement levels among learners attending rural and socio-economically disadvantaged schools compared to their counterparts in urban settings (Taylor, 2021). These disparities suggest that curriculum reform alone cannot guarantee improved learner outcomes. Instead, the effectiveness of curriculum implementation depends largely on the capacity of schools and their leadership structures to translate policy expectations into meaningful classroom practice.

From this perspective, CAPS may be viewed not merely as a policy document but as a curriculum management instrument that requires active interpretation, coordination, monitoring, and support. Consequently, SMTs become central actors in the implementation process because they serve as the link between curriculum policy and classroom practice. The effectiveness of mathematics curriculum implementation therefore depends not only on the quality of the curriculum itself but also on the leadership practices through which the curriculum is enacted within schools

3.2.2 SMT Responsibilities in Curriculum Management

Curriculum leadership has increasingly emerged as a critical dimension of school effectiveness. Unlike traditional administrative leadership approaches that focus primarily on organisational efficiency, curriculum leadership emphasises improving teaching and learning through active engagement with instructional processes (Bush, 2020).

The literature consistently demonstrates that schools characterised by strong curriculum leadership tend to exhibit improved teacher performance, enhanced curriculum implementation, and higher learner achievement (Leithwood, Harris & Hopkins, 2020). Effective curriculum leaders establish clear academic expectations, facilitate collaborative planning, support professional learning, and use assessment information to guide decision-making.

However, curriculum leadership should not be viewed as a technical process involving only monitoring and compliance. Rather, it is a relational and developmental process that requires SMTs to create professional environments that encourage teacher growth and instructional improvement. This perspective aligns with Constructivist Theory, which views knowledge construction as an active and socially mediated process. Within this framework, SMTs are not merely supervisors but facilitators of professional learning who create opportunities for teachers to reflect upon and improve their instructional practices.

The significance of curriculum leadership becomes particularly evident in mathematics education, where learner achievement is closely associated with the quality of instructional support provided to teachers. Consequently, SMT experiences of curriculum management cannot be separated from their capacity to enact curriculum leadership within complex school environments.

3.3 SMTs and Curriculum Management

3.3.1 Curriculum Leadership Roles

Curriculum leadership has increasingly emerged as a critical dimension of school effectiveness. Unlike traditional administrative leadership approaches that focus primarily on organisational efficiency, curriculum leadership emphasises improving teaching and learning through active engagement with instructional processes (Bush, 2020).

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3.3.2 Instructional Leadership

Instructional Leadership Theory provides one of the most influential frameworks for understanding curriculum management within schools. Hallinger (2011) conceptualises instructional leadership as a leadership approach that prioritises teaching and learning as the primary focus of school improvement efforts.

The theory identifies three interrelated dimensions: defining the school mission, managing instructional programmes, and promoting a positive learning climate. These dimensions provide a useful lens through which SMT experiences may be interpreted. Firstly, SMTs are expected to articulate clear educational goals and curriculum priorities. Secondly, they are responsible for monitoring curriculum implementation and supporting instructional improvement. Thirdly, they are expected to create organisational conditions conducive to effective teaching and learning.

Although the benefits of instructional leadership are widely acknowledged, empirical evidence suggests that its implementation remains uneven across schools. Mestry (2019) found that SMTs in disadvantaged schools frequently experience difficulties implementing instructional leadership due to resource constraints, inadequate training, and excessive workloads. Similarly, Ntuli and Mahlangu (2023) observed that while SMT members often understand their instructional responsibilities, many struggle to translate this understanding into effective curriculum leadership practices.

These findings suggest that instructional leadership cannot be understood independently of context. Rather, leadership effectiveness appears to be mediated by organisational capacity, resource availability, and broader systemic support structures. This observation resonates strongly with Systems Theory, which argues that school performance is influenced by the interaction of multiple interconnected elements within the educational system.

3.3.3 Curriculum Monitoring and Teacher Support

Curriculum monitoring forms an important component of SMT responsibilities. Monitoring activities include classroom observations, moderation of learner assessments, analysis of learner performance data, and review of curriculum coverage records (DBE, 2016).

Teacher support is equally important. SMTs are expected to identify professional development needs, facilitate mentoring, organise workshops, and provide instructional guidance to teachers. Research indicates that ongoing teacher support contributes significantly to curriculum implementation and learner achievement (Taylor, 2021).

Where SMTs actively monitor teaching and provide instructional support, teachers are more likely to implement curriculum requirements effectively and address learner learning difficulties promptly (Mestry, 2019).

3.3.4 Challenges in Curriculum Management

Despite policy expectations, SMTs encounter numerous challenges when managing curriculum implementation. These include insufficient curriculum leadership training, excessive administrative workloads, inadequate resources, and limited opportunities for professional development (Mestry, 2019).

Studies further indicate that SMT members often experience difficulties supporting mathematics teachers due to limited subject-specific expertise and competing managerial responsibilities (Ntuli & Mahlangu, 2023). Such challenges may reduce the effectiveness of curriculum monitoring and instructional support activities.

3.4 Mathematics Curriculum Management in Primary Schools

3.4.1 Mathematics Curriculum Leadership

Mathematics curriculum management presents unique leadership demands because of the specialised nature of the subject and its persistent underperformance within many South African schools. Unlike some learning areas where curriculum implementation may rely largely on general pedagogical competence, mathematics requires specific content knowledge, specialised instructional approaches, and continuous assessment monitoring (Taylor, 2021).

The literature suggests that SMTs frequently encounter difficulties supporting mathematics teachers due to limited mathematics-specific expertise. This challenge is particularly significant in primary schools where SMT members often possess leadership experience but

not necessarily specialised mathematics knowledge. Consequently, SMTs may experience uncertainty when required to evaluate instructional quality, support curriculum planning, or address learner performance challenges in mathematics.

This raises an important leadership dilemma. While SMTs are expected to provide instructional leadership for mathematics, they may not always possess the subject-specific expertise required to fulfil this role effectively. Understanding how SMTs navigate this dilemma forms an important aspect of understanding their experiences of curriculum management.

3.4.2 Teacher Support and Professional Development

Teacher competence significantly influences mathematics curriculum implementation. SMTs therefore have a responsibility to facilitate professional development opportunities that strengthen teachers' mathematics content knowledge and pedagogical skills.

Professional development initiatives may include mentoring, coaching, peer learning communities, workshops, and collaborative planning sessions (Naidoo, 2021). Such interventions assist teachers in improving instructional practices and responding to learner needs more effectively.

Research suggests that schools with strong professional development cultures are more likely to achieve improved mathematics outcomes than schools where teacher development receives limited attention (Taylor, 2021).

3.4.3 Assessment Monitoring

Assessment monitoring enables SMTs to evaluate learner progress and identify curriculum implementation challenges. Assessment data provide evidence of learner achievement and assist SMTs in planning interventions to address learning gaps.

Through moderation, learner performance analysis, and feedback processes, SMTs can support teachers in improving assessment practices and instructional effectiveness (DBE, 2011).

3.4.4 Resource and Contextual Challenges

Mathematics curriculum implementation is often constrained by shortages of textbooks, teaching aids, technological resources, and appropriately qualified teachers. Research conducted in rural schools indicates that these constraints negatively affect curriculum coverage and learner achievement (Mestry, 2019; Neluheni, 2023).

Consequently, SMTs are frequently required to develop innovative strategies to manage curriculum implementation despite resource limitations.

3.5 Mathematics Curriculum Management in Rural and Under-Resourced Contexts

3.5.1 Resource Constraints

Many rural schools experience shortages of learning materials, technological infrastructure, and financial resources necessary for effective curriculum implementation. These shortages create additional management challenges for SMTs (Neluheni, 2023).

3.5.2 Staffing Challenges

Rural schools often experience teacher shortages, high staff turnover, and limited access to mathematics specialists. Such challenges increase SMT workload and reduce opportunities for curriculum support and monitoring (Mestry, 2019).

3.5.3 District Support

District offices play an important role in supporting curriculum implementation. However, studies indicate that district support frequently focuses on administrative compliance rather than instructional leadership development (Naidoo, 2021).

Limited district support may therefore hinder SMTs' capacity to manage the mathematics curriculum effectively.

3.5.4 Community and Parental Involvement

Parental and community support contribute significantly to learner achievement and curriculum success. However, socio-economic challenges in rural communities often limit parental involvement in educational activities (Mutongoza, Olawale & Mzilikazi, 2021).

This places additional responsibility on SMTs to create partnerships that support learner achievement.

3.6 Empirical Studies on SMT Experiences

3.6.1 South African Studies

Collectively, South African studies reveal a consistent pattern. While SMTs are expected to function as curriculum leaders, their experiences are frequently characterised by tensions between policy expectations and contextual realities. Studies conducted by Ntuli (2018), Mestry (2019), and Naidoo (2021) suggest that curriculum management effectiveness is influenced less by policy prescriptions and more by the capacity of SMTs to negotiate contextual constraints such as resource shortages, inadequate support, and competing administrative responsibilities. Although these studies provide valuable insights into curriculum leadership, they focus predominantly on curriculum implementation processes, school effectiveness, or leadership practices. Comparatively little attention has been directed towards understanding how SMT members themselves experience the management of the mathematics curriculum in rural primary schools.

3.6.2 International Studies

International literature similarly emphasises the importance of instructional leadership, teacher support, and curriculum monitoring in improving learner outcomes (Hallinger, 2011; Fullan, 2014).

Studies conducted across different educational systems suggest that curriculum implementation challenges are often linked to leadership capacity, resource availability, and contextual factors affecting schools (Senge, 2006).

3.6.3 Synthesis of Findings

The literature demonstrates that effective mathematics curriculum management requires strong instructional leadership, continuous teacher support, adequate resources, and supportive organisational systems.

However, many studies focus primarily on learner achievement, teacher practices, or general leadership responsibilities. Comparatively little attention has been given to understanding how SMT members themselves experience the management of the mathematics curriculum.

3.7 Research Gap

Existing literature provides substantial insight into instructional leadership, curriculum management, and the roles of School Management Teams in South African schools. However, limited research has specifically explored how SMT members themselves experience the management of the mathematics curriculum in primary schools situated in rural and under-resourced contexts such as the OR Tambo Coastal District. Most studies focus on learner achievement, teacher practices, or general leadership responsibilities rather than the perspectives of SMT members responsible for curriculum management. Consequently, there remains insufficient understanding of how SMTs navigate curriculum leadership responsibilities, contextual challenges, and support mechanisms in managing the mathematics curriculum within rural primary school settings. This study therefore seeks to address this gap by exploring SMTs' experiences of mathematics curriculum management in the OR Tambo Coastal District.

3.8 Summary

This chapter critically reviewed literature relevant to the experiences of School Management Teams (SMTs) in managing the mathematics curriculum in primary schools. The review was structured progressively from the broader South African curriculum context to the more specific realities of mathematics curriculum management within rural and under-resourced school environments. The chapter established that the Curriculum and Assessment Policy Statement (CAPS) provides the policy framework that guides curriculum implementation and assigns SMTs significant responsibilities for curriculum planning, monitoring, support, evaluation, and instructional leadership.

The literature demonstrated that curriculum management extends beyond administrative compliance and requires SMTs to exercise instructional leadership that directly influences teaching quality, teacher development, curriculum coverage, assessment practices, and learner achievement. Instructional leadership emerged as a central component of effective curriculum management, requiring SMTs to monitor classroom practice, support teacher professional development, analyse learner performance data, and create conditions conducive to effective teaching and learning. Studies further indicate that schools characterised by strong instructional leadership tend to demonstrate improved curriculum implementation and enhanced learner outcomes, particularly in Mathematics where sustained instructional support is essential for learner success (Hallinger, 2011; Leithwood et al., 2020).

The review further highlighted the complexity of mathematics curriculum management. Mathematics remains one of the most challenging learning areas within South African primary schools due to curriculum demands, teacher content knowledge requirements, assessment expectations, and persistent learner underachievement. Consequently, SMTs are expected not only to manage curriculum processes but also to provide subject-specific support, monitor curriculum pacing, facilitate teacher development, and implement intervention strategies aimed at improving learner performance. Effective mathematics curriculum management therefore requires a combination of curriculum leadership, pedagogical support, assessment monitoring, and resource coordination.

A significant body of literature revealed that these responsibilities are often undertaken within contexts characterised by severe resource constraints. Rural and under-resourced schools continue to experience shortages of qualified teachers, inadequate learning and teaching

support materials, limited technological infrastructure, overcrowded classrooms, socio-economic challenges, and insufficient parental support. Such contextual realities substantially influence the capacity of SMTs to perform their curriculum management responsibilities effectively. Research consistently demonstrates that rurality is not merely a geographical condition but a systemic factor that shapes leadership practices, resource availability, instructional support, and curriculum implementation processes. SMTs operating within rural contexts therefore experience curriculum management differently from their counterparts in more resourced environments. (ResearchGate)

The chapter also reviewed empirical studies on SMT leadership and curriculum management. Existing South African and international literature provides valuable insights into instructional leadership, curriculum management practices, teacher support mechanisms, and leadership challenges within schools. However, much of the existing scholarship focuses on learner achievement, teacher practices, school effectiveness, or general leadership responsibilities. While these studies contribute significantly to understanding curriculum leadership, they provide limited insight into how SMT members themselves experience the day-to-day management of the mathematics curriculum, particularly within rural primary school contexts.

The synthesis of literature therefore revealed a clear research gap. Although curriculum leadership, instructional leadership, and mathematics education have been extensively researched, limited attention has been given to the lived experiences of SMT members responsible for managing the mathematics curriculum in rural and under-resourced primary schools. Furthermore, little is known about how SMTs navigate contextual challenges, interpret their curriculum management roles, and implement support strategies within districts such as OR Tambo Coastal in the Eastern Cape Province. This gap is particularly important because understanding SMT experiences may provide valuable insights into the factors that facilitate or constrain effective mathematics curriculum management.

Accordingly, this study seeks to address this gap by exploring the experiences of SMTs in managing the mathematics curriculum in primary schools within the OR Tambo Coastal District. By foregrounding SMT members' perspectives, the study aims to contribute to a deeper understanding of curriculum leadership within rural contexts and to generate evidence that may inform policy, professional development programmes, district support initiatives, and

school-level interventions aimed at strengthening mathematics curriculum management and improving learner achievement.

The next chapter presents the research methodology employed to investigate SMTs' experiences of managing the mathematics curriculum in primary schools within the OR Tambo Coastal District of the Eastern Cape Province.

CHAPTER FOUR
RESEARCH METHODOLOGY AND DESIGN

4.1 Introduction

This chapter presents the research methodology and design employed in the study entitled *Experiences of School Management Teams in Managing the Mathematics Curriculum in Primary Schools in the OR Tambo Coastal District of the Eastern Cape Province*. The chapter outlines the philosophical assumptions underpinning the study, the research paradigm, research approach, and research design. It further describes the study setting, population, sampling procedures, participants, data collection methods, data analysis procedures, strategies employed to ensure trustworthiness, ethical considerations, and the limitations and delimitations of the study.

The study was located within an interpretivist paradigm and adopted a qualitative case study design. The purpose of the study was not to measure Mathematics performance statistically, test hypotheses, or determine the effectiveness of specific interventions. Rather, the study sought to understand how School Management Team (SMT) members experience, interpret, and manage the mathematics curriculum within the contexts of their schools. Through an in-depth exploration of selected primary schools in the OR Tambo Coastal District, the study sought to generate rich descriptions of SMTs' experiences, perceptions, practices, and challenges associated with Mathematics curriculum management.

Data were generated from SMT members through semi-structured interviews, focus group discussions, document analysis, and researcher field notes. The use of multiple sources of data enabled a comprehensive understanding of participants' experiences and the contexts within which Mathematics curriculum management occurs. The chapter concludes by explaining how the collected data were analysed and interpreted to answer the research questions guiding the study.

4.2 Research Paradigm

This study was underpinned by the interpretivist paradigm. Interpretivism is based on the assumption that reality is socially constructed and that individuals develop meanings through their interactions, experiences, and engagement with their social environments. Rather than

seeking a single objective reality, interpretivist researchers aim to understand how people make sense of their experiences and how they interpret the situations in which they find themselves.

The interpretivist paradigm was considered appropriate for this study because the research sought to explore and understand the experiences of School Management Team members in managing the Mathematics curriculum in primary schools. SMT members perform their curriculum management responsibilities within specific school contexts and develop their own understandings of curriculum leadership, policy implementation, teacher support, assessment management, and learner performance monitoring. Consequently, their experiences cannot be fully understood through objective measurement alone but require an exploration of the meanings they attach to their work and the challenges they encounter.

The study therefore sought to understand how SMT members interpret their roles and responsibilities in managing the mathematics curriculum, how they make sense of curriculum management challenges, and how they respond to contextual realities within their schools. Through semi-structured interviews, focus group discussions, document analysis, and researcher field notes, participants were given opportunities to describe and reflect on their experiences in their own words.

The interpretivist paradigm guided the researcher in collecting rich, descriptive qualitative data and in interpreting participants' accounts within the contexts in which they occurred. The paradigm was therefore well suited to the purpose of the study, which was not to test hypotheses or measure variables, but to gain an in-depth understanding of how SMT members experience, explain, and manage the mathematics curriculum in selected primary schools in the OR Tambo Coastal District.

4.3 Research Approach

This study adopted a qualitative research approach. Qualitative research is concerned with understanding and interpreting participants' experiences, perceptions, meanings, and actions within their natural settings. It seeks to provide rich and detailed descriptions of social phenomena by exploring how individuals understand and make sense of their experiences.

The qualitative approach was considered appropriate for this study because the research sought to explore the experiences of School Management Team (SMT) members in managing the mathematics curriculum in primary schools. The study aimed to gain an in-depth understanding

of how SMT members perceive their curriculum management responsibilities, the challenges they encounter, the strategies they employ, and the meanings they attach to their experiences within their specific school contexts.

The qualitative approach aligns with the interpretivist paradigm underpinning this study, as both emphasise understanding participants' perspectives and interpreting the meanings they construct from their experiences. Through direct engagement with SMT members, the researcher was able to obtain rich, descriptive accounts of curriculum management practices that would not have been adequately captured through quantitative methods.

Furthermore, the study was not intended to measure Mathematics performance statistically, test hypotheses, establish causal relationships, or determine the effectiveness of particular interventions. Rather, it sought to understand how SMT members experience, explain, and manage the mathematics curriculum within the realities of their schools. The qualitative approach therefore provided an appropriate means of exploring these experiences in depth and within their natural contexts.

The approach also enabled the use of multiple qualitative data sources, including semi-structured interviews, focus group discussions, document analysis, and researcher field notes, thereby facilitating a comprehensive understanding of SMTs' experiences of Mathematics curriculum management.

4.4 Research Design

The study employed a qualitative exploratory research design to explore and understand School Management Teams' experiences of managing the mathematics curriculum in primary schools. A case study design facilitates an in-depth exploration of a contemporary phenomenon within its real-life context, particularly when the boundaries between the phenomenon and the context are not clearly evident. The design enables researchers to develop a detailed understanding of participants' experiences, practices, and interactions within a specific setting.

The case study design was considered appropriate for this study because the research sought to understand how School Management Team (SMT) members experience and manage the mathematics curriculum within the contexts of their schools. Mathematics curriculum management is influenced by a range of school-based and contextual factors, including leadership practices, teacher capacity, learner performance, resource availability, district

support, and school-specific conditions. A case study design therefore provided an opportunity to examine these issues holistically within their natural settings.

In this study, the selected public primary schools in the OR Tambo Coastal District constituted the bounded cases. The study focused on SMT members, namely principals, deputy principals, and heads of department, within these schools. By concentrating on a small number of carefully selected schools, the researcher was able to obtain rich and detailed accounts of participants' experiences of managing the mathematics curriculum.

The case study design enabled the researcher to:

• Explore SMT members' experiences and perceptions of Mathematics curriculum management in depth;

• Examine the contextual factors that influence curriculum management practices within schools;

• Investigate how SMTs interpret and respond to curriculum management challenges in their specific school environments;

• Draw on multiple sources of data, including semi-structured interviews, focus group discussions, document analysis, and researcher field notes; and

• Generate rich, contextualised descriptions of SMTs' experiences in managing the mathematics curriculum.

The purpose of the case study was not to produce statistically generalisable findings but to develop a detailed understanding of SMTs' experiences within selected primary school contexts. The findings may therefore provide valuable insights into curriculum management practices in similar rural and under-resourced school settings.

4.5 Study Setting

The study was conducted in selected public primary schools located within the OR Tambo Coastal District of the Eastern Cape Province, South Africa. The district comprises predominantly rural and semi-urban communities and serves schools that operate under diverse socio-economic and educational conditions. Many schools within the district experience

challenges such as limited teaching and learning resources, inadequate infrastructure, teacher shortages, large learner enrolments, and varying levels of parental and community support.

The OR Tambo Coastal District was selected as the setting for this study because it has consistently faced challenges associated with curriculum implementation and learner performance, particularly in Mathematics. These challenges place significant demands on School Management Teams (SMTs), who are expected to provide instructional leadership, support teachers, monitor curriculum delivery, and implement strategies to improve learner achievement despite contextual constraints.

The district therefore provided an appropriate context for exploring SMTs' experiences of managing the mathematics curriculum. The selected primary schools offered opportunities to examine how SMT members interpret and carry out their curriculum management responsibilities within rural and semi-urban school environments characterised by varying levels of resources and support.

The study setting was particularly relevant to the research problem because the experiences of SMTs are shaped by the contextual realities within which they work. Factors such as resource availability, school infrastructure, staffing levels, district support, learner socio-economic circumstances, and community conditions influence how SMTs manage the mathematics curriculum. Exploring these experiences within the OR Tambo Coastal District therefore enabled the researcher to develop a contextually grounded understanding of Mathematics curriculum management in primary schools.

The findings of the study should be understood within the context of the participating schools and the broader realities of the OR Tambo Coastal District. While the study does not seek statistical generalisation, it may provide useful insights into curriculum management experiences in similar rural and under-resourced primary school contexts.

4.6 Target Population

The target population consisted of members of School Management Teams (SMTs) in public primary schools. SMTs typically include:

- Principals
- Deputy principals
- Heads of Department (HODs)

These members were selected because they play a central role in planning, supervising, monitoring, and supporting the implementation of the mathematics curriculum. The following table outlines the population that was targeted for inteviews.

4.7 Population, Sampling Strategy and Sample Size

4.7.1 Population

The target population for this study comprised School Management Team (SMT) members serving in public primary schools within the OR Tambo Coastal District of the Eastern Cape Province. SMTs in South African schools typically consist of principals, deputy principals, and heads of department who are responsible for curriculum leadership, implementation, monitoring, and support. Because the study sought to explore experiences of managing the mathematics curriculum, SMT members constituted the most appropriate population from which participants could be selected.

4.7.2 Sampling Strategy

The study employed purposive sampling to select both participating schools and participants. Purposive sampling involves the deliberate selection of information-rich participants who possess knowledge and experience relevant to the phenomenon under investigation.

Six public primary schools were purposively selected from the OR Tambo Coastal District. The schools were selected because they provided contexts within which SMTs were actively involved in managing the mathematics curriculum. Within the selected schools, SMT members were invited to participate based on their curriculum management responsibilities and their experience in school leadership.

Participants were selected because they:

• Were members of the School Management Team;

• Had direct responsibility for Mathematics curriculum management, supervision, or support;

• Were actively involved in curriculum planning, implementation, monitoring, and assessment processes; and

• Had at least two years of experience in curriculum management within their schools.

The study focused exclusively on SMT members because the research aimed to understand their experiences of managing the mathematics curriculum. SMTs occupy leadership positions that place them at the centre of curriculum planning, implementation, monitoring, and support activities. Their experiences were therefore considered most relevant to answering the research questions.

However, the exclusion of teachers, learners, parents, and district officials means that the findings reflect the perspectives of SMT members only. Consequently, the study does not make direct claims regarding the experiences or perceptions of these other stakeholder groups.

4.7.3 Sample Size

The final sample consisted of sixteen (16) SMT members drawn from six selected public primary schools. Participants included principals, deputy principals, and heads of department. The sample size was considered appropriate for a qualitative case study because it enabled the researcher to obtain rich, detailed accounts of participants' experiences while allowing for in-depth analysis of the data.

Table 4.1 presents the distribution of participants across the six participating schools.

Table 4.1: Distribution of Participants

Participants	**School A**	**School B**	**School C**	**School D**	**School E**	**School F**	**Total**
Principal (P)	1	1	1	1	1	1	6
Deputy Principal (DP)	1	1	1	1	0	1	5
Head of Department (HOD)	1	1	1	1	0	1	5
Total	3	3	3	3	1	3	16

All six principals from the selected schools participated in the study. Five deputy principals and five heads of department also participated. School E did not have a deputy principal or head of department available for participation at the time of data collection. Consequently, the final sample comprised six principals, five deputy principals, and five heads of department, resulting in a total of sixteen participants.

Participant recruitment continued until sufficient depth and richness of information had been obtained. During the later stages of data collection, similar patterns, experiences, and themes began to recur across interviews, indicating that data saturation had been achieved. Data collection was therefore concluded when no substantially new information emerged from participants' accounts.

4.7 Data Collection Methods

4.7.1 Semi-Structured Interviews

This study employed multiple qualitative data collection methods, namely semi-structured individual interviews, focus group discussions, document analysis, and researcher field notes. The use of multiple methods allowed for data triangulation and a richer understanding of School Management Teams' (SMTs') experiences in managing the mathematics curriculum in selected primary schools.

4.8.1 Semi-Structured Interviews

Semi-structured individual interviews were the primary data collection method used in this study. This method was appropriate because it allowed the researcher to explore SMT members' experiences in depth while maintaining a flexible interview structure guided by a pre-prepared interview schedule.

The use of semi-structured interviews enabled the researcher to:
• Explore participants' experiences, perceptions, and interpretations of Mathematics curriculum management;
• Use probing and follow-up questions to gain deeper insight into responses; and
• Allow participants to freely express their experiences within their school contexts.

Interviews were conducted with principals, deputy principals, and heads of department from the selected schools. Each interview lasted approximately 45 minutes and was audio-recorded

with participants' informed consent. Field notes were also taken during and immediately after interviews to capture non-verbal cues and contextual observations.

4.8.2 Focus Group Discussions (FGDs)

Focus group discussions were used as a complementary data collection method to generate interactive data through group dialogue among SMT members. The use of FGDs was appropriate for this study because it enabled participants to share and reflect on collective experiences of managing the Mathematics curriculum, while also allowing the researcher to observe interaction patterns, agreement, and differing viewpoints among SMT members.

In this study, FGDs were conducted to:
• Explore shared experiences of curriculum management challenges and strategies;
• Encourage interaction and discussion among SMT members from different schools; and
• Generate deeper insights through group reflection and dialogue.

The FGDs were facilitated by the researcher, who acted as moderator and guided the discussion using a semi-structured discussion guide aligned with the research questions. The researcher ensured that all participants had opportunities to contribute, while maintaining focus on the study objectives.

Prior to the discussions, ground rules were established to promote respectful and orderly participation. These included allowing one participant to speak at a time, avoiding interruptions, switching off mobile phones, and respecting differing viewpoints. The researcher also ensured that the environment was conducive to open and honest discussion.

The FGDs were audio-recorded with participants' consent and lasted approximately 60 minutes. Sixteen (16) SMT members participated in the FGDs, drawn from the six selected schools. Although eighteen (18) participants were initially expected, two participants were unavailable on the day of data collection.

4.8.3 Researcher Role, Field Notes, and Ethical Considerations

During both interviews and FGDs, the researcher assumed the role of facilitator and observer. The researcher guided discussions, ensured ethical compliance, and recorded relevant contextual observations through field notes. These field notes captured non-verbal

communication, group dynamics, participant interactions, and contextual factors that could not be fully captured through audio recordings.

All interviews and FGDs were conducted in accordance with ethical requirements. Participants provided informed consent for participation and audio recording. Confidentiality and anonymity were ensured throughout the study, and participants were informed of their right to withdraw at any stage without penalty.

4.8.4 Data Management and Analysis Preparation

All audio recordings were securely stored and transcribed verbatim for analysis. Field notes were integrated with interview and FGD transcripts to provide contextual depth during analysis. Data from interviews and FGDs were then coded thematically in preparation for analysis in Chapter 5, ensuring alignment with the research questions and theoretical framework.

4.8.2 Document Analysis

Document analysis was used as a supplementary data source to support and contextualise information obtained through interviews and focus group discussions. The purpose of document analysis was not to generate stand-alone findings but rather to provide additional evidence regarding curriculum management practices within the participating schools.

The documents reviewed included:

• School Improvement Plans (SIPs);

• Mathematics subject plans and work schedules;

• Curriculum monitoring tools and records;

• Assessment schedules and moderation records; and

• Relevant Department of Basic Education circulars and curriculum management documents.

These documents were purposively selected because they were directly related to curriculum planning, implementation, monitoring, and assessment in Mathematics. The researcher

reviewed the documents to identify evidence of curriculum management processes, monitoring practices, assessment procedures, and intervention strategies referred to by participants during interviews and focus group discussions.

Document analysis served primarily as a means of triangulating information obtained from participants. The documents provided contextual information and helped verify certain curriculum management practices described by SMT members. However, the findings of the study were derived primarily from interview and focus group discussion data, with document analysis serving a supportive and corroborative role.

4.8.4 Researcher Field Notes

Researcher field notes were maintained throughout the data collection process. The field notes were not treated as a separate primary source of data but were used to record contextual observations that could assist in the interpretation of interview and focus group discussion data.

The field notes included observations relating to:

• Participants' non-verbal communication and reactions;

• Group interactions during focus group discussions;

• The school environment and contextual conditions observed during site visits;

• Reflections on emerging issues relevant to Mathematics curriculum management; and

• Methodological observations that could inform subsequent data analysis.

The field notes were reviewed alongside interview transcripts, focus group discussion transcripts, and documents during the analysis process. They assisted the researcher in providing contextual understanding and supporting the interpretation of participants' experiences.

4.9 **Data Analysis**

The study employed thematic analysis to analyse the qualitative data generated through semi-structured interviews, focus group discussions, document analysis, and researcher field notes.

Thematic analysis was considered appropriate because it enabled the identification, organisation, and interpretation of recurring patterns and themes relating to SMTs' experiences of managing the Mathematics curriculum.

Data analysis commenced immediately after data collection and followed a systematic process:

1. Audio-recorded interviews and focus group discussions were transcribed verbatim.
2. The researcher read and re-read the transcripts, field notes, and relevant documents to gain familiarity with the data and develop an overall understanding of participants' experiences.
3. Initial codes were generated by identifying meaningful statements, ideas, and issues relevant to the research questions.
4. Similar codes were grouped into broader categories representing related concepts and experiences.
5. Categories were reviewed and refined to develop overarching themes and sub-themes that captured patterns across the data set.
6. The themes were interpreted in relation to the research questions, the reviewed literature, and the theoretical framework underpinning the study.

Manual coding was used throughout the analysis process. This involved systematically examining the data, identifying recurring ideas and patterns, and organising them into meaningful thematic categories. The researcher continuously compared data from interviews, focus group discussions, documents, and field notes to enhance the credibility and trustworthiness of the findings.

The resulting themes provided the basis for the presentation and discussion of findings in Chapter Five. These themes were subsequently interpreted through the lenses of Instructional Leadership Theory, Curriculum Management Theory, Constructivist Theory, and Systems Theory to develop an in-depth understanding of SMTs' experiences in managing the mathematics curriculum.

4.9 Trustworthiness

To ensure the quality, rigor, and trustworthiness of the study, the criteria proposed by Guba and Lincoln (1985), namely credibility, transferability, dependability, and confirmability, were applied throughout the research process.

4.9.1 Credibility

Credibility refers to the extent to which the findings accurately represent participants' experiences and perspectives. To enhance credibility, several strategies were employed:

• Prolonged engagement with participants and the research setting to gain a deeper understanding of SMTs' experiences of managing the Mathematics curriculum;

• Member checking, whereby participants were given opportunities to verify the accuracy of interpretations and clarify meanings where necessary;

• Triangulation of multiple data sources, including semi-structured interviews, focus group discussions, document analysis, and researcher field notes; and

• The use of verbatim quotations during data presentation to ensure that participants' voices were accurately represented.

These strategies contributed to a credible and authentic representation of SMTs' experiences.

4.9.2 Transferability

Transferability refers to the extent to which the findings may be applicable to other contexts with similar characteristics. In qualitative research, transferability is facilitated through the provision of rich and detailed descriptions that enable readers to determine whether the findings are relevant to their own contexts.

In this study, transferability was enhanced through detailed descriptions of the research setting, participant characteristics, school contexts, and data collection processes. Such descriptions provide sufficient contextual information to enable readers to assess the extent to which the findings may be applicable to other settings.

Although the findings cannot be statistically generalised beyond the participating schools, they may offer useful insights for schools operating in similar rural and under-resourced contexts

where SMTs are expected to manage the Mathematics curriculum under conditions of limited staffing, resources, and subject-specific support.

4.9.3 Dependability

Dependability refers to the consistency and stability of the research process over time. To enhance dependability, the researcher maintained a systematic and transparent record of all stages of the research process.

The study ensured dependability through:

• A clear description of the research design, sampling procedures, data collection methods, and data analysis process;

• The use of an interview guide and focus group discussion guide aligned with the research questions;

• The maintenance of an audit trail documenting methodological decisions and research procedures; and

• The systematic application of thematic analysis across all data sources.

These measures provide evidence of how the findings were generated and allow readers to follow the logic of the study.

4.9.4 Confirmability

Confirmability refers to the extent to which the findings are grounded in participants' experiences rather than the researcher's personal assumptions or biases.

To enhance confirmability, the researcher maintained reflective field notes throughout the study and engaged in ongoing self-reflection regarding personal assumptions and interpretations. In addition, the use of multiple data sources, including interviews, focus group discussions, documents, and field notes, contributed to data triangulation and reduced the likelihood of researcher bias influencing the findings.

Furthermore, direct quotations from participants were used during the presentation of findings to demonstrate that interpretations were grounded in the data collected from participants.

4.10 Ethical Considerations

Ethical clearance was obtained from the relevant university ethics committee and permission was sought from the Provincial Department of Education in the Eastern Cape.

The following ethical principles were upheld:

- Informed consent: Participants were informed about the purpose of the study and signed consent forms.
- Confidentiality: Pseudonyms were used to protect participants' identities.
- Voluntary participation: Participants were informed of their right to withdraw at any time without penalty.
- Anonymity: Schools and individuals were not identified in the report.

4.11 Ethical Considerations

Ethical clearance for the study was obtained from the relevant university research ethics committee. Permission to conduct the study was also obtained from the Eastern Cape Department of Education and the relevant district authorities before data collection commenced.

The study adhered to the following ethical principles:

• **Informed Consent:** Participants were provided with detailed information regarding the purpose, procedures, benefits, and potential risks of the study. Written informed consent was obtained prior to participation.

• **Voluntary Participation:** Participation in the study was entirely voluntary. Participants were informed that they could withdraw from the study at any stage without any negative consequences.

• **Confidentiality:** Information provided by participants was treated as confidential. Data were securely stored and accessed only by the researcher and authorised supervisors.

• **Anonymity:** Pseudonyms and identification codes were used to protect the identities of participants and schools. No identifying information appears in the reporting of the findings.

• **Protection from Harm:** The researcher ensured that participation did not expose participants to physical, psychological, professional, or social harm. Interviews and discussions were conducted in a respectful and professional manner.

• **Permission to Record:** Participants were informed about the use of audio recording devices during interviews and focus group discussions and provided consent for recordings to be made.

The researcher remained committed to conducting the study with integrity, respect, and adherence to accepted ethical standards throughout the research process.

4.12 Limitations of the Study

This study is subject to several limitations that should be considered when interpreting the findings.

Firstly, the study employed a qualitative case study design and involved a relatively small purposively selected sample of School Management Team members from selected primary schools in the OR Tambo Coastal District. Consequently, the findings cannot be statistically generalised to all primary schools in the Eastern Cape Province or South Africa. The purpose of the study, however, was to gain an in-depth understanding of SMTs' experiences in managing the mathematics curriculum within their specific contexts.

Secondly, the study relied predominantly on self-reported data collected through semi-structured interviews and focus group discussions. Participants may have unintentionally omitted certain information, provided selective accounts of their experiences, or responded in ways perceived to be socially acceptable. These factors may have influenced the completeness and accuracy of the data.

Thirdly, although document analysis was used to support triangulation, the availability, consistency, and completeness of documents varied across participating schools. This

limited the extent to which documentary evidence could fully corroborate participants' accounts.

Furthermore, limited direct observation of curriculum management practices was undertaken. As a result, the findings are primarily based on participants' descriptions and interpretations rather than extensive observation of actual classroom or management practices.

In addition, practical constraints related to time and access limited the number of participating schools and SMT members. Consequently, some experiences within the district may not have been captured.

Finally, the study was conducted within the specific socio-economic and educational context of the OR Tambo Coastal District. Therefore, findings should be interpreted within this context. Although the findings cannot be statistically generalised, they may provide useful insights for similar rural and under-resourced contexts where SMTs manage the mathematics curriculum under conditions of limited staffing, resources, and subject-specific support.

4.13 Delimitations of the Study

The study was conducted within clearly defined boundaries established by the researcher.

Firstly, the study was confined to selected public primary schools in the OR Tambo Coastal District of the Eastern Cape Province.

Secondly, the study focused exclusively on School Management Team members, namely principals, deputy principals, and heads of department, as it sought to explore their experiences in managing the mathematics curriculum.

Thirdly, the investigation was limited to the management of the mathematics curriculum and did not include other learning areas.

Finally, the study adopted a qualitative case study design to obtain an in-depth understanding of SMTs' experiences. These delimitations ensured a focused and manageable scope while generating rich and contextual insights

4.14 Chapter Summary

This chapter presented the research methodology and design adopted for the study. The study was located within an interpretivist paradigm and employed a qualitative case study design to explore School Management Teams' (SMTs') experiences in managing the mathematics curriculum in selected primary schools in the OR Tambo Coastal District.

The chapter described the study setting, population, sampling strategy, and a sample of sixteen SMT members comprising principals, deputy principals, and heads of department from six selected schools. It further outlined the data collection methods, namely semi-structured interviews, focus group discussions, document analysis, and researcher field notes.

The chapter also explained the thematic analysis process used to analyse the data, including transcription, coding, categorisation, theme development, and interpretation guided by the research questions and theoretical framework. Trustworthiness measures and ethical considerations were also discussed.

Overall, this chapter provides a transparent account of how the study was conducted and how the findings were generated. The next chapter presents the findings of the study, focusing on SMTs' experiences of managing the mathematics curriculum in the selected primary schools.

CHAPTER FIVE
DATA ANALYSIS AND INTERPRETATION

5.1 INTRODUCTION

This chapter presents and analyses the experiences of School Management Team members regarding the management of the mathematics curriculum in primary schools. Guided by an interpretivist qualitative case study approach, the chapter explores the lived experiences of SMT members and examines the meanings they attach to their curriculum management practices.

The findings are presented and interpreted in relation to the study objectives, research questions and the Instructional Leadership Theory underpinning the study. While the chapter reports participants' experiences, its primary purpose is to provide an in-depth interpretation of what these experiences reveal about mathematics curriculum management in rural primary school contexts. The analysis therefore focuses not only on what participants reported, but also on the significance of their experiences, how these experiences influence curriculum implementation, and what they imply for effective mathematics curriculum leadership and management.

Where appropriate, comparisons are drawn across SMT positions, including principals, deputy principals and heads of department, as well as across participating schools, to illuminate similarities and differences in curriculum management experiences and practices. The findings are organised into themes and sub-themes that emerged from the analysis of interview and focus group discussion data. Each theme is presented through participant evidence, analytical interpretation and discussion of its implications for mathematics curriculum management.

This chapter is guided by the following main research question:

What are the experiences of School Management Teams in managing the mathematics curriculum in primary schools in the OR Tambo Coastal District of the Eastern Cape Province?

The chapter further addresses the following subsidiary research questions:

• What are the experiences of School Management Teams in managing the mathematics curriculum in primary schools in the OR Tambo Coastal District of the Eastern Cape Province?

• What programmes are in place to close the gap in managing the mathematics curriculum?

• Which intervention strategies can be implemented to ensure adequate management of the mathematics curriculum?

• What recommendations can be made to empower School Management Teams to manage the mathematics curriculum effectively?

5.2 DATA ANALYSIS AND INTERPRETATION

The analysis of the data was guided by the thematic analysis procedures outlined in Chapter Four. Interview and focus group discussion transcripts were systematically reviewed, coded and organised into categories to identify recurring patterns, meanings and experiences related to mathematics curriculum management. In line with the six stages of thematic analysis proposed by Islam (2022:7), the researcher familiarised himself with the data, generated initial codes, searched for themes, reviewed and refined themes, defined and named themes, and subsequently produced the analytical report.

Furthermore, Conte and Davison's (2020:3–4) approach to organising qualitative data into meaningful categories was utilised to facilitate interpretation. Similar categories were grouped together, reduced and refined according to their relevance to the study objectives and research questions. This process resulted in the identification of five themes and seven sub-themes that form the basis of the findings presented in this chapter.

The analysis focused on understanding the lived experiences of SMT members and interpreting the implications of these experiences for mathematics curriculum management within the participating primary schools.

5.3 DEMOGRAPHIC DATA OF THE SAMPLE

Data were collected through semi-structured interviews, especially with individual SMT members, and FGD interviews. Ten female participants ranged from 46 to 55 years. The six

male participants also spanned the same age category. The experiences of SMTs as teachers ranged from six to 21 years and above, while the experiences of SMT members who managed the mathematics curriculum ranged from two to four years. Participants' qualifications for teaching mathematics were analysed. Their highest qualifications ranged from bachelor's degree to master's degree level. The study also analysed ethnic groups. These demographic details are presented in the form of tables.

Table 5.1: Age distribution and ethnic group of participants

Gender	Age ranges	Ethnic group	Number of participants
Female	46 – 55	Black	10
Male	46- 55	Black	6
Total			**16**

Of the 16 SMT participants, 10 females ranged between the age groups of 46 to 55 years, and six males were in the same age group.

Table 5.2: Highest qualification

Qualifications	Number
Bachelor's degree	6
Advanced Certificate in Education	2
Honours degree	7
Master's degree	1
Total	**16**

Among the SMT participants interviewed, a few held an Advanced Certificate in Education, while the least number held a Master's degree. The majority of participants had an Honours degree.

Table 5.3: Work experience of school management teams

Total number of participants sampled	Description	SMTs work experiences	SMTs' work experience in managing the mathematics curriculum

16	Work experience Ranges	6 – 21 years	2 – 4 years

All SMT working experiences ranged from six to 21 years, while their working experiences in managing mathematics curriculum ranged from two to four years.

Table 5.4: Description of school management teams

Code	Description	Total
P	Principal	5
DP	Deputy Principal	4
DH	Head of Department/Departmental Head	4
P	Acting Principal	1
DP	Co-opted Deputy Principal	1
DH	Co-opted Departmental Head/ Head of Department	1
Total number of participants		**16**

Table 5.4 above narrates the description of the coding.

Table 5.5: Category of school management teams according to their schools and their availability

Schools	SMTs coding	Present/Absent
A	P-A	Present
	DP-A	Present
	DH-A	Present
B	P-B	Present
	DP-B	Present
	DH-C	Present
C	P-C	Present
	DP-C	Present

	DH-C	Present
D	P-D	Present
	DP-D	Present
	DH-D	Present
E	P-E	Present
	DP-E	Absent
	DH-E	Absent
F	P-F	Present
	DP-F	Present
	DH-F	Present
Total	**16**	

Of the 18 invited SMTs, 16 participants availed themselves, two SMTs were unavailable, and both the DP and DH were from School F.

5.4 THEMATIC PRESENTATION OF FINDINGS

The analysis of data generated through semi-structured interviews and focus group discussions resulted in the identification of five major themes and seven sub-themes. These themes emerged through a process of thematic analysis and represent the collective experiences, perceptions and reflections of School Management Team (SMT) members regarding the management of the mathematics curriculum in primary schools within the OR Tambo Coastal District.

The themes are presented in accordance with the objectives and research questions of the study. Collectively, they illuminate how SMTs experience curriculum management, the challenges that constrain effective implementation, the support systems available to schools, intervention strategies employed to strengthen curriculum delivery, and recommendations for enhancing SMT capacity in mathematics curriculum leadership.

Rather than merely describing participants' views, the themes are interpreted to reveal their implications for mathematics curriculum management and instructional leadership within rural primary school contexts. The findings are supported by verbatim participant extracts,

comparisons across SMT roles and school contexts, and links to the theoretical framework underpinning the study.

Table 5.6: A summary of themes that emerged during that analysis

Themes	Sub-themes
5.4.1 Curriculum management system and innovation (I)	5.4.1.1 Experiences of SMTs in managing the mathematics curriculum (I) 5.4.1.2 Experiences of SMTs in managing the curriculum of the subject when learners do not attend school due to climate change and the pandemic (I & FGD)
5.4.2 Barriers to achieving effective management of teaching mathematics (I & FGD)	5.4.2.1 The SMTs' challenges in achieving effective management of teaching mathematics (I & FGD)
5.4.3 Support systems for managing the mathematics curriculum (I & FGD)	5.4.3.1 Programmes available to close the gap in managing the mathematics curriculum (I & FGD)
5.4.4 Advanced techniques and mechanisms for managing the mathematics curriculum (I & FGD)	5.4.4.1 Available strategies to assist in ensuring the adequate management of the mathematics curriculum (I & FGD) 5.4.4.2 Suggested possible strategies (FGD)
5.4.5 SMT empowerment and capacitating (I)	5.4.5.1 Recommendations on how SMTs can be empowered to manage the mathematics curriculum (I)

I = Interviews; FGD = Focus Group Discussion

The themes presented in Table 5.5 are discussed in the sections that follow. Each theme begins with an analytical statement derived from the data, followed by participant evidence, interpretation of the findings, comparisons across SMT positions and school contexts where applicable, and discussion of the implications for mathematics curriculum management. This approach enables a deeper understanding of the experiences of SMTs and provides a foundation

for the conclusions, recommendations and contributions to knowledge presented in Chapter Six.

5.4.1 Theme 1: Curriculum management system and innovation

5.4.1.1 Sub-theme 1: Experiences of SMTs in managing the mathematics curriculum

The findings revealed that SMT members experienced mathematics curriculum management as a complex leadership responsibility shaped by staffing shortages, curriculum monitoring demands, varying levels of mathematics expertise, and contextual learner challenges. Although participants demonstrated commitment towards improving mathematics teaching and learning, their experiences differed according to their leadership roles, professional backgrounds, and school contexts. Four interrelated categories emerged from the data, namely curriculum monitoring under staffing constraints, mathematics expertise as a leadership resource, curriculum management within challenging learner contexts, and role overload in curriculum leadership.

Category 1: Curriculum Monitoring under Staffing Constraints

A recurring experience reported by participants was the challenge of monitoring curriculum implementation amidst staffing shortages and limited subject-specific leadership structures.

P-A explained:

> "Okay, eh –eh, DP-C is a school manager; there is a problem with non-completion of the syllabus in time and in-service programmes."

This statement suggests that curriculum management challenges extended beyond classroom teaching and included concerns about curriculum coverage and teacher development. The participant's concern regarding non-completion of the syllabus indicates that SMTs were required to monitor curriculum pacing while simultaneously addressing teacher support needs. From an instructional leadership perspective, curriculum coverage remains a critical indicator of curriculum implementation because incomplete syllabus coverage limits learners' opportunities to acquire prescribed mathematical knowledge and skills. Hallinger (2020:22)

argues that instructional leaders are responsible for coordinating curriculum delivery, monitoring implementation, and ensuring that teaching progresses according to planned learning outcomes.

The staffing constraints underlying curriculum monitoring became more evident when DP-A stated:

> "There is no departmental head of mathematics only or of the phase but one departmental head of the whole school. Because I am curriculum head, I have managed all the subjects in all the 15 years of my experience."

Unlike P-A, who focused on curriculum completion challenges, DP-A highlighted the structural realities underpinning those challenges. The quotation demonstrates how curriculum leadership responsibilities were redistributed due to limited staffing structures. Rather than benefiting from specialised mathematics leadership, curriculum management responsibilities were consolidated into broader management roles. This suggests that SMT members frequently managed mathematics alongside numerous other subjects, thereby limiting opportunities for subject-specific instructional support. Leithwood et al. (2020:9) contend that effective instructional leadership requires specialised curriculum oversight, particularly in subjects such as mathematics where conceptual progression and content knowledge are essential for learner success.

Collectively, these findings indicate that curriculum monitoring was often undertaken within constrained staffing environments, reducing opportunities for specialised mathematics supervision and increasing leadership workloads.

Category 2: Mathematics Expertise as a Leadership Resource

The findings further revealed that mathematics content knowledge significantly influenced SMT members' confidence and effectiveness in managing the curriculum.

DH-A explained:

> "Because we are acquitted with workshops, so what I am doing, I am using the guidelines we are given in the workshops … even when I do my supervision I know where to focus."

This response indicates that professional development opportunities enhanced the participant's confidence in supervising curriculum implementation. Workshops appeared to provide practical guidance that enabled SMT members to identify priority areas during curriculum monitoring. The finding suggests that leadership capacity can be strengthened when SMT members receive structured support related to curriculum management. Darling-Hammond et al. (2022:34) argue that professional learning opportunities improve leaders' ability to support teaching and learning through informed instructional supervision.

A contrasting experience emerged from School B where the principal stated:

> "Firstly, as a manager, I taught mathematics since 1987. I enjoyed teaching mathematics and also managing mathematics … you manage in such a way you motivate both the teacher and learners."

Unlike DH-A, who relied primarily on workshop-based support, P-B drew on extensive mathematics teaching experience. The participant's confidence in managing mathematics was closely linked to prior subject expertise. This finding suggests that mathematics knowledge strengthened the participant's ability to support teachers, motivate learners and make informed curriculum decisions. Nguyen (2021) argues that leaders who possess strong curriculum knowledge are better positioned to guide teachers, monitor instructional quality and promote learner achievement.

A critical finding emerging from this comparison is that SMT members with mathematics teaching experience appeared more confident in curriculum supervision than those relying solely on general management knowledge or workshops. This suggests that mathematics curriculum leadership is strengthened when leadership experience is complemented by subject-specific expertise.

Category 3: Curriculum Management within Challenging Learner Contexts

Participants consistently reported that mathematics curriculum management was influenced by broader learner and community challenges.

DP-B explained:

> "We do not associate performance with IQ but also consider social factors... We have our own school policy that talks to what should be done by each teacher."

This quotation demonstrates that curriculum management was informed by an awareness of socio-economic realities affecting learner performance. The participant recognised that mathematics achievement could not be understood solely through academic ability but must also be viewed within the context of poverty, child-headed households and other social challenges. The finding suggests that SMTs were required to balance curriculum accountability with sensitivity to learners' social circumstances. Robinson (2020:42) argues that effective instructional leaders create supportive learning environments while maintaining high academic expectations.

A similar concern emerged from DP-C, who stated:

> "Most learners have a bad attitude toward mathematics; they do not take it seriously … we tried to motivate them."

While DP-B focused on external socio-economic influences, DP-C highlighted learner attitudes towards mathematics as an internal challenge affecting curriculum implementation. The participant described efforts to motivate learners and encourage study groups, indicating that curriculum management involved both instructional and motivational responsibilities.

Together, these findings suggest that SMTs managed mathematics curriculum implementation within complex social and educational contexts. Rather than functioning solely as curriculum supervisors, SMT members assumed broader roles that included learner motivation, social support and academic intervention.

Category 4: Role Overload and Distributed Curriculum Leadership

Another dominant finding concerned the role overload experienced by SMT members who were expected to manage mathematics without specialised training or adequate support structures.

DH-B stated:

> "You know, sir, as DH, you must be clear about mathematics so that you can assist the teacher ... I am not teaching mathematics, but I must know it so that I can be able to assist all the teachers in my phase."

This quotation reveals a significant tension within curriculum management. While the participant recognised the importance of mathematics knowledge for supporting teachers, she simultaneously acknowledged not being a mathematics teacher herself. The finding suggests that SMT members were often expected to supervise mathematics instruction without possessing specialised content knowledge. Onyema et al. (2024) argue that leaders who lack subject-specific expertise often focus on administrative monitoring rather than meaningful pedagogical support.

A similar concern was raised by P-F:

> "My experience will focus on the challenge of maths teachers; I teach Arts and Culture. I do not qualify to teach mathematics as we have a huge shortage of the subject in this school."

The principal highlighted how shortages of qualified mathematics teachers also affected leadership capacity. Mathematics curriculum management became constrained because SMT members were required to oversee a subject in which they had limited formal expertise.

This challenge was further reinforced by DP-F who explained:

> "I am the only departmental head of the school ... I have to monitor all the work."

Unlike DH-B and P-F, who focused on subject expertise, DP-F emphasised workload pressures arising from understaffing. The participant's responsibility for supervising multiple grades and phases illustrates the extent of role overload experienced in under-resourced schools.

Collectively, these findings suggest that mathematics curriculum management in the participating schools was characterised by role overload, distributed leadership responsibilities and limited subject-specific supervision capacity. Consequently, SMT members frequently relied on general management skills rather than specialised mathematics leadership expertise.

Concluding Interpretation of Theme 1

Overall, the findings reveal that SMT members experienced mathematics curriculum management as a multifaceted leadership responsibility shaped by staffing shortages, limited subject-specialist leadership structures, contextual learner challenges and varying levels of mathematics expertise. While some SMT members drew confidence from prior mathematics teaching experience and professional development opportunities, others were required to supervise mathematics instruction without specialised content knowledge. Comparisons across principals, deputy principals and heads of department further revealed that curriculum management responsibilities were unevenly distributed and frequently expanded beyond formally designated roles. Consequently, mathematics curriculum leadership within the participating schools was characterised by a strong commitment to learner achievement but constrained by structural and capacity-related limitations. These findings suggest the need for mathematics-specific leadership development, strengthened staffing structures and targeted support mechanisms to enhance SMT effectiveness in managing the mathematics curriculu

5.4.2 Theme 2: Barriers to achieving effective management of teaching mathematics

5.4.2.1 Sub-theme 1: The SMTs' challenges in achieving effective management of teaching mathematics

The findings revealed that SMTs experienced multiple interconnected barriers that constrained their ability to manage the mathematics curriculum effectively. These barriers extended beyond classroom instruction and influenced curriculum supervision, teacher support, learner performance monitoring, parental involvement, and technology integration. Although the barriers manifested differently across schools, they collectively pointed to systemic challenges affecting the effective management of mathematics teaching and learning.

Analysis of the data revealed four broad categories of barriers:

- Human resource and leadership capacity barriers;
- Home and community support barriers;
- Technological and infrastructure barriers; and
- Curriculum and learner-related barriers.

These barriers did not operate independently. Rather, they interacted to shape the experiences of SMT members in managing the mathematics curriculum.

Category 1: Human Resource and Leadership Capacity Barriers

A dominant finding across interviews and focus group discussions was the shortage of qualified mathematics teachers and the limited mathematics expertise available within some SMT structures.

DH-B explained:

> "I do not have much knowledge of mathematics itself; we have a shortage of maths teachers…"

This statement highlights a challenge that extends beyond staffing shortages. The participant not only reported a shortage of mathematics teachers but also acknowledged limited personal mathematics knowledge. The finding suggests that SMT members were often expected to supervise mathematics instruction without possessing sufficient subject expertise to provide meaningful pedagogical guidance. Consequently, curriculum monitoring was frequently limited to checking lesson plans, Annual Teaching Plans (ATPs), and assessment records rather than evaluating conceptual understanding, learner misconceptions, or the quality of mathematical instruction.

A similar concern emerged in School F, where the principal stated:

> "My experience will focus on the challenge of maths teachers; I teach Arts and Culture. I do not qualify to teach mathematics as we have a huge shortage of the subject in this school."

Unlike DH-B, who highlighted the challenge from a departmental leadership perspective, P-F emphasised the challenge from a whole-school management perspective. The principal

recognised that staffing shortages directly affected the school's ability to provide subject-specific curriculum leadership. The findings suggest that mathematics curriculum management was often delegated to SMT members whose professional training was outside the discipline.

The comparison between DH-B and P-F demonstrates that both middle-level and senior SMT leaders experienced similar challenges, although from different vantage points. Heads of Department tended to focus on their inability to support teachers pedagogically, whereas principals focused on the broader staffing implications for curriculum delivery.

These findings support Instructional Leadership Theory, which emphasises that effective curriculum supervision requires leaders to possess adequate curriculum knowledge to support teacher development and instructional improvement (Hallinger, 2020). Similarly, Spaull (2022) argues that shortages of qualified mathematics teachers remain a significant contributor to poor mathematics performance in South African schools.

The findings further revealed that human resource challenges extended beyond shortages to include issues of professional accountability.

DH-A stated:

> "Some educators do not comply with all the guidelines…"

This finding suggests that SMTs experienced difficulties in ensuring consistent implementation of curriculum policies and instructional expectations. While curriculum compliance is essential for effective curriculum management, participants indicated that some teachers did not fully adhere to prescribed curriculum requirements.

The findings therefore suggest that effective mathematics curriculum management is constrained not only by shortages of qualified personnel but also by limited mathematics leadership capacity and challenges associated with sustaining professional accountability.

Category 2: Home and Community Support Barriers

The findings further revealed that SMTs experienced challenges associated with the socio-economic realities of learners and their families.

DH-B explained:

> "We have learners who live with their grandparents who are illiterate…"

This quotation reveals that mathematics curriculum management is influenced by factors beyond the school environment. Participants associated poor learner performance with limited academic support at home, particularly in households headed by grandparents who lacked the literacy and numeracy skills necessary to assist learners with mathematics activities.

The challenge becomes particularly significant because mathematics requires regular practice, reinforcement, and conceptual consolidation beyond classroom instruction. When learners receive limited support at home, the burden of remediation falls almost entirely on teachers and SMTs.

The findings were reinforced by concerns regarding parental understanding of contemporary mathematics teaching approaches.

DH-F stated:

> "Parents sometimes complain that they don't understand this method of teaching…"

Participants indicated that parents often struggled to understand learner-centred and problem-solving approaches promoted through CAPS. Consequently, parents were unable to provide effective support during homework activities and, in some instances, questioned the legitimacy of current instructional approaches.

The findings suggest that SMTs were required to manage mathematics curriculum implementation within complex socio-economic contexts characterised by limited home support and weak alignment between home and school learning environments.

Research supports these observations. Spaull (2022) identifies caregiver education levels as a significant predictor of mathematics achievement, while Leithwood et al. (2020) emphasise the importance of productive school-family relationships in supporting learner outcomes.

Collectively, the findings indicate that mathematics curriculum management extends beyond school-based instructional processes and requires SMTs to navigate broader social realities that influence learner achievement.

Category 3: Technological and Infrastructure Barriers

Technology-related challenges emerged as another major barrier affecting mathematics curriculum management.

P-F explained:

> "The resources are limited… smart phones for parents, tablets for learners…"

Similarly, P-C reported:

> "Wi-Fi needs electricity and smart boards… as well as knowledge from SMTs, teachers, learners, and parents."

These findings reveal that technology integration was constrained by both infrastructural limitations and digital literacy challenges. Participants reported inadequate access to devices, unreliable internet connectivity, inconsistent electricity supply, and limited digital competence among teachers, SMT members, learners, and parents.

The findings suggest that technological barriers operated at multiple levels. At the infrastructure level, schools lacked adequate resources to support digital learning. At the human capacity level, participants reported limited knowledge regarding the effective use of digital technologies for teaching and curriculum management.

The findings align with Venketsamy and Hu (2022), who found that teachers often struggle to integrate technology into teaching because of inadequate professional development and limited technical support. Similarly, Hallinger (2020) argues that contemporary instructional leadership increasingly requires leaders to develop digital instructional capacity within schools.

The findings therefore suggest that effective mathematics curriculum management now requires digital leadership competencies alongside traditional instructional leadership responsibilities.

Category 4: Curriculum and Learner-Related Barriers

The findings further revealed challenges associated with the nature of the mathematics curriculum itself and the characteristics of the learner population.

P-C remarked:

> "The content of mathematics is wide and complex… from whole numbers to data handling."

Participants described the mathematics curriculum as broad, demanding, and cognitively challenging. SMT members indicated that teachers often struggled to balance curriculum coverage with conceptual understanding, particularly where subject expertise was limited.

The findings further revealed that large class sizes complicated curriculum implementation.

P-C explained:

> "It is difficult to teach big classes and pay individual attention…"

Participants indicated that overcrowded classrooms limited opportunities for individual learner support, formative assessment, and targeted intervention. As a result, learner misconceptions were not always identified and addressed promptly.

Another challenge related to learner mobility.

P-C observed:

> "Most learners came with a content gap in mathematics…"

Participants reported that transferring learners frequently arrived with gaps in prerequisite mathematical knowledge. These gaps disrupted curriculum progression and required teachers to spend additional time on remediation activities.

Taken together, these findings suggest that SMTs experienced difficulties balancing curriculum coverage, learner support, and curriculum progression. The barriers were particularly pronounced in schools characterised by overcrowding, learner mobility, and limited instructional resources.

The findings align with research indicating that mathematics learning is cumulative and that interruptions in learning progression can negatively affect later achievement (DBE, 2011; OECD, 2023).

The findings revealed that barriers to effective mathematics curriculum management were multidimensional and interconnected. SMTs did not experience challenges as isolated events but as overlapping constraints involving human resource shortages, limited mathematics leadership capacity, weak home support systems, technological limitations, curriculum complexity, and learner-related factors. While some barriers originated within schools, others emerged from broader socio-economic and systemic conditions beyond the immediate control of SMTs.

Importantly, the findings suggest that effective mathematics curriculum management is influenced not only by leadership commitment but also by the availability of mathematics expertise, supportive home environments, digital readiness, and responsive learner support systems. The study therefore demonstrates that mathematics curriculum management should be understood as a systemic leadership challenge requiring coordinated interventions at school, community, and policy levels rather than as a purely instructional or administrative responsibility.

5.4.3 Support systems for managing the mathematics curriculum

5.4.3.1 Sub-theme 1: Programmes available to close the gap in managing the mathematics curriculum

The findings revealed that support systems available to SMTs were largely administrative, compliance-oriented and teacher-focused rather than specifically designed to strengthen SMT capacity in mathematics curriculum management. Across the participating schools, SMT members reported limited access to programmes that could enhance their ability to supervise mathematics instruction, support teachers, analyse learner performance data, or coordinate curriculum improvement initiatives. As a result, many SMTs relied on personal experience and school-based practices rather than formal leadership development opportunities.

This finding suggests that while support structures existed within schools, they were not sufficiently aligned to the specialised leadership demands associated with managing the mathematics curriculum.

The findings indicate that programmes intended to support curriculum management focused primarily on appraisal activities, planning processes and parental involvement. Participants reported few structured initiatives specifically aimed at developing SMT competence in mathematics curriculum leadership.

P-F explained:

"Appraisal activities, year plans, open day where parents come to school to see their children's work."

This response demonstrates that support programmes within the school were largely centred on monitoring, planning and stakeholder engagement. Although these activities contribute to school accountability and communication, they do not directly strengthen SMT capacity to supervise mathematics instruction, mentor teachers, analyse learner performance trends, or implement mathematics-specific interventions.

The finding is significant because it suggests that SMT support was directed more towards administrative compliance than instructional leadership development. Consequently, SMT members were expected to manage mathematics curriculum implementation without receiving specialised preparation for this role.

This challenge was also reflected in earlier findings where SMT members reported limited mathematics expertise, shortages of qualified mathematics teachers, and a lack of workshops specifically designed for SMTs managing the mathematics curriculum. Viewed collectively, these findings suggest that support structures available to SMTs were fragmented and insufficiently responsive to the demands of mathematics curriculum leadership.

The finding aligns with Instructional Leadership Theory, which emphasises that effective curriculum leadership requires ongoing professional development, curriculum knowledge, instructional supervision skills, and the ability to monitor learner achievement (Hallinger, 2020:23). Similarly, Leithwood et al. (2020:9) argue that leadership preparation programmes are essential for enabling school leaders to coordinate curriculum improvement effectively.

An important finding emerging from this study is that support systems were not experienced uniformly across schools. For example, School B benefited from a principal with a strong mathematics teaching background, which provided an informal source of curriculum support. In contrast, schools with limited mathematics expertise among SMT members relied primarily on administrative processes such as appraisal activities and year planning. This suggests that the effectiveness of support systems was often dependent on individual expertise rather than institutionalised leadership development programmes.

Therefore, the study contributes evidence that mathematics curriculum management requires dedicated SMT support structures beyond general school management programmes. The absence of mathematics-specific leadership development emerged as a significant gap across the participating schools and provides a strong basis for recommending targeted SMT empowerment programmes in Chapter 6.

5.4.3 Theme 3: Support Systems for Managing the Mathematics Curriculum

Theme 3 explores the support systems available to assist SMTs in managing the mathematics curriculum. Support systems refer to the institutional, professional and community-based structures intended to strengthen curriculum implementation, support teachers and improve learner achievement. Instructional Leadership Theory (ILT) identifies the development of teachers and the creation of supportive conditions for teaching and learning as core responsibilities of school leaders (Hallinger, 2020:23). Effective mathematics curriculum management therefore depends not only on the competence of SMTs but also on the availability of support structures that enable them to perform their instructional leadership roles effectively.

The findings revealed that although schools had some support mechanisms in place, these were predominantly administrative and compliance-oriented rather than specifically designed to strengthen mathematics curriculum leadership. Participants consistently referred to appraisal systems, year planning processes and parental engagement activities as sources of support. However, very few participants reported receiving structured programmes that specifically developed SMT capacity in mathematics curriculum management.

5.4.3.1 Sub-theme 1: Programmes Available to Close the Gap in Managing the Mathematics Curriculum

The findings revealed that support programmes available to SMTs focused mainly on accountability, planning and communication with stakeholders. While these initiatives assisted schools in monitoring curriculum implementation, they provided limited opportunities for SMTs to develop specialised competencies required for mathematics curriculum leadership.

P-F explained:

> "Appraisal activities, year plans, open day where parents come to school to see their children's work."

The participant identified appraisal activities, annual planning processes and open days as mechanisms used to support curriculum implementation. These activities demonstrate that schools had established systems for monitoring teacher performance and communicating learner progress to parents. However, the participant's response also suggests that support was largely directed towards administrative compliance rather than strengthening SMTs' capacity to lead mathematics instruction.

The emphasis on appraisal activities indicates that accountability structures were present within schools. Through classroom monitoring, documentation checks and year planning processes, SMTs attempted to ensure that curriculum activities proceeded according to policy expectations. However, participants did not describe any mathematics-specific leadership development programmes that equipped them to analyse learner performance data, mentor mathematics teachers or support subject-specific instructional improvement.

This finding suggests that support systems were primarily designed to monitor implementation rather than to strengthen instructional leadership capacity. Consequently, SMTs often relied on personal experience and informal knowledge when managing mathematics curriculum challenges.

A comparison across schools revealed important differences in how support was experienced. In School B, the principal's extensive mathematics teaching background functioned as an informal source of support for curriculum management. The principal's subject expertise enabled more confident supervision of mathematics instruction and provided guidance to teachers. In contrast, participants from Schools F and D reported relying primarily on general

administrative structures because specialised mathematics expertise was limited within their SMTs.

This comparison suggests that support for mathematics curriculum management depended heavily on the availability of individual expertise rather than institutionalised support systems. Where mathematics expertise existed within SMT structures, curriculum leadership appeared stronger and more confident. Where such expertise was absent, SMTs relied largely on procedural monitoring mechanisms.

The findings further revealed that parental engagement initiatives formed an important component of existing support systems. Open days created opportunities for parents to observe learners' work and engage with teachers regarding academic progress. Participants viewed these activities as valuable for strengthening home-school relationships and enhancing accountability. However, parental engagement initiatives were not specifically designed to assist SMTs in addressing mathematics curriculum challenges such as teacher development, learner performance gaps or curriculum supervision.

A significant finding emerging from this study is therefore that support systems available to SMTs were fragmented and insufficiently aligned to the specialised demands of mathematics curriculum leadership. While schools possessed mechanisms for accountability, planning and stakeholder engagement, structured programmes focusing on mathematics instructional leadership were largely absent. This finding extends current understandings of curriculum support by demonstrating that the challenge is not merely a lack of support, but a mismatch between available support and the leadership competencies required to manage mathematics effectively.

The study therefore suggests that effective mathematics curriculum management requires support systems that move beyond administrative compliance towards targeted leadership development. Such support should include mathematics-specific SMT workshops, mentoring programmes, curriculum data analysis training, subject-based leadership networks and ongoing professional support from district curriculum specialists. Without these forms of specialised support, SMTs may continue to manage mathematics curriculum implementation primarily through administrative oversight rather than instructional leadership.

5.4.4 Theme 4: Advanced techniques and mechanisms for managing the mathematics curriculum

This theme explores the strategies and mechanisms employed by School Management Teams (SMTs) to strengthen the management of the mathematics curriculum in primary schools. While Theme 2 focused on barriers and Theme 3 examined support systems, this theme focuses on practical instructional and managerial approaches used by SMTs to enhance curriculum implementation, teacher support, learner participation and curriculum monitoring.

Instructional Leadership Theory (ILT) emphasises that effective school leaders are responsible for coordinating curriculum implementation, promoting instructional improvement and monitoring teaching and learning processes (Hallinger, 2020:21). Within this framework, SMTs are expected to establish mechanisms that improve mathematics teaching quality and learner achievement. Suwanmanee et al. (2023:1) argue that effective curriculum leadership requires the integration of transformational leadership, learning management and practical implementation strategies.

The findings revealed that SMTs employed a variety of mechanisms to strengthen mathematics curriculum management despite contextual challenges such as teacher shortages, limited resources and learner performance difficulties. Two sub-themes emerged from the data, namely available strategies currently utilised by SMTs and suggested strategies for improving curriculum management.

5.4.4.1 Sub-theme 1: Available strategies to assist in ensuring the adequate management of the mathematics curriculum

The findings revealed that SMTs utilised several strategies to support mathematics curriculum implementation. These included instructional modelling, collaborative learning, teacher support structures, formative assessment practices and curriculum supervision mechanisms.

Instructional Modelling and Guided Practice

P-A stated:

> "Provide clear models for solving mathematics problems… start from the known to unknown…"

This finding suggests that SMT members viewed explicit modelling as an important strategy for supporting mathematics teaching. The participant emphasised the progression from familiar concepts to unfamiliar concepts, which reflects learner-centred approaches promoted within CAPS Mathematics (DBE, 2011:14).

The finding indicates that SMTs recognised the importance of structured instructional approaches that assist learners in developing conceptual understanding. Hattie (2020:15) identifies teacher clarity and explicit modelling as high-impact practices associated with improved learner achievement.

From an instructional leadership perspective, modelling becomes more effective when SMTs ensure that such practices are consistently implemented across classrooms. The study therefore contributes to existing knowledge by demonstrating that SMTs viewed instructional modelling not only as a classroom strategy but also as a mechanism for improving mathematics curriculum delivery.

Technology as a Curriculum Support Mechanism

P-C reported:

> "There is wifi that was installed but not working…"

Although the participant highlighted a challenge, the finding simultaneously reveals that SMTs viewed technology as a potentially valuable mechanism for strengthening mathematics teaching and learning. The availability of technological infrastructure demonstrates attempts to integrate digital resources into curriculum implementation.

However, the non-functionality of the Wi-Fi suggests that infrastructure provision alone does not guarantee successful technology integration. UNESCO (2023:88) argues that effective digital transformation requires maintenance systems, teacher development and leadership support.

The study contributes to knowledge by showing that technology-related interventions in rural primary schools are often constrained not by lack of vision but by implementation challenges associated with infrastructure sustainability and resource maintenance.

Collaborative Learning and Peer Support

P-B noted:

> "We allow learners to form group discussions."

Similarly, DP-B explained:

> "We mix high IQ learners with others… organise extra classes…"

The findings suggest that SMTs encouraged collaborative learning approaches to strengthen learner participation and improve mathematics performance. Group discussions and peer-assisted learning were viewed as mechanisms for supporting learners experiencing difficulties in mathematics.

Research indicates that collaborative learning promotes mathematical reasoning and learner engagement (OECD, 2023:117). Similarly, Slavin (2020:89) argues that cooperative learning improves learner achievement when carefully structured and monitored.

The study contributes to knowledge by revealing that SMTs relied on collaborative learner support mechanisms to compensate for resource limitations and diverse learner abilities within rural school contexts.

Teacher Support Groups and ATP Utilisation

DP-C stated:

> "Teachers have support groups… and they use the Annual Teaching Plan as a strategy."

The findings indicate that curriculum pacing and professional collaboration formed part of existing curriculum management mechanisms. The use of the Annual Teaching Plan (ATP) assisted teachers in organising curriculum coverage while support groups provided opportunities for professional interaction.

Within ILT, curriculum coordination and instructional guidance are central leadership responsibilities (Hallinger, 2020:21). However, participants suggested that teacher participation in support groups was sometimes inconsistent.

The study therefore demonstrates that while collaborative structures existed within schools, their effectiveness depended largely on active leadership support and continuous participation.

Peer Marking and Formative Accountability

A deputy principal explained:

> "I allow learners to assist others… I also do peer marking…"

This finding suggests that SMTs promoted formative assessment practices aimed at improving learner engagement and monitoring learner progress. Peer marking enabled learners to participate actively in assessment processes while providing immediate feedback opportunities.

Black and Wiliam (2020:354) emphasise that formative assessment contributes significantly to improved learner achievement when feedback is timely and constructive.

The study contributes to knowledge by showing that SMTs utilised learner-centred assessment approaches as practical mechanisms for strengthening mathematics learning and accountability.

Curriculum Supervision and Documentation Monitoring

DH-D stated:

> "We supervise the teachers' preparation books… every Friday…"

Among all strategies identified, this finding reflects the most direct expression of curriculum management. Regular monitoring of teachers' preparation books enabled SMTs to verify curriculum coverage, assessment implementation and lesson planning.

Hallinger (2020:21) identifies monitoring the instructional programme as a central dimension of instructional leadership. Similarly, Robinson (2020:42) argues that leadership practices directly linked to teaching and learning have the strongest influence on learner achievement.

The findings suggest that curriculum supervision served as a critical mechanism through which SMTs attempted to strengthen accountability and curriculum implementation.

The study contributes to existing knowledge by highlighting the importance of routine instructional supervision as a practical leadership mechanism within rural primary school mathematics programmes.

5.4.4.2 Sub-theme 2: Suggested possible strategies

The findings further revealed several strategies proposed by SMT members to strengthen future mathematics curriculum management.

Cluster-Based Teacher Sharing and Recorded Lessons

P-C suggested:

> "I suggested inter-school teacher rotation and lesson recording…"

This finding suggests that SMTs recognised the value of collaboration beyond individual schools. Inter-school teacher sharing was viewed as a strategy for addressing shortages of mathematics expertise while lesson recordings could provide continuity during teacher absence.

OECD (2023:118) identifies inter-school collaboration as an effective mechanism for professional learning and curriculum improvement. Spillane (2021:83) similarly argues that distributed expertise strengthens instructional capacity.

The study contributes to knowledge by demonstrating that SMTs themselves proposed cluster-based collaboration as a locally relevant response to mathematics teacher shortages.

Tablet Provision and E-Learning

P-E stated:

> "I proposed tablet distribution…"

The participant viewed digital devices as a means of improving learner access to mathematics learning resources. This finding reflects SMT aspirations to integrate technology more effectively into curriculum delivery.

UNESCO (2023:101) notes that digital learning can improve educational outcomes when aligned with curriculum goals and supported through teacher training.

The findings suggest that SMTs regarded technology as a potential catalyst for improving mathematics teaching and learner engagement.

Strengthening Curriculum Supervision

DH-C stated:

> "I advocated frequent supervision…"

The participant proposed increasing the frequency of instructional monitoring to strengthen curriculum implementation. Frequent supervision was perceived as a means of improving accountability, curriculum coverage and instructional quality.

Hallinger (2020:21) emphasises that effective instructional leaders engage regularly with teaching and learning processes.

This finding suggests that SMT members viewed strengthened supervision as an important mechanism for improving mathematics curriculum management.

ICT Workshops and Catch-Up Programmes

DH-A proposed:

> "I recommended ICT workshops and extra classes."

The participant highlighted the need for professional development in technology integration as well as learner remediation programmes.

UNESCO (2023:102) argues that ICT training improves instructional effectiveness, while OECD (2023:115) emphasises the importance of structured catch-up programmes in addressing learning gaps.

The study contributes to knowledge by demonstrating that SMTs recognised the need for both teacher development and learner support interventions to strengthen mathematics performance.

Concluding Interpretation of Theme 4

Overall, the findings reveal that SMTs employed a combination of instructional, collaborative and supervisory mechanisms to manage the mathematics curriculum. Existing strategies focused primarily on curriculum supervision, collaborative learning, ATP utilisation and formative assessment, while proposed strategies emphasised technology integration, inter-school collaboration, strengthened supervision and professional development.

A key contribution of this study is the finding that SMTs in rural primary schools rely predominantly on practical, low-cost instructional leadership mechanisms to manage mathematics curriculum implementation. The study further demonstrates that SMT members possess contextually relevant solutions for addressing curriculum challenges, particularly through collaboration, supervision and targeted capacity-building initiatives. These findings extend Instructional Leadership Theory by illustrating how instructional leadership practices are adapted within resource-constrained rural school environments.

5.4.5 Theme 5: SMT Empowerment and Capacitating

The findings revealed that participants regarded SMT empowerment and capacitation as essential for improving mathematics curriculum management in primary schools. Across the participating schools, SMT members consistently indicated that their ability to manage the mathematics curriculum effectively was constrained by limited access to specialised training, inadequate technological resources, insufficient mathematics expertise, and limited support from departmental structures. Consequently, participants proposed a range of empowerment strategies aimed at strengthening curriculum leadership, instructional supervision, teacher support and learner achievement.

The findings further suggest that SMT members viewed empowerment not merely as the provision of resources but as a continuous process of professional development, capacity building and institutional support. Participants emphasised that effective mathematics curriculum management requires SMTs to possess both leadership competencies and subject-specific knowledge to support teachers and monitor curriculum implementation effectively.

5.4.5 Theme 5: SMT Empowerment and Capacitating

The findings revealed that SMT members regarded empowerment and capacitation as essential prerequisites for effective mathematics curriculum management in primary schools. Across the participating schools, participants consistently indicated that their ability to manage the mathematics curriculum was constrained by limited mathematics-specific leadership training, inadequate technological resources, shortages of qualified mathematics teachers, insufficient professional development opportunities, and limited support from departmental structures.

The findings further suggest that participants viewed empowerment as more than the provision of resources. Rather, SMT empowerment was perceived as a continuous process involving professional development, subject-specific capacity building, instructional leadership development, mentoring, and institutional support. Participants emphasised that effective mathematics curriculum management requires SMT members to possess both leadership competencies and sufficient mathematics knowledge to support teachers, monitor curriculum implementation, and improve learner achievement.

The findings therefore indicate that strengthening SMT capacity is a critical condition for improving mathematics curriculum management, particularly within rural and under-resourced primary school contexts where curriculum leadership challenges are intensified by staffing shortages and resource constraints.

5.4.5.1 Sub-theme 1: Recommendations on How SMTs Can Be Empowered to Manage the Mathematics Curriculum

Digital Resources and ICT Training

One of the most prominent recommendations emerging from the study was the need for digital resources and ICT training for SMT members, teachers and learners.

P-E explained:

> "If the SMTs can be assisted on how to access the space for school digital resources… The Department of Education must provide learners with tablets and computers and a training workshop on SMT for ICT using the current digital tools…"

This quotation demonstrates that participants viewed technology as an important mechanism for strengthening curriculum management and improving mathematics teaching and learning. However, the recommendation also reveals a perceived skills gap among SMT members regarding the effective utilisation of digital resources. The participant's emphasis on training suggests that access to technology alone is insufficient unless accompanied by professional development that enables SMTs to integrate digital tools into curriculum planning, instructional supervision, assessment monitoring and teacher support.

The recommendation further reflects participants' recognition that digital learning environments have become increasingly important within contemporary education systems. Consequently, SMT empowerment requires the development of digital leadership competencies that enable school leaders to use technology strategically for curriculum improvement.

This finding supports existing literature that emphasises the importance of digital leadership in education. UNESCO (2023:102) argues that technology initiatives are most successful when 3accompanied by targeted training for school leaders and teachers. Similarly, Hennessy,

Ruthven and Brindley (2021:112) maintain that digitally competent school leaders are better positioned to support innovative instructional practices and curriculum monitoring.

A comparison across SMT roles revealed that principals focused primarily on resource acquisition and infrastructure development, whereas deputy principals and heads of department emphasised the practical utilisation of technology to improve classroom instruction and learner support.

Qualification-Based Teacher Deployment and Mathematics Leadership Development

Another significant recommendation concerned qualification-based teacher deployment and specialised mathematics curriculum leadership training.

DP-B stated:

> "...learners must be taught by teachers who know the subject better with qualifications… departmental officials should come to SMTs for support, not to inspect… workshops of SMTs for managing the curriculum of mathematics are highly needed as they do not exist."

This quotation highlights three important empowerment needs.

Firstly, the participant emphasised the importance of assigning mathematics teaching responsibilities to appropriately qualified teachers. This recommendation reflects concerns raised in Theme 2 regarding shortages of qualified mathematics teachers and limited mathematics expertise among some SMT members.

Secondly, the participant challenged the predominantly compliance-oriented relationship between schools and departmental officials. Rather than inspection-focused visits, the participant advocated for a developmental support model characterised by mentoring, coaching and professional guidance.

Thirdly, the quotation provides direct evidence of the absence of mathematics-specific leadership development programmes for SMT members. The participant's call for curriculum management workshops suggests that SMTs perceive a significant gap between the

responsibilities assigned to them and the professional preparation provided to fulfil those responsibilities.

This finding aligns with Instructional Leadership Theory, which emphasises the importance of leadership capacity development for effective curriculum management (Hallinger, 2020:23). Similarly, Leithwood et al. (2020:9) argue that leadership effectiveness improves when leaders receive specialised professional development linked to instructional improvement and curriculum supervision.

A comparison across schools revealed that participants from schools experiencing severe mathematics staffing shortages expressed stronger support for mathematics leadership training than participants from schools where mathematics expertise already existed within SMT structures. This suggests that empowerment needs are shaped by contextual realities and available human resources.

Technology Integration and Strengthened Parental Involvement

The study further revealed the importance of integrating technology with parental involvement strategies.

DH-A suggested:

> "…the establishment of using technology… even the parents can be deeply involved. Even the teacher should be trained; let us use laptops and projectors and get rid of chalk and chalkboard."

Unlike previous recommendations that focused primarily on SMT development, this recommendation adopts a broader systemic perspective. The participant recognised that effective mathematics curriculum management requires collaboration among SMTs, teachers, learners and parents.

The recommendation suggests that technology can be utilised not only for instructional purposes but also as a mechanism for strengthening communication between schools and families. Participants perceived parental involvement as an important factor in supporting mathematics achievement, particularly in contexts where learners often experience limited academic support at home.

The emphasis on teacher training further reinforces the view that successful curriculum transformation depends on human capacity development rather than resource provision alone. SMT empowerment therefore extends beyond leadership training to include creating conditions that enable teachers, learners and parents to participate effectively in curriculum implementation.

Research supports this finding. OECD (2023:117) reports that meaningful parental involvement contributes positively to learner achievement, while UNESCO (2023:101) argues that digital platforms can strengthen communication between schools and families. From an Instructional Leadership Theory perspective, effective leaders coordinate resources, professional learning opportunities and stakeholder partnerships to improve teaching and learning outcomes (Hallinger, 2020:23).

Cross-Role and Cross-School Analysis

Across all participating schools, SMT members consistently identified capacity development as a prerequisite for effective mathematics curriculum management. Although the specific recommendations varied, a common pattern emerged: participants believed that SMTs require specialised support that extends beyond general school management training.

Schools experiencing limited mathematics expertise among SMT members were more likely to recommend mathematics-specific leadership development, while schools experiencing technological challenges prioritised ICT training and resource provision.

Differences also emerged across SMT positions. Principals generally focused on strategic leadership concerns such as staffing, infrastructure and resource allocation. Deputy principals emphasised curriculum monitoring, professional support and departmental collaboration. Heads of department concentrated on instructional support, teacher development and classroom-level improvement strategies. These variations demonstrate that empowerment initiatives should be differentiated according to SMT roles and responsibilities.

Theme 5 Synthesis and Contribution of the Study

The findings indicate that SMT empowerment should encompass mathematics-specific leadership development, digital capacity building, qualification-based teacher deployment,

strengthened departmental support, teacher professional development, and enhanced parental involvement.

A significant contribution of this study is the identification of a gap between the responsibilities assigned to SMTs in managing the mathematics curriculum and the specialised preparation available to support those responsibilities. While SMTs are expected to provide curriculum leadership, instructional supervision and teacher support, participants consistently reported insufficient preparation in mathematics curriculum management.

The study therefore contributes new contextual knowledge by demonstrating that effective mathematics curriculum management in rural primary schools requires subject-specific leadership development rather than generic school management training alone. Furthermore, the findings suggest that SMT empowerment should be viewed as a multidimensional process involving instructional, technological, organisational and community-based capacity development.

Collectively, these findings provide empirical justification for the development of a Mathematics Curriculum Management Empowerment Framework for SMTs, which is proposed in Chapter 6 as a strategy for strengthening mathematics curriculum management in rural primary schools.

5.5 CONCLUSION

This chapter presented findings derived from semi-structured interviews and focus group discussions with 16 School Management Team (SMT) members in OR Tambo Inland District, Eastern Cape Province. Five main themes and seven sub-themes emerged from the data analysis, namely: Curriculum Management Systems and Innovation; Barriers to Effective Management of Mathematics Teaching; Support Systems for Managing the Mathematics

Curriculum; Advanced Techniques and Mechanisms for Curriculum Management; and SMT Empowerment and Capacitation.

The findings indicate that the Department of Basic Education (DBE) and the Eastern Cape Department of Education (ECDoE), through district structures, assign significant responsibility to SMTs for leading the management of the mathematics curriculum. However, the data also highlights that SMT effectiveness is shaped by variations in leadership capacity, subject expertise, and institutional support, which in turn influence how curriculum monitoring, teacher support, and instructional leadership are enacted across schools.

The next chapter provides a synthesis of the study, drawing conclusions from both literature and empirical findings, and presents recommendations aimed at strengthening SMT leadership in mathematics curriculum management, particularly through enhanced instructional support systems, leadership capacity development, and the integration of digital learning platforms

Table 5.7: Evidence Chain from Research Questions to Recommendations

Research Question	Main Finding	Supporting Theme	Evidence from Participants/Documents	Recommendation
What are the experiences of SMTs in managing the Mathematics curriculum?	SMTs experience Mathematics curriculum management as complex and demanding due to limited Mathematics-specific expertise and heavy workloads.	SMT Experiences of Mathematics Curriculum Management	Participants reported difficulty supporting Mathematics teachers and monitoring curriculum implementation because of limited subject knowledge and multiple responsibilities.	Provide Mathematics-focused professional development and curriculum leadership training for SMTs.
What are the experiences of SMTs in	Staffing shortages and lack of	Human Resource	Participants reported vacant posts, multi-grade teaching, and	Strengthen staffing policies and prioritise

Research Question	Main Finding	Supporting Theme	Evidence from Participants/Documents	Recommendation
managing the mathematics curriculum?	qualified Mathematics teachers constrain curriculum management.	Capacity Challenges	difficulties recruiting qualified Mathematics teachers.	deployment of qualified Mathematics teachers.
What are the experiences of SMTs in managing the mathematics curriculum?	Resource shortages and learner-related challenges negatively affect curriculum implementation.	Resource and Contextual Challenges	School documents and participant accounts revealed shortages of teaching and learning resources and learner readiness challenges.	Improve provision of Mathematics teaching resources and learner support programmes.
Which intervention strategies can be implemented to ensure adequate management of the mathematics curriculum?	SMTs rely on curriculum supervision, ATP monitoring, and lesson observations.	Curriculum Monitoring Strategies	Participants described monitoring teacher files, lesson plans, assessment records, and curriculum coverage.	Develop practical Mathematics lesson observation and curriculum monitoring tools.
Which intervention strategies can be implemented to ensure adequate management of the mathematics curriculum?	SMTs use collaboration and peer support to strengthen teaching and learning.	Collaborative Support Strategies	Participants reported mentoring, team teaching, moderation activities, and peer learning practices.	Establish formal professional learning communities and collaborative support structures.
What recommendations can be made to empower SMTs to manage the mathematics curriculum?	Existing support systems are largely compliance-oriented and administrative.	District and Institutional Support	Participants indicated that district support focused more on compliance requirements than instructional guidance.	Introduce district-based mentoring, coaching, and instructional leadership support programmes.
What recommendations can be made to empower SMTs to manage the mathematics curriculum?	SMTs require stronger instructional leadership capacity in Mathematics.	SMT Empowerment and Capacity Development	Participants requested training in mathematics curriculum leadership, lesson observation, assessment monitoring, and curriculum planning.	Provide Mathematics-focused professional development for SMTs, including training in lesson

Research Question	Main Finding	Supporting Theme	Evidence from Participants/Documents	Recommendation
				observation, instructional feedback, curriculum pacing, conceptual understanding, and assessment data analysis.
What recommendations can be made to empower SMTs to manage the mathematics curriculum?	Community and parental support remains limited.	Home and Community Support	Participants reported limited parental involvement in learners' mathematics learning and school activities.	Strengthen school-community partnerships and parental engagement programmes.

Table 5.7 demonstrates the evidence chain underpinning the study. The findings show that Mathematics curriculum management is a systemic instructional leadership challenge influenced by leadership capacity, teacher support, resource provision, learner-related factors, and district support. The recommendations presented in this chapter are therefore derived directly from the empirical findings and are intended to strengthen SMT capacity to manage the mathematics curriculum more effectively.

CHAPTER SIX

DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

6.1 INTRODUCTION

This chapter presents a synthesis of the key findings of the study on School Management Teams' (SMTs') experiences in managing the mathematics curriculum in primary schools in the OR Tambo Coastal District. The discussion is grounded in the integrated theoretical framework presented in Chapter 2, namely Instructional Leadership Theory, Curriculum Management Theory, Systems Theory, and Constructivist Theory.
The chapter interprets the findings in relation to existing literature, draws conclusions based on the research objectives, and provides recommendations for practice, policy, and further research.

6.2 SUMMARY OF THE STUDY

6.2.1 Discussion of Key Findings in Relation to Literature and Theory

SMT Experiences in Managing the Mathematics Curriculum

The findings revealed that SMTs experience Mathematics curriculum management as a complex leadership responsibility shaped by limited subject expertise, staffing shortages, role overload, and contextual learner challenges.

From the perspective of Instructional Leadership Theory (Hallinger, 2020), SMTs are expected to provide strong instructional direction, monitor curriculum coverage, and support teacher development. However, the findings indicate that many SMT members lacked sufficient Mathematics content knowledge to fully enact these responsibilities. This created a gap between expected instructional leadership roles and actual practice, particularly in schools where SMT members were not mathematics specialists.
This aligns with Leithwood et al. (2020) who argue that instructional leadership effectiveness is significantly influenced by leaders' subject knowledge and capacity to support pedagogy. The study therefore confirms that SMT effectiveness in mathematics is constrained when

leadership is not supported by discipline-specific expertise.
From a Systems Theory perspective, SMT experiences were strongly shaped by interconnected structural challenges such as staffing shortages and uneven distribution of expertise within schools. These systemic constraints meant that curriculum leadership responsibilities were often concentrated on a few individuals, increasing workload pressures and limiting instructional depth.

6.2.2 Barriers to Effective Mathematics Curriculum Management

The study identified four interconnected categories of barriers: human resource and leadership capacity constraints, home and community factors, resource and infrastructure limitations, and curriculum complexity combined with learner-related challenges.

The findings confirm Systems Theory's assertion that educational outcomes are shaped by interdependent internal and external factors (Fullan, 2021). For example, limited parental support and socio-economic challenges directly affected learner readiness for mathematics, placing additional pressure on SMTs and teachers.
The shortage of qualified mathematics teachers and limited SMT subject expertise reflects broader national concerns highlighted by Spaull (2022), who identifies teacher quality as a key determinant of mathematics performance in South Africa.
From an Instructional Leadership Theory perspective, these barriers significantly weaken SMTs' ability to monitor instruction, support teachers, and sustain curriculum improvement. Similarly, Curriculum Management Theory is challenged when structural constraints limit the effective implementation of curriculum planning and monitoring systems.

6.2.3 Support Systems for Mathematics Curriculum Management

The findings revealed that existing support systems were largely administrative and compliance-oriented rather than instructional or developmental in nature. Appraisal systems, planning processes, and parental engagement activities dominated existing support structures. This finding indicates a misalignment with Curriculum Management Theory, which emphasises continuous monitoring, evaluation, and improvement of teaching and learning processes. Instead of strengthening instructional capacity, existing systems tended to focus on documentation and compliance.
The absence of structured mathematics-specific SMT development programmes highlights a critical gap in instructional leadership preparation. As Hallinger (2020) argues, effective

instructional leadership requires ongoing professional development focused on curriculum leadership and instructional improvement.

From a Constructivist perspective, SMTs interpreted these limited support systems in varied ways, often relying on personal experience or informal school-based knowledge to manage curriculum demands. This resulted in uneven leadership capacity across schools.

6.2.4 Strategies Used to Manage the Mathematics Curriculum

SMTs employed a range of practical strategies, including instructional modelling, collaborative learning, peer marking, curriculum supervision, and use of the Annual Teaching Plan (ATP). These strategies reflect adaptive leadership practices developed in response to resource constraints.

Within Instructional Leadership Theory, these practices demonstrate SMT efforts to influence teaching and learning indirectly through monitoring and support mechanisms. Curriculum supervision, particularly the monitoring of teacher preparation books, reflects one of the strongest expressions of instructional leadership observed in the study. However, the findings also suggest that many of these strategies were low-cost and context-driven, reinforcing Systems Theory, which emphasises adaptation within constrained environments.

From a Constructivist lens, SMTs developed these strategies through experience and reflection, demonstrating how leadership practices are socially constructed rather than formally prescribed.

6.2.5 SMT Empowerment and Capacity Development

The findings clearly indicate that SMT empowerment is central to improving mathematics curriculum management. Participants emphasised the need for Mathematics-specific leadership development, strengthened instructional leadership skills, improved teacher deployment, enhanced curriculum monitoring practices, stronger district support, and increased parental involvement.

This finding strongly supports Instructional Leadership Theory, which positions leadership development as essential for effective curriculum management. It also reinforces Curriculum Management Theory, which requires alignment between leadership capacity and curriculum implementation demands.

The study demonstrates that SMT empowerment must be understood as a multidimensional process involving instructional leadership development, curriculum management capacity, organisational support, and systemic strengthening to improve mathematics curriculum implementation and learner outcomes.

6.2.6 Synthesis of Findings in Relation to the Research Questions

Collectively, the findings answer the three research questions of the study. First, SMTs experience mathematics curriculum management as a complex leadership responsibility influenced by limited mathematics expertise, staffing shortages, resource constraints, and contextual challenges. Second, SMTs employ adaptive strategies including curriculum supervision, collaborative learning, peer support, and instructional modelling to manage the mathematics curriculum. Third, SMT empowerment requires mathematics-focused professional development, strengthened instructional leadership skills, support in curriculum monitoring, improved use of assessment data, and stronger district support structures. These findings demonstrate that effective mathematics curriculum management depends not only on SMT commitment and leadership practices but also on the availability of systemic support and subject-specific capacity development.

6.3 Conclusions of the Study

Based on the findings, the study concludes that:

1. SMTs play a critical role in managing the mathematics curriculum but often operate under conditions of limited subject expertise and heavy workloads.
2. Effective mathematics curriculum management is constrained by systemic barriers including staffing shortages, limited resources, and socio-economic challenges affecting learners.
3. Existing support systems are largely administrative and do not adequately develop SMT instructional leadership capacity in Mathematics.
4. SMTs employ adaptive, context-driven strategies to manage curriculum implementation, often relying on experience and collaboration.

5. SMT empowerment is essential and must include Mathematics-specific leadership training, strengthened instructional leadership practices, effective curriculum monitoring, and enhanced institutional support structures.
6. Mathematics curriculum management is best understood as a systemic, instructional, and interpretive process shaped by interconnected school and community factors.

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10. SMT empowerment is essential and must include Mathematics-specific leadership training, strengthened instructional leadership practices, effective curriculum monitoring, and enhanced institutional support structures.
11. Mathematics curriculum management is best understood as a systemic, instructional, and interpretive process shaped by interconnected school and community factors.

6.4 Integrated Synthesis of Findings

What all findings mean collectively

The findings collectively demonstrate that the challenge of mathematics curriculum management cannot be attributed solely to learner underperformance or teacher practices. Rather, the study reveals a broader problem of school-level instructional leadership capacity operating within constrained educational systems.

SMTs are expected to lead curriculum implementation, monitor teaching and learning, support teachers, and improve learner outcomes. However, they frequently perform these responsibilities without adequate mathematics-specific expertise, sufficient staffing, instructional leadership preparation, or sustained district support.

The findings further show that curriculum management difficulties arise through the interaction

of multiple factors, including leadership capacity, teacher competence, learner challenges, resource shortages, and community support. Consequently, mathematics curriculum management should be understood as a systemic leadership challenge requiring coordinated support from schools, districts, communities, and education authorities.
This study therefore concludes that improving mathematics performance requires strengthening SMT instructional leadership capacity alongside improvements in teacher support, district assistance, and resource provision.

6.5 **Contribution of the Study**

This study makes four interrelated contributions to knowledge.

Firstly, the empirical contribution of the study lies in providing evidence-based insights into the experiences of School Management Teams in managing the Mathematics curriculum within selected primary schools in the OR Tambo Coastal District. The findings enrich the limited body of knowledge on mathematics curriculum leadership in rural and under-resourced school contexts.

Secondly, the study makes a conceptual contribution by demonstrating that effective mathematics curriculum management extends beyond compliance with administrative requirements. The findings distinguish between compliance-based curriculum management and instructional leadership practices that directly support teaching, learning and learner achievement.

Thirdly, the study makes a practical contribution by identifying specific areas in which SMTs require support, including mathematics-specific leadership development, instructional supervision, curriculum monitoring, assessment data utilisation and teacher support.

Finally, the study makes a policy contribution by highlighting the need for education authorities to strengthen SMT capacity through targeted professional development, mentoring and instructional support rather than relying predominantly on accountability and compliance mechanisms.

The study does not claim to develop a new model of curriculum management. Rather, it contributes evidence-based insights and recommendations derived directly from the experiences of SMTs responsible for managing the mathematics curriculum in rural primary schools.

6.6 Recommendations

6.6.1 Recommendations for Practice

• SMTs should receive specialised Mathematics curriculum leadership training.
• Schools should strengthen instructional supervision practices beyond compliance monitoring.
• Collaborative teacher support structures should be institutionalised.

6.6.2 Recommendations for Policy

• The Department of Education should develop SMT Mathematics leadership programmes.
• The Department of Education should prioritise the provision of curriculum support resources and infrastructure necessary for effective mathematics teaching and learning.
• Staffing policies should ensure qualification-based Mathematics teacher deployment.

6.6.3 Recommendations for District Support

• District officials should adopt mentoring rather than compliance-driven support.
• Ongoing professional learning communities for SMTs should be established.

6.7 Suggestions for Further Research

• The impact of SMT training programmes on Mathematics learner achievement.
• Comparative studies between rural and urban SMT curriculum leadership.
• Studies exploring the relationship between SMT instructional leadership capacity and mathematics learner achievement.

6.8 Chapter Summary

The chapter synthesised the findings within the integrated theoretical framework and demonstrated that SMTs' experiences of managing the mathematics curriculum are shaped by instructional leadership, curriculum management, systemic influences, and contextual realities. The chapter further highlighted recommendations aimed at strengthening SMT capacity and improving mathematics curriculum management in rural primary schools.

This study set out to explore School Management Teams' (SMTs') experiences in managing the mathematics curriculum in primary schools in the OR Tambo Coastal District. The findings, interpreted through Instructional Leadership Theory, Curriculum Management Theory, Systems Theory, and Constructivism Theory demonstrate that Mathematics curriculum management is a complex, multidimensional leadership function shaped by both internal school capacities and external contextual conditions.

The study concludes that SMTs are central to mathematics curriculum implementation; however, their effectiveness is significantly constrained by limited subject-specific expertise, staffing shortages, and inadequate instructional leadership preparation. While SMTs are expected to monitor curriculum coverage, support teachers, oversee assessment practices, and improve learner performance, many operate without sufficient mathematics curriculum leadership training.

Furthermore, the study concludes that existing support systems are largely administrative and compliance-driven, focusing on appraisal processes, planning documentation, and general accountability measures rather than instructional improvement. This misalignment results in limited direct support for SMTs in strengthening mathematics teaching and learning. Despite these constraints, SMTs demonstrate agency and adaptability by developing contextually relevant strategies such as curriculum supervision, collaborative learning structures, peer assessment, and instructional modelling. These practices reflect their ability to construct meaning from experience and respond innovatively to resource constraints and learner challenges.

A key conclusion of the study is that mathematics curriculum management in rural primary schools cannot be understood solely as an administrative function. Instead, it must be understood as a systemic and instructional process influenced by interdependent relationships among SMTs, teachers, learners, parents, district officials, and broader socio-economic conditions.

Based on these findings, the study highlights the need for a coordinated approach to

strengthening mathematics curriculum management through enhanced SMT instructional leadership development, teacher support, district assistance, and improved resource provision. Such an approach recognises that effective curriculum management depends on the interaction of leadership, teaching, learning, and contextual factors operating within the broader educational system.

The study therefore concludes that improving mathematics outcomes in rural primary schools requires more than policy compliance; it requires sustained investment in SMT instructional leadership capacity, targeted professional development, and strengthened support systems that align leadership practices with the realities of classroom instruction.

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Available at: https://auth0.com/docs/authenticate/login

APPENDIX A: PROOF OF REGISTRATION

UNISA university of south africa

1215 M1RST

ZIDE N K MR
P O BOX 723
LIBODE
5160

STUDENT NUMBER : 5028-996-9

ENQUIRIES NAME : MR P FOLKARD
ENQUIRIES TEL : 0861670411

DATE : 2023-03-10

Dear Student

I wish to inform you that your registration has been accepted for the academic year indicated below. Kindly activate your Unisa mylife (https://myunisa.ac.za/portal) account for future communication purposes and access to research resources.

DEGREE :	PHD (EDUCATION)	(90019)
TITLE :	Experiences of the school management teams in managing the curriculum of mathematics in primary schools	
SUPERVISOR :	Prof RI LUMADI (lumadri@unisa.ac.za)	
ACADEMIC YEAR :	2023	
TYPE:	THESIS	
SUBJECTS REGISTERED:	TFPEM01 PhD - Education (Education Management)	

A statement of account will be sent to you shortly.

You must re-register online and pay every academic year until such time that you can submit your dissertation/thesis for examination.

Students registering for the first time for a dissertation or thesis must complete a research proposal in their first year of study. Guidelines will be provided by your supervisor/contact person.

If you intend submitting your dissertation/thesis for examination you have to submit an Intention to submit form (available on the website www.unisa.ac.za) at least two months before the date of submission. If submission takes place after 15 November, but before the end of January of the following year, you do need not to re-register and pay registration fees for the next academic year. Should you submit after the end of January, you must formally reregister online and pay the full fees.

Please access the information with regard to your personal librarian on the following link:
https://bit.ly/3hxNqVr

Yours faithfully,

Prof M S Mothata
Registrar

University of South Africa
Preller Street, Muckleneuk Ridge, City of Tshwane
PO Box 392 UNISA 0003 South Africa
Telephone: +27 12 429 3111 Facsimile: +27 12 429 4150
www.unisa.ac.za

APPENDIX B: ETHICAL CLEARANCE

UNISA university of south africa

UNISA COLLEGE OF EDUCATION ETHICS REVIEW COMMITTEE

Date: 2023/08/10

Ref: **2023/08/10/50289969/27/AM**
Name: Mr NK ZIDE
Student No.:50289969

Dear Mr NK ZIDE

Decision: Ethics Approval from 2023/08/10 to 2028/08/10

Researcher(s): Name: Mr NK ZIDE
E-mail address: 5028996@mylife.unisa.ac.za
Telephone: 0786166463

Supervisor(s): Name: PROF.R I LUMADI
E-mail address: Lumadri@unisa.ac.za
Telephone: 012 429 2123

Title of research:

EXPERIENCES OF SCHOOL MANAGEMENT TEAMS IN MANAGING THE CURRICULUM OF MATHEMATICS IN PRIMARY SCHOOLS IN THE O.R TAMBO COASTAL IN EASTERN CAPE PROVINCE.

Qualification: PhD EDUCATION MANAGEMENT

Thank you for the application for research ethics clearance by the UNISA College of Education Ethics Review Committee for the above mentioned research. Ethics approval is granted for the period 2023/08/10 to 2028/08/10.

*The **low risk** application was reviewed by the Ethics Review Committee on 2023/08/10 in compliance with the UNISA Policy on Research Ethics and the Standard Operating Procedure on Research Ethics Risk Assessment.*

3

The proposed research may now commence with the provisions that:

1. The researcher will ensure that the research project adheres to the relevant guidelines set out in the Unisa Covid-19 position statement on research ethics attached.
2. The researcher(s) will ensure that the research project adheres to the values and principles expressed in the UNISA Policy on Research Ethics.

University of South Africa
Preller Street, Muckleneuk Ridge, City of Tshwane
PO Box 392 UNISA 0003 South Africa
Telephone: +27 12 429 3111 Facsimile: +27 12 429 4150
www.unisa.ac.za

3. Any adverse circumstance arising in the undertaking of the research project that is relevant to the ethicality of the study should be communicated in writing to the UNISA College of Education Ethics Review Committee.
4. The researcher(s) will conduct the study according to the methods and procedures set out in the approved application.
5. Any changes that can affect the study-related risks for the research participants, particularly in terms of assurances made with regards to the protection of participants' privacy and the confidentiality of the data, should be reported to the Committee in writing.
6. The researcher will ensure that the research project adheres to any applicable national legislation, professional codes of conduct, institutional guidelines and scientific standards relevant to the specific field of study. Adherence to the following South African legislation is important, if applicable: Protection of Personal Information Act, no 4 of 2013; Children's act no 38 of 2005 and the National Health Act, no 61 of 2003.
7. Only de-identified research data may be used for secondary research purposes in future on condition that the research objectives are similar to those of the original research. Secondary use of identifiable human research data requires additional ethics clearance.
8. No field work activities may continue after the expiry date **2028/08/10**. Submission of a completed research ethics progress report will constitute an application for renewal of Ethics Research Committee approval.

Note:
The reference number **2023/08/10/50289969/27/AM** *should be clearly indicated on all forms of communication with the intended research participants, as well as with the Committee.*

Kind regards,

Prof AT Motlhabane
CHAIRPERSON: CEDU RERC
motlhat@unisa.ac.za

Prof Mpine Makoe
EXECUTIVE DEAN
qakisme@unisa.ac.za

University of South Africa
Preller Street, Muckleneuk Ridge, City of Tshwane
PO Box 392 UNISA 0003 South Africa
Telephone: +27 12 429 3111 Facsimile: +27 12 429 4150
www.unisa.ac.za

APPENDIX C: PERMISSION FROM THE EASTERN CAPE DEPARTMENT OF EDUCATION TO CONDUCT THE STUDY

Province of the
EASTERN CAPE
EDUCATION

CORPORATE PLANNING, MONITORING, POLICY AND RESEARCH COORDINATION
Steve Vukile Tshwete Complex, Zone 6 Zwelitsha, 5608, Private Bag X0032, Bhisho, 5605 REPUBLIC OF SOUTH AFRICA:
Enquiries: **Ms. F. Pakade Tel: 040 602 7071 . Fax :040 608 4372. Email:** fundiswa.pakade@ecdoe.gov.za
Website: www.ecdoe.gov.za **Date: 05 September 2023**

Mr. Nkosinati Kennedy Zide

Mdeni Location

Ncise Administration Area

Umtata

5099

Dear Mr. Zide

PERMISSION TO UNDERTAKE A DOCTORAL RESEARCH: EXPERIENCES OF SCHOOL MANAGEMENT TEAMS IN MANAGING CURRICULUM OF MATHEMATICS IN PRIMARY SCHOOLS IN O.R. TAMBO COASTAL IN EASTERN CAPE

1. Your application to conduct the above-mentioned research involving six (6) Principals, six (6) Deputy Principals, six (6) Departmental Heads of intermediate and Senior phase of mathematics in six (6) primary schools of O.R. Tambo Coastal district under the jurisdiction of the Eastern Cape Department of Education (ECDoE) is hereby approved based on the following conditions:

   a. there will be no financial implications for the Department;

   b. institutions and respondents must not be identifiable in any way from the results of the investigation;

   c. you seek parent's consent for minors;

d. it is not going to interrupt educators' time and task;

e. the research may not be conducted during official contact time;

f. the research may not be conducted during official contact time, provided that an arrangement to do research at the school including getting inside a classroom has been arranged and agreed upon in writing with the Principal and the affected teacher/s;

g. you present a copy of the written approval letter of the Eastern Cape Department of Education (ECDoE) to the Cluster and District Directors before any research is undertaken at any institutions within that particular district;

h. you will make all the arrangements concerning your research;

i. should you wish to extend the period of research after approval has been granted, an application to do this must be directed to Chief Director: Corporate Strategy Management;

j. you present the Department with a copy of your final paper/report/dissertation/thesis free of charge in hard copy and electronic format. This must be accompanied by a separate synopsis (maximum 2 – 3 typed pages) of the most important findings and recommendations if it does not already contain a synopsis;

k. you present the findings to the Research Committee and/or Senior Management of the Department when and/or where necessary;

l. you are requested to provide the above to the Chief Director: Corporate Strategy Management upon completion of your research;

m. you comply with all the requirements as completed in the Terms and Conditions to conduct Research in the ECDoE document duly completed by you;

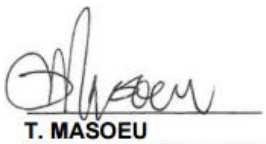
n. you comply with your ethical undertaking (commitment form);

o. You submit on a six-monthly basis, from the date of permission of the research, concise reports to the Chief Director: Corporate Strategy Management.

2. The Department reserves a right to withdraw the permission should there be non-compliance to the approval letter and contract signed in the Terms and Conditions to conduct Research in the ECDoE and/or legal requirements to do so.

3. The Department will publish the completed Research on its website.

4. The Department wishes you well in your undertaking. You can contact the Mrs. Fundiswa Pakade on the numbers indicated in the letterhead or email fundiswa.pakade@ecdoe.gov.za should you need any assistance.



T. MASOEU
CHIEF DIRECTOR: CORPORATE STRATEGY MANAGEMENT

FOR ACTING HEAD OF DEPARTMENT: EDUCATION

APPENDIX D: INFORMATION SHEET

INFORMATION SHEET FOR

DISTRICT MANAGER, SUB-DISTRICT MANAGER, SCHOOL PRINCIPAL, DEPUTY PRINCIPAL AND DEPARTMENTAL HEAD OF MATHEMATICS

Dear Department Official, School Principal, Deputy Principal and Departmental Head of Mathematics,

I, Nkosinati Kennedy Zide, a doctoral student in Education Management at the University of South Africa (Unisa), would like to conduct research on the experiences of school management teams in managing the mathematics curriculum in public primary schools. This study, entitled "Experiences of the School Management Teams in Managing the Curriculum of Mathematics in Primary Schools in OR Tambo Coastal in the Eastern Cape Province," is for degree purposes.

The aim of the study is to investigate the experiences of school management teams in managing the mathematics curriculum, particularly in light of the challenges they face during uncertain times, such as pandemics and climate change, which prevent learners from attending school. This study focuses on public schools in the intermediate and senior phases (Grades 4, 5, 6 and 7).

The study will use a case study approach. The participants will include the principal, one deputy principal, and one departmental head of mathematics from each of the six public primary schools in the OR Tambo Coastal District, specifically in Libode and Ngqeleni.

The data collection method will be qualitative and quantitative in nature, including: (i) semi-structured interviews with principals, deputy principals, and departmental heads of mathematics, which will be captured through digital audio recording. Additionally, notes will be taken using a cell phone notepad. (ii) Focus group discussions with principals, deputy principals, and departmental heads of mathematics, also recorded with digital audio devices, with note-taking supported by a cell phone notepad.

Once the data has been collected and analysed, and the research report drafted, the audio recordings and transcripts will be securely stored in the researcher's department safe at Unisa

College of Education and will be destroyed after three years. Data collection will occur during Term 2 and/or Term 3 of 2023, with the time required from each participant clearly outlined in the consent letters provided.

Participation in this research is entirely voluntary, and participants may withdraw from the study at any time without consequence. They have the option to leave any part of the information-gathering sheet unanswered and may decline to answer any questions posed during the interview. Participants will be assured of their anonymity, as labels and pseudonyms will be used for both their schools and themselves. If someone other than the researchers is involved in transcribing the audio recordings of the interviews, anonymity will still be guaranteed.

I look forward to your support in my study.

Should you require further information, please contact me on 078 616 6463 or email 50289969@mylife.unisa.ac.za.

Thank you in anticipation.

Mr Nkosinati Zide

24 August 2023

APPENDIX E: REQUEST FOR PERMISSION TO CONDUCT RESEARCH

REQUEST FOR PERMISSION

Department of Basic Education – Eastern Cape Department of Education (This serves as the covering letter to accompany the Eastern Cape Department of Education Request form)

Dear Sir/Madam,

I, Nkosinati Kennedy Zide, a doctoral student in Education Management at the University of South Africa (Unisa), request your permission to conduct a study on the experiences of school management teams in managing the mathematics curriculum. The details are provided in the attached information sheet on the prescribed ECDoE request form.

Kindly sign this form:

I, (full name) …….in the capacity of (state position within the Department of Education……..acknowledge receipt of the information sheet and declare that I fully understand the content thereof. I grant/do not grant permission (delete whichever is inapplicable) for the study to be conducted.

ECDoE official: Signature:…….Date:……

Mr Nkosinati Kennedy Zide

Signature:……..Date:…….

APPENDIX F: INFORMED CONSENT

REQUEST FOR CONSENT PRINCIPAL/DEPUTY PRINCIPAL/DEPARTMENTAL HEAD OF MATHEMATICS PARTICIPANTS

Dear Sir/Madam,

I, Nkosinati, Kennedy Zide, a doctoral student in Education Management at the University of South Africa (Unisa), would like to invite you to participate in my study of the experiences of school management teams in managing the mathematics curriculum. This study focuses on public schools in the intermediate and senior phases (Grades 4, 5, 6 and 7).

The research seeks to gain insights into the experiences of school management teams to enhance the understanding of managing the mathematics curriculum, particularly when learners are unable to attend school due to unfavourable conditions such as pandemics and climate change. Your prospective participation is viewed as a valuable contribution to improving mathematics curriculum management and leadership, ultimately leading to better mathematics outcomes in primary schools.

I would like to assure you that the findings of the study will be made available to you if you wish.

Kindly sign this form:

I, (full name)……. principal/deputy principal/ departmental head of mathematics (delete whichever is inappropriate) at (state name of school) ……acknowledge receipt of the information sheet and declare that am aware that:

>My participation is voluntary and that I can be withdraw from the study at any time;
>I can leave any part of the questionnaire unanswered;
>I am also invited to participate in a semi-structured interview;
>I can decline answering any questions pose to me during the interview session;
>I guaranteed anonymity, i.e., the student/ researcher will use labels and pseudonyms my school and me, respectively;
>My participation in this study will not affect me adversely; and

>The study will take place during the take term 2/or3 of 2023 and will take up to approximately 2 hours and 45 minutes of my time. (Approximately 120 will be sufficient to complete the semi-structured interview and 45 minutes will be also enough to complete the focus group discussion).

I consent/do not consent (delete whichever is inapplicable) to be a participant of the study.

Signature……..Date…….

Mr Nkosinati Kennedy Zide

Signature……Date……

APPENDIX G: REQUEST FOR AUDIO RECORDING AND USE OF CELL PHONE NOTEPAD

REQUEST FOR CONSENT FOR AUDIO-RECORDING OF PRINCIPAL/DEPUTY PRINCIPAL/DEPARTMENTAL HEAD OF MATHEMATICS, AND THE USE OF A CELL PHONE AND NOTEPAD

Dear Sir/Madam,

I, Nkosinati Kennedy Zide, a doctoral student in Education Management at the University of South Africa (Unisa), would like to request your consent to conduct an interview with you, which will be audio-recorded and transcribed. Additionally, I would like your permission to use a cell phone notepad to take notes during our discussion.

Kindly sign this form:

I understand that the transcriptions will be used in conjunction with the questionnaire data I will be providing and analysed for the purpose of this study. I also understand that the researcher will use a cell phone notepad to write down notes of the researcher's concerns during the interview, which will only be used for the purpose of the study. I also understand that I will remain anonymous throughout this study.

I, (full name) ……. principal/ deputy principal/ department head of mathematics (delete whichever is inapplicable) at (name of school) …….. I acknowledge receipt of the information sheet and declare that I fully understand the contents thereof. I also understand this request to engage in an interview with the researcher of this study, have interviews recorded, and use the researcher's cell phone notepad.

I grant/do not grant consent (delete whichever is inapplicable) for the interview to be recorded and the use of the researcher's cell phone notepad to take notes during the interview.

Interviewee

Signature:…… Date:……

Mr Nkosinati Kennedy Zide

Signature…… Date:…….

APPENDIX H: SEMI-STRUCTURED INTERVIEW QUESTIONS

SEMI-STRUCTURED INTERVIEW QUESTIONS WITH THE PRINCIPAL, DEPUTY PRINCIPAL, AND DEPARTMENTAL HEAD OF MATHEMATICS

Greetings.

Introductory remarks

Set the scene to acknowledge the time taken to participate, the purpose of the research, confidentiality, acceptance of tape recording the interview or not, as well as any disclosure to show participants the report prior to submission as to whether changes should be made.

Questions to the principal, deputy principal, and departmental head of mathematics:

1. Please explain your experiences managing the mathematics curriculum in your position.

2. Please explain what challenges you face in managing the mathematics curriculum in attempting to yield effective management of teaching the subject. (Participants should be prompted to discuss the availability of support to achieve compliance – what barriers they have experienced and how would they feel these barriers could be addressed and minimised.)

3. What programmes are available that can assist in closing the gap in managing the mathematics curriculum? (Participants should be prompt to discuss the effectiveness of these programmes to expatiate their feelings about them. Suggest the programmes they see could be suitable and give reasons).

4. Can you please explain what strategies can be implemented to ensure the adequate management of the mathematics curriculum?

5. What recommendations can be made on how the school management team can be empowered to manage the mathematics curriculum?

APPENDIX I: FOCUS GROUP DISCUSSION QUESTIONS

FOCUS GROUP DISCUSSION QUESTIONS

Greetings.

Set the scene to acknowledge the time taken to participate, the purpose of the research, confidentiality, acceptance of tape recording the interview or not, as well as any disclosure to show participants the report prior to submission as to whether changes should be made. Thereafter, ask the principals, deputy principals, and departmental heads of mathematics about themselves, their working experience, and their experiences as a school management team in managing the mathematics curriculum.

SECTION A: PERSONAL QUESTIONS

1. Please introduce yourself
   (a) Gender
   (b) Age [1-(25 years and younger), 2-(26-35 years), 3-(36-45years), 4-(46-55 years), 5-(56 and older)]
   (c) Racial group
   (d) Subject(s) you teach
   (e) Highest qualification [1-Teaching certificate, 2-Teaching Diploma, 3-Bachelor's degree, 4-Advanced Certificate in Education (ACE), 5-Honours degree, 6-Master's degree, 7-Doctoral degree]

SECTION B: WORKING EXPERIENCE AND EXPERIENCE AS SMT MANAGING THE MATHEMATICS CURRICULUM

2. What experience do you have in this field as a teacher? Share your working experience
   (a) 1-(1-5years), 2-(6-10years), 3-(11-15years), 4-(16-20years), 5-(21and older)
3. How long have you been in this field as a school management team? Discuss further the experiences of managing the mathematics curriculum you have enjoyed implementing and those you have not. (Follow-up questions will prompt the participants to provide more in-depth information, such as why.
4. What challenges do you have you can share as a school management team in managing the mathematics curriculum? Further discussion: How do you manage the subject's curriculum when learners are not at school due to unfavourable conditions of the pandemic and climate change? Suggest possible strategies.

SECTION C: OPINION

5. What intervention programmes do you know that are available to assist in overcoming the challenges the school management team faces in managing the mathematics curriculum? Explore both existing and non-existing ways that are implemented at your school. Follow-up questions can be employed to allow the participants to justify these programmes, such as why existing ways are not implemented. If they are implemented, how do these are implemented? What are the outcomes that are implemented then?

NIM Editorial
Bryanston, Gauteng, 2074
Cell: +27 82 587 4489
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24 September 2024

Editorial Certificate

To Whom It May Concern,

This certificate confirms that the PhD thesis entitled **"EXPERIENCES OF THE SCHOOL MANAGEMENT TEAMS IN MANAGING THE CURRICULUM OF MATHEMATICS IN PRIMARY SCHOOLS IN OR TAMBO COASTAL IN THE EASTERN CAPE PROVINCE"** by **NKOSINATI KENNEDY ZIDE** (student number: 50289969) was edited by an expert English editor with a PhD. The following issues were corrected: grammar, spelling, punctuation, sentence structure, phrasing, and formatting.

Signed on behalf of NIM Editorial by:

.....

Dr N.I. Mabidi

Founder & Chief Editor

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