The leadership role of the Head of Department in the teaching of Mathematics

N.I. JACA

DISSERTATION

Submitted in partial fulfillment of the requirements for the degree

MAGISTER EDUCATIONIS

In the

FACULTY OF EDUCATION
UNIVERSITY OF PRETORIA

SUPERVISOR
DR C.E.N. AMSTERDAM

CO-SUPERVISOR
DR. S.T. MAMPANE

November 2013

DEDICATION

This dissertation is dedicated to my grandmother who always said to me "never stop learning because you will suffer". I dedicate it together with song number ten in my album 'Ugogowami' meaning "My Granny".

ACKNOWLEDGEMENTS

I would like to express my sincere gratitude and appreciation to the following:

- Almighty God for giving me the opportunity and strength to do this study.

- Jabulane David Thwala my dearest brother and colleague for always being there for me.

- Sasol Inzalo Foundation, for sponsoring my studies at UP and for their undying support throughout this journery

- My husband BongaJaca, for not stopping me from pursuing my dream.

- Dr. Gallie, for his tireless spiritual and academic support, encouragement and motivation throughout this journey.

- My supervisors Dr. Amsterdam and Dr.Mampane, for their love, support, patience and expertise.

- Lulama Mnomiya, my dearest sister, who helped take care of my son while I was studying.

- My lovely son, Simangaliso, who brought joy to me when days were dark through his lovely smile.

ABSTRACT

This study explores the leadership role of the Head of Department (HoD) in the teaching of Mathematics.It focuses on the perspectives that the educators hold about the leadership role of HoDs in the teaching of Mathematics in two Gauteng primary schools.The study was framed by the following research question: What perspectives do educators hold about the leadership role of the HoD in the teaching of Mathematics in primary schools?

A qualitative case study was employed whereby data were collected in two primary schools in Gauteng Province. To examine the relevance and clarityinterview questions used, a pilot study wasat first conducted in which one HoD and one teacher were interviewed.For the actual study, ten individual semi-structured interviews were conducted with four HoDs, two principals and four teachers in two township schools in a Gauteng district. Documents such as monitoring instruments of HoDs were also collected and analysed for purposes of triangulation.

Key findings were that HoDsnever received any formal preparation to lead the teaching of Mathematics. They learned about the role by participating in professional development activities offered by outside actors, upgrading themselves, assisting the Education district department in facilitating workshops for teachers as well as serving as acting HoDs.They provided leadership by monitoring teaching and teachers' work,checking lesson plans, doing class visits, checking learners' books and assessment tasks and doing follow ups.Challenges that were identified in relation to the leadership role of the HoD leadership in the teaching of Mathematics includedHoDs' lack of Mathematics knowledge (SMK) and pedagogical content knowledge (PCK), lack of teaching resources, teachers' lack of knowledge of the new curriculum, a heavy workload, overcrowded classrooms, demotivated teachers, teacher absenteeism and too much paperwork.The perceived strategies that were used by HoDsto address challenges

includedthe following:engaging in discussions with teachers in an attempt to collectively find solutions, substituting absent teachers, taking work home, using the expertise of other teachers through delegation, leading by example by presenting lessons for teachers, making learners their first priority followed by paperwork as well as engaging with some stakeholders for support.

The following were the recommendations: there should be more clarity about what is expected of HoDs.Sufficient time should be allocated in order for HoDs to be able to balance their leadership duties and teaching effectively;current as well as prospective HoDs should be trained in both the subject in which they are expected to provide leadership as well as the generic leadership part of their job.HoDs should involve Mathematics teachers in the development of the monitoring tools since Mathematics teachers are familiar with a sensible blend of tools, methodologies and approaches that can meet the needs of their learners.HoDs should also be developed on what they should look for as they monitor teachers' work.In that way they may be able to effectively use the results of their monitoring to support teachers.A final recommendation is that the workload of HoDs be reduced through the allocation of administrative tasks to school administrators and appointing paid HoD assistants such as subject heads.

KEY WORDS

Educator perspectives

Head of Department

Leadership

Leadership of teaching

Mathematics teaching

Performance measurement

Primary schools

School improvement

Teacher support

Teaching and learning

ACRONYMS

CAPS:	Curriculum Assessment Policy Statement
EEA:	Employment of Educators Act
GPLMS:	Gauteng Primary Language and Mathematics Strategy
HOD:	Head of Department
IQMS:	Integrated Quality Management System
NGO:	Non-Governmental Organisation
SMT:	School Management Team
TTA:	Teacher Training Agency

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER 1
INTRODUCTION

This chapter gives the background, and outlines the focus of the study, and provides the problem statement, the purpose and the rationale for the study. It also highlights the main and sub-questions that inform the research undertaken.

1.1   BACKGROUND

Leadership for teaching and learning has emerged as a key aspect of improvement in education around the world. Research studies and reports show that "leadership is a crucial factor in school effectiveness and the key to organisational success and improvement" (Earley&Weindling, 2004:3). South African schools are led and managed by the members of school management teams (SMTs), which comprise the principals, deputy principals and Heads of Department (HoDs).The focus of this study was on HoDs.HoDs are called differently in different countries.For example, department chairs and administrators in the United States of America and middle leaders, subject leaders and curriculum coordinators in the United Kingdom. For this study, I used the acronym 'HoDs' as it is used in a South African context, except where another name was used in the literature.HoDs have the responsibility of providing leadership in particular subjects, departments and phases (DoE, 2000).According to Harris (2000) they have a direct influence on the quality of teaching and learning within subject departments.

In South Africa, the work of HoDs is guided by the Employment of Educators Act, 64 (1998).In terms of this Act, their job depends on the approaches and the needs of a particular school and entails, but is not limited to: administration; teaching; personnel; extra and co-curricular activities; and communication.The core duties of the HoDsaccording to the DoE (2000: 6-9) are:

HoDs are in charge of a subject or a phase. They have to engage in teaching.They should provide and coordinate guidance on the latest

ideas on approaches to the subject, method, techniques, evaluation, aids and effectively convey these to the staff members concerned. HoDs have to cooperate with colleagues in order to maintain good teaching standards and progress among the learners.They have to foster administrative efficiency within the department and the school.They are also expected to participate in agreed school/teacher appraisal processes in order to regularly review professional practice with the aim of improving teaching and learning and management.

In addition, HoDs are also expected to lead the Developmental Support Groups (DSGs)during the appraisal process (DoE, 2005). The roles and responsibilities of DSGs include: mentoring; giving support to teachers; assisting teachers in the development of their Personal Growth Plans (PGPs); conducting the diagnostic assessment of teachers for development purposes; and the summative evaluation at the end of the year for performance measurement. It is expected of HoDs to provide teachers with feedback and that together they set targets for professional development after supervision and appraisal (Monyatsi, 2006).These roles and responsibilities constitute subject leadership.

In the United Kingdom, there are four key areas of subject leadership that are prescribed by the Teacher Training Agency (TTA).They are: *strategic direction and development of the subject, teaching and learning, leading and managing staff, efficient and effective deployment of staff and resources.*

In order to ensure a strategic and development of the subject, subject leaders are expected to ensure the development and implementation of policies and practices that reflect the schools' mission to of high achievement, effective teaching and learning.They have to utilize data in order to identify learners who are poorly performing and make means to assist those learners (TTA, 1998).

Subject leaders are responsible for ensuring that there is curriculum coverage and progression in the subject for all learners.They are expected to ensure that teachers have a clear understanding of the objectives of their lessons and are able to impart that to learners (TTA, 1998).

In leading and managing staff, Subject leaders are expected to assist teachers to accomplish positive working relationships with learners.They are expected to appraise their staff and use that process to personally and professionally develop teachers.They are also expected to assess the training needs of their staff, lead professional development of staff through leading by example and providing support through coaching and outsourcing external expertise (TTA, 1998).

In order to ensure efficient and effective deployment of staff and resources, Subject leaders are responsible for the establishment of the staff and resource needs for the subjects under their supervision and advise the senior management on how to priorities efficiently to meet the objectives of the schools.They are also expected to deploy, or advise the head teacher on the deployment of staff involved in the subject (TTA, 1998).

1.2   PROBLEM STATEMENT

Whilst there are so many expectations of HoDs, research suggests that most HoDs do not have the required skills and competences to fulfil their leading roleas they have not been prepared for the job (Turner, 2000). They mostly learn 'on the job', while some use their intuitions to understand the tasks they have to perform. Moreover, they carry a heavy workload, lacking sufficient time to perform their duties (Ali & Botha, 2006; Zepeda &Kruskamp, 2007; Rosenfeld et. al, 2008; Bak, 2010).A study by Stephenson (2010) in New Zealand also raises another challenge, that HoDs are not adequately developed professionally. The findings of the above study point out that, while subject teachers receive continuous training for different subjects, there is no such continuous professional development aimed at HoDs in their role as leaders.

1.3 THE RATIONALE

This study was partially informed by my experience as a HoD, as well as by research that has been conducted on the work of HoDs. I applied for the position based on my years of teaching experience. I knew what was expected of me from the Employment of Educators Act (EEA, 1998). However, I did not know how to fulfill the expectations. A number of subject teachers in my department were assigned to being subject heads, as a way of assisting me in subjects that were not my specialisation.However, in reality, they did not do much to assist, and as a result, I was struggling alone.

Research about the leadership role of the HoD in the teaching of Mathematics is limited, especially in South Africa. Primary schools are also under-researched.According to Bennett et al. (2003), most studies focus on secondary schools, even though the issues that are raised are relevant for both primary and secondary schools. The South African studies that relate to HoDswere conductedin secondary schools (Ali & Botha, 2006; Bambi, 2012). Although the EEA (1998) serves as a guide as to the role ofHoDs, little is known aboutthe way in which they ought to go about doing it, especially in South Africa. The poor Mathematics performance amongst learners in South African schools and the lack of studies that provide the knowledge about the role that the HoDs are playing in the teaching of Mathematics is a call for this research.

The poor Mathematics performance is evident in studies where South African learners performed poorly in standardised international, regional and national assessments. Those assessments included the Southern and Eastern Africa Consortium for Monitoring Educational Quality (SACMEQ); the Third International Math and Science Study (TIMMS); the Annual National Assessment (ANA); and the National Senior Certificate (Matric) examinations (Taylor, 2008). In addition, further research was recommended by Andrews, Gilbert & Martin (2007), in order to find out whether support is being provided to teachers, especially those who are new in the profession. Zepeda &Kruskamp (2007) recommended that more studies be

4

conducted to understand, support, and to nurture the work of department chairs.A South African researcher, Poopedi (2011), also recommended that leadership continue to be studied, due to the difficulties in leadership and management in schools.

1.4   PURPOSE OF THE STUDY

The purpose of this study was to explore the perspectives that educators hold about the leadership role of the HoD in the teaching of Mathematics in primary schools.In exploring this phenomenon, the study takes in to account the perspectives educators hold as to the leadership role of the HoD in the teaching of Mathematics. The term educator refers to anyone who is employed under the Employment of Educators Act (EEA), and is also teaching or providing professional services in a public school (EEA, 1998:3). In this study, "educator" refers to subject teachers, HoDs and school principals. The term Mathematics has been used in this study to represent both Numeracy and Mathematics, because the participants were Foundation, Intermediate and Senior Phase (INTERSEN) educators, where Numeracy and Mathematics are respectively taught.

1.5   SIGNIFICANCE OF THE STUDY

Studies have been conducted in order to examine the different roles that the HoDsought to play in schools. Research has not addressed the subject leadership role of HoDs. Exploring the leadership role of the HoD in relation to what is happening in the classrooms may assist in the development of a standardised model, which can be used to inform leadership training forHoDs.

1.6   THE RESEARCH QUESTIONS

What perspectives do educators hold about the leadership role of the HoD in the teaching of Mathematics in primary schools?

1.6.1   Sub-questions

1. What are the perceived roles and responsibilities of HoDs in leading the teaching of Mathematics in primary schools?

2. What kind of preparation and on –the job training did HoDs receive to lead the teaching of Mathematics in primary schools?

3. What are the perceived activities ofHoDs in leading the teaching of Mathematics in primary schools?

4. What do HoDs identify as challenges they face in providing leadership in the teaching of Mathematics in primary schools?

5. What do HoDs do to respond to challenges faced in leading the teaching of Mathematics in primary schools?

1.7   CONCLUSION

This chapter has provided the background of the study. The problem that informed the study was introduced, and the rationale, purpose and significance of this research were highlighted. The broad and critical/sub research questions were posed in this chapter. The next chapter will review both international and national literature, that is "relevant and also that which is closely related" to my study; the leadership role of the HoDin the teaching of Mathematics as suggested by (Hofstee, 2006:96).

CHAPTER TWO
LITERATURE REVIEW
2.1   INTRODUCTION

6

This chapter consists of three sections.In the first section, leadership and the two relevant types of leadership are defined and discussed.The second section focuses on international and South African literature which consists of journal articles, conference proceedings, research reports as well as theses that have focus on leadership in relation to the work of HoDs.The conceptual framework that guided data collection and analysis was presented in the third section.

2.2 DEFINITION OF LEADERSHIP

The concept of leadership is naturally defined differently by different researchers.According to Kruger (2003), leadership is a process that involves defining and communicating a clear mission, goals and objectives with staff members. He argues that leadership entails managing curriculum and instruction, supervising and supporting teachers, as well as monitoring learners' progress. Leithwood and Riehl (2003) have articulated leadership as a process of providing direction and exercising influence, while Hoerr (2005:7) has stated that "leadership is about relationships". Yukl (2006) defines leadership as persuading followers into working towards a common goal.According to Yukl, this implies that leaders affect and are affected by followers, either positively or negatively. He also asserts that leadership is a two-way interactive event between leaders and followers, and not a one-way event in which the leader only affects the followers.

There are various types of leadership such as transactional, transformational, functional, positional, instructional and distributed leadership.However, the types of leadership that are closely related to the leadership role of HoDs are instructional and distributed leadership.

2.2.1 Instructional leadership

Bush and Glover (2002:10) have contended that instructional leadership is about teaching and learning, as well as the behaviour of teachers as they work with learners. The authors have added that where instructional leadership is employed, the leader focuses his influence on student learning through teachers.Meanwhile,

7

according to DiPaola&Tschannen-Moran (2003: 44), instructional leadership is a term that emerged to define the roles and responsibilities to the principals. The authorshave gone on to say that it was intended to address the needs of teachers and to improve learner outcomes. Both Robinson (2006) and Bush (2007) have agreed that instructional leadership is about leading and managing teaching and learning as the core business of schools.

Instructional leadership has always been associated with principalship. However, according to Banda (2012), principals are no longer the only instructional leaders in schools. He added that schools have been redone to empower teachers. This resulted in the distribution of leadership and also ensuring that teaching and learning is kept the focus. Banda (2012) is in line with the findings of Kruger (2003) who found that most of the principals are not directly involved in the leadership of teaching and learning in schools,which is delegated toHoDs.Bush (2005:8) argued that it is the HoDs that are instructional leaders in schools, due to the pressure that is put on principals as well as other senior staff. In addition, HoDs are "almost always highly experienced and successful classroom practitioners." Sharing the same sentiment are Hoadley, Christie, and Ward (2009), in a study they conducted to investigate the management of curriculum and instruction in South African secondary schools in two provinces. The study revealed that principals spent most of their time on the combination of administrative functions andthe disciplining of learners.Overseeing teaching and learning (instructional leadership) was broadly found not to be the function that took up the majority of many principals' time. Management of curriculum and instruction was distributed across the school.Less than a thirdof principals identified instructional leadership as their main task. About a third of principals claimed that they were primarily responsible for ensuring curriculum coverage, whereas the majority stated that this was the responsibility of senior managers. On the other hand, two thirdsof teachers confirmed that from their perspective, overseeing curriculum coverage was primarily the task of HoDs and subject heads.

The findings of Hoadley, et al (2009) are in line with those of Rietzburg, West &Angel (2008) as they investigated the principals' understanding of the relationship between their daily work and the improvement of instruction (instructional leadership) in their schools in the USA. They categorised data into relational, linear, organic and prophetic instructional leadership. They found that four principals described themselves as providers of relational instructional leadership. Their goal was to create school culture and to achieve higher test scores. Principals did not work directly with the instructional programmes, but they built relationships by helping students and staff to feel good about themselves and work harder. They also spent time counseling both students and teachers, listening to their stories, keeping students at school, and ensuring that teachers were totally prepared to work for the benefitof students and to be an advocate for disadvantaged students. Principals assumed that, when people feel connected and cared for, they feel better about themselves and learn more.Half of theprincipals promoted'linear instructional leadership', which according to them, was about the alignment and use of test results to monitor the process, which involved aligning, teaching, testing and analysis; re-teaching and testing.It also involved a formal curriculum through covering pace setters; using data to improve instruction; monitoring lesson plans and use of essential questions. The assumption was that if there was an alignment in curriculum, testing and teaching, test scores would improve, and when test scores improved, it meant that students learned more. A third ofprincipalspromoted'organic instructional leadership', which was about increased student learning and the achievement of higher test scores, and which involved doing peer walk-throughs, team-based issue study, action research; research on school issues;analysing and discussing data; grade level discussions on curriculum; planning lessons in teams; and asking questions. The principals assumed that when people study and discuss issues of practice, they learn from one another, and we individually and collectively improve their practice. When their practice improves, students learn more.

Less than third of principalspromoted 'prophetic instructional leadership', as they viewed its goal as to be the provision of education for creating a better world, including helping students to learn how to engage and participate in a democratic society. It was about leading schools to a higher calling than simply working towards the achievement of politically appropriate results,or exercising moral leadership for educational purposes, and having a school vision that went beyond achieving higher test scores. This involved: raising questions of purpose; changing policies and practices; making them consistent with an alternative vision; teaching and supporting teachers in different ways of thinking; providing opportunities for discussions of alternative visions and practice; and stimulating and facilitatingapplication. The principals' assumptions were that it is not enough to follow the status-quo instructional vision of policy makers.

Prophetic instructional leadership was viewed as an approach that should be used to move schools towards a moral vision. Principals who used this approach were more concerned with achieving a better world than with test scores. The authors remained with questions based on the leadership aspects chosen by the principals under study. The questions were about the real purpose and the outcomes the principals were working towards, as well as the aspects that were being ignored.However, the authors viewed the practice of prophetic instructional leadership as the one that raised more questions.In a South African context, the prophetic instructional leadership is sparse if there is any. In most schools, principals follow relational instructional leadership,and are not directly involved with teaching and learning. It is the duty that is delegated or distributed to HoDs,who are a link between the senior leadership and teachers. However, the principals are still accountable for the overall performance of the school.

2.2.2 Distributed Leadership

The notion of distributed leadership has emerged in educational literature over the last twenty years. Spillane, John, Diamond &Jita (2003:535) have affirmed that the distributed leadership framework includes the "practice of those multiple

10

individuals in a school who work at mobilising and guiding school staff in the instructional innovation process." Despite the criticisms and misconceptions about distributed leadership, it still continues to be followed and supported. Hammersley-Fletcher &Brundrett (2005) examined issues of leadership involvement in the primary school sector in England. Their study revealed that both head teachers and subject leaders were in favour of leadership models in which there was an involvement of staff in collaboration on school development discussions. A majority of participants indicated a belief in the delegation ofresponsibilities in order for everyone to gain the opportunity to demonstrate leadership and to develop leadership skills.The head teachers emphasised the importance of the awareness of the developmental needs and celebration of their staff's achievements.The subject leaders viewed the above mentioned awareness as an indication for them to work with colleagues and utilise their expertise, experience and energy in order to develop their area of responsibility.However, the extent to which they were given responsibility depended on the head as the ultimate leader of the school hierarchy.

The above researchers identified two aspects of distributed leadership in schools under study which included the fact that the implementation of strategies that were collectively discussed had limitations for the subject leaders because it depended on the head teacher.That restricted the freedom of subject leaders to create new strategies.On the other hand, in schools where distributed leadership was active, ideas were facilitated and expected through the leadership system.Subject leaders were able to implement research based ideas.There was a culture of no blame and the focus was on children and the vision of the school.The head teacher was just a facilitator and not a director.The study suggests that in schools there should be systems in place to force staff out of their comfort zones.In schools where teachers were put in positions of leadership and where creativity and innovations were expected, there was knowledge development and support which led to greater confidence.It also suggests that; in order for the head teachers to encourage a capacity for learning in their staff, a huge amount of both confidence and systems are needed on the part of head teachers in order to encourage a culture of self-

development.The authors are of the opinion that such developments result in self-improving schools.They further recommended the development of subject leaders' strategic leadership skills, improvement of mediation and interpersonal skills.Based on the anecdotal evidence, what the above authors found is not different from what can be observed in a South African context.In South Africa, teaching and learning is delegated to the HoDs, however some of the principals make final decisions.

Distribution of leadership has its challenges.Williams (2011) examined the possibilities of and factors that prevent the actualisation of distributive leadership in South African schools.His assumption was that when teachers are allowed to work collectively, it gives them a sense of authority.He also asserted that this type of leadership contradicts active assumptions between power, authority and influence.In as far as the constraints are concerned, Williams found that despite the fact that policies have been endorsed to democratise decision-making, a dictatorial attitude still exists in the education system. The school management team ignore the decisions taken by school governing bodies and hide behind what they term'the best interest of the school.'Moreover, there is a lack of proper leadership development for principals and teachers.The workshops for leadership development are geared towards school principals, ignoring equally relevant leadership development needs of teachers.

According to Williams (2011: 195), "the majority of schools function in the contexts that are not conducive to distributed leadership."He contends that this is due to the fact that principals are not yet empowered enough to not feel threatened by what is perceived as a loss of status and power.He adds on to say that many South African schools are regarded as historically disadvantaged, and are generally considered as dysfunctional, which impacts negatively on the possibility of them implementing distributed forms of leadership.The conclusion by Williams (2011) was that South African teachers are under-utilised as leaders because, as much as there are new policies that provide teachers with opportunities to participate in meaningful decision making, the conditions to do soare not conducive to distributed leadership and nor have teachers been empowered to enact it.He further

recommended the on-going and sustainable programmes for school leaders and the negotiation of time-off to avoid disrupting school activities.

The following section covers the studies that have been conducted on the work of HoDs.

2.3 STUDIES ON THE WORK OF HODS/ SUBJECT/ MIDDLE LEADERS/ DEPARTMENT CHAIRS

The following themes emerged from literature on the work of HoDs:*roles and responsibilities of HoDs, instructional supervision, Heads of Department preparation for leadership of teaching and learning; competences of HoD and issues facing HoDs in leading teaching and learning, respectively.*

2.3.1 *Roles and responsibilities of Heads of department*

HoDs have a large role to play in the leadership of teaching and learning.In the UK, Fletcher & Bell (1999) examined the perspectives of subject leaders on the complexity of their role as subject leaders, their frustrations and their responses to the challenges they faced in raising the quality of teaching and learning in their subject area.The participants were twenty subject leaders and they were interviewed through semi-structured interviews.The schools understudy represented both rural and inner city schools across two districts.They foundeight perceived roles and responsibilities of subject leaders.First and foremost, subject leaders were perceived as resource providers as well as administrators. Participants viewed resourceproviders as obligated to ensuring that all necessary current resources were available for use in their departments. The administration role of subject leaders meant that they were required to do paperwork, which included departmental policies, and communicating with teachers to ensure that they were aware of the expectations placed upon them.

Participants reported that they were also expected to influence practice by being exemplary, typically byensuring that teaching and learning took place;chairing meetings; motivating the teachers; advising teachers; and providing feedback after

13

attending courses.Subject leaders were viewed as monitors, who were expected to evaluate teachers' work;analyse results; check the planning of teachers; assess whether or not set targets were met; do classroom observations; moderate learners' work; as well as the way in which records were kept by teachers. They had to provide professional development to the teachers, according to the needs identified by teachers, as well as keep them informed on new developments in the subjects under their supervision.Subject knowledge was also perceived as important for subject leaders, and they were required to update it by undergoing developmental courses.

Subject leaders were expected to be supportive of teachers in their departments by ensuring that they listened to them, communicated with them, assisted them, shared ideas with them, while being flexible, accessible and sensitive.Above all, they were expected to ensure on-going teaching and learning in their different departments.The frustrations of subject leaders involved lack of time for monitoring and developing colleagues.There was also an issue of lack of cooperation from the colleagues which posed difficulties for subject leaders in terms of developing their roles. Subject leaders seemed to be dependent on school heads and receiving advice for colleagues or experts from outside the schools in order to address the challenges they faced.

Hammersley-Fletcher (2002) alsodid a comparison between the policy requirements and the practices of subject leaders.The number of participants was twenty, which comprised two subject leaders from each of ten primary schools.Subject leaders were also asked to keep diaries and to record the tasks they conducted, in order to examine what they actually did in relation to their role. Data were collected through semi-structured interviews. She argued that subject leaders agreed with the policy on their role.However there was a need for clarity about what leadership meant in the context of primary schools, as well as on the need to support subject leaders in their monitoring role.

It was found that despite an emphasis by TTA (1998) on monitoring progress and using analysis to guide improvement, finding time for some aspects of monitoring was a problem.Some subject leaders felt uncomfortable about observing lessons, despite attaching importance to it. In addition to that, subject leaders were not clear about how to make use of the results of their monitoring activities.Subject leaders were setting targets and aims for what ought to be taught, and the coverage of their curriculum area, through the provision of schemes of work.They were also devising assessment procedures and methods of recording and reporting pupils' achievements.There was reluctance to intruding or advising on individual teaching methods, because that was seen as an infringement of individual teacher's independence.

Participants were aware of the need to approach their relationships with colleagues in a constructive and supportive manner.They acted to support staff development and training and there was evidence that everyone was kept informed through staff meetings. TTA (1998) expects subject leaders to ensureefficiency and effectiveness in the redeployment of both staff and resources. The study results suggested that in primary schools,subject leaders focused more on the deployment of resources than on deployment of staff.Data also indicated that this task was in fact one that subject leaders spent most of their time doing.It was recommended that staff in primary schools needed to help in developing a better understanding of the role of subject leadership, as well as in establishing perceptions of the benefits from developing clearly set out and carefully implemented monitoring practices. Despite the fact that there are a number of studies devoted to the role of HoDs, where the role of both primary and secondary school HoDs is equally complex, a survey of the literature suggests that primary schools are relatively ignored in the world of research.

The changing role of subject leaders was examined by Bennet et al. (2003) in the United Kingdom. They found that subject leaders were against conductingclassroom observations to monitor their teachers. They preferred pupils'

assessment, results and records. They preferred looking at the assessment results, at pupils' records, and displays of pupil's work.The authority of subject leaders depended on their competence as teachers, and on their subject knowledge.It was also revealed that the possession of subject knowledge provided both subject leaders and their colleagues with a professional identity. The subject leaders believed that a lack of subject knowledge could be a barrier to significant change. There was a perceived conflict of roles, where subject leaders were torn between senior management and teachers. They chose to be supportive to their departments. Teaching and learning are the core business in schools. Therefore,HoDs are expected to ensure that there is an improvement in their various departments, and ultimately in the school as a whole.

A South African study by Ali & Botha (2006) focused on determining the HoD role, its importance and the effectiveness of HoDs in contributing to school improvement in Gauteng public secondary schools.Both qualitative and quantitative approaches were employed. Thefindings of the study were that HODs played a large role in school improvement, yet they lacked competencies to lead and manage. HoDs experienced challenges such as lack of time to do their job, heavy teaching and administration loads and too many responsibilities.The class sizes were too big for the HoDs to be able to manage effectively. There was a lack of learner discipline and low teacher morale. Some teachers were improperly trained.Too much was expected of HoDs by their peers.There was also a lack of commitment on the part of principals.HoDs had no clear understanding of their duties and responsibilities.Ali & Botha (2006) recommended that HODs should be developed regularly, according to their needsin order for them to be able to do their job more effectively. They also proposed that future research should be conducted on the following pertinent subjects: stress levels of HODs in public secondary schools in Gauteng; evaluation of educators' perceptions of HODs; contrasting the role, duties and responsibilities between HODs in primary and secondary schools; and on provinces outside Gauteng in South Africa.

16

Dinham (2007) explored the role of HoDs in leading teams producing exceptional outcomes in years seven to ten in New South Wales.Both quantitative and qualitative data was used in order to choose sites with exceptionally performing schools in either specific subjects, or across school programs, for at least four years. Sources of data includedstandardised tests, examinations, different value-added measures, and nominations from various stakeholders. Thirty-eight secondary schools were studied, comprising twenty-six HoDs at four governmental and non-governmental schools across the state. The researcher conducted triangulation in order to consider socio-economic factors. The study revealed leadership to be the key factor in achieving exceptional outcomes and, that the certain qualities,attributes and practices of HODs were central, and that their focus was on students and their learning. The recommendation was that the study should inform the future learning of secondary school HODs, and be used for their selection. In order to see if HoDs are effective in performing their roles, it appears that it is important to know what constitutes effective leadership.

The nature of effective subject leadership and the subject leaders' role in leading and managing cultural change were examined by Poultney (2007) in the UK.A survey was conducted in which questionnaires as well as follow-up telephone interviews were used.A sample of eleven secondary schools was selected, with one hundred and fifty-nine subject teachers, eighty-five subject leaders and forty-one senior teachers. Interpersonal skills emerged as a theme and were viewed by all participants as the ability of a subject leader to build trust and effective working relationships with the staff. Subject educators believed that subject leaders should be approachable when educators needed support in their work. The other theme was instructional leadership, which was viewed as focusing on improving the quality of teaching and learning in the subject departments. Subject leaders' involvement in other's work and sharing pedagogy were perceived as central to their leadership role. It was also found that subject leaders were experiencing problems in delegating responsibilities to senior educators, who viewed delegation as crucial. The role of

HoDs is continuously changing because of the changes in the education systems, both internationally as well as in South Africa.

The changing nature of the HoD role in Australian secondary schools was investigated by Rosenfeld, Ehrich & Cranston (2008).In their findings, the HoDs interviewed perceived the change in their role as an unwelcome addition to their workload.The influence of HoDs on leadership had increased, with their leadership becoming complicated. The HoDs were not familiar with the demands for leadership and leadership skills. They attested toa lack of training, explaining thatthey were learning on the job, while recognising the influence of role models and mentors. Some said that they developed their understanding through personal experiences. They also voiced difficulties in accepting change. Role ambiguity, conflict and commitment to the old culture were revealed. The HoDs' role as instructional leadership had been replaced with generic management skills. As much as the role changed, so did the required skills.However, the development of those skills was not formalised, but, depended on an individual's eagerness.Professional development of management skills was demanded by a new role was recommended. As much as there are a number of studies that focus on the role of HoDs, there remains a need for more studies that examine the way in whichHoDs understand their role as leaders of teaching and learning.

Heng& Marsh (2009) studied the middle leaders in primary schools in Singaporeto understand the perceptions and understanding of their roles in leading teaching and learning.They found that middle leaders should have the interpersonal skills to be able to manage change and successfully influence others. They should also have a deep knowledge and understanding of pedagogy and subject matter in order to be recognized as competent. They were expected to be consistent and fair in making judgements. Middle leaders were also expected to foster relationships across the departments. Learning by developing personal capacity in knowledge, skills and values, as well as learning by understanding people, context and change, were noted as important. However, middle leaders were not comfortable with the notion of

learning by participating in shared decision-making. The recommendation was made to conduct further studies in order to critically examine the extent to which collegial relationships are translated into practice in schools.

The high school department leaders' understanding of their role in relation to leadership and school improvement was explored byFeeney (2009) in the USA.The findings were that the role was perceived as a distinct position responsible forserving the needs of many people.Department leaders were also perceived as being liaisons, managers, enforcers, suppliers, fixers, department representatives, advocates, communicators and mediators.This implies that the responsibilities of department leaders were to represent the department to the senior leadership; they have to provide resources for the department, ensure the policy implementation, take care of the problems encountered by teachers in the department, and communicate with the members in order to ensure the smooth running of the department. The department leaders revealed that they were thinking of promoting participation and collaboration within their departments. However, there was no evidence of any efforts to strengthen the capacity of colleagues to work collaboratively on instructional issues.

Ling(2010) explored the roles of HoDs as instructional leaders, the impact of their role on work culture and the challenges they faced in promoting work culture.For the provision of in-depth information on work culture as well as the role of HODs as instructional leaders, the study used purposive sampling to select two HODs and two senior lecturers from different schools.The findings were thatthe role of HODs was perceived as that of resource providers, communicators, and authority figures. The challenge was the workload and there was a need for training and support from top management to equip HODs with relevant skills to lead and manage their departments effectively.It was recommended that an ethnographic study be conducted in order to obtain an in-depth understanding of the way in which work culture develops,as well as also that researchers should spend time in institutions during data collection periods in order to understand its culture-sharing

behaviours, beliefs and values.Another important aspect of the work of HoDs is supervising the instruction in their departments.

2.3.2 *Instructional supervision*

The perspectives of three high school department chairs in providing instructional supervision to teachers in their departments of Mathematics, Science and Social Studies were examined by Zepeda & Kruskamp (2007) in the USA. Open-ended interviews were used to collect data. The study revealed that the department chairs were not well prepared for the practice of instructional supervision,having received little instruction to enact the role of instructional supervisor. They were also compelled to create their own roles,since there was a lack of support in terms of direction from the principal.

The department chairs experienced the role conflict and ambiguity in relation to the task of providing instructional supervision. Role ambiguity has been defined as an adequate knowledge of what is expected in an assigned position (Huse, 1980 cited in Mayer & Zepeda, 2002). Role tension on the other hand has been described as a situation where an individual has to meet two or more expectations of the role in such a way that if she complies with one, it makes it difficult to comply with the other (Katz &Kan, 1978 cited in Mayer & Zepeda, 2002). They used their intuitions to understand the meaning of instructional supervision, and that was reflected in the different approaches that were used. Instructional supervision was limited by time and lack of emphasis.

In Kenya, Wanzare (2012) examined the state of internal instructional supervisory practices and procedures in public secondary schools, from the perceptions of head teachers, teachers and senior government education officers. The author did not involve the HoDs as participants, however, literature suggests that it is the HoDs who are responsible for the quality of teaching and learning in schools, due to the delegation of supervision duties to them (Bush, 2008). The study focused on: the meaning, purposes and practices of internal instructional

20

supervision;problems associated with practices of internal supervision; documents and guidelines on instructional supervision provided by the Ministry of Education; skills and attributes of internal supervisors; change needed to improve instructional supervision practices and procedures; and staff development programmes for teachers and head teachers. His sample comprised two hundred secondary schools, which were randomly selected,where only one hundred and thirty six schools volunteered to partake in the study. He used both qualitative and quantitative approaches to collect data from two hundred and thirteen participants. The results revealed a discrepancy among a groups of participants with regards to the meaning of instructional supervision. However, the three groups agreed that instructional supervision included strategies put in place by head teachers, deputy head teacher and HoDs, in order to monitor the teaching and learning process in the school, and that this is a way of checking other peoples' work to ensure that bureaucratic regulations and procedures are followed and that loyalty to the higher authorities be maintained.

Participants believed that instructional supervision contributed to students' academic performance in the examination, as well as to the overall results of the schools. They agreed that internal instructional supervision practices had improved,and that they had maintained the quality of teaching in the schools and facilitated teachers' performance by enlightening them about instructional methods, helping them to identify areas of weaknesses and to address them, encouraging them to prepare and to plan their teaching effectively. The participants considered the importance of the role of instructional supervision as enabling head teachers to monitor teachers' instructional performance closely, keep teachers on their toes, and to identify marginal teachers with teaching difficulties. The participants also agreed that through instructional supervision, teachers were able to implement the school curriculum more effectively, by covering subject syllabuses on time, head teachers were able to identify andprovide needed instructional materials and teachers were introduced to current developments in curriculum and instruction.

The study also revealed that the participants had no confidence in supervision practices because they were inconsistent, biased and subjective, and that the practices generally stressed and frustrated the teachers. The instructional supervisors were ill-prepared for supervision, rarely conducted supervision meaningfully and generally preoccupied themselves with other non-instructional responsibilities, to the extent that they failed to provide enough professional help to teachers. The participants regarded teachers' attitudes towards instructional supervision as an important factor in the successful supervision of instruction. They also believed that meaningful feedback and follow-up support with respect to instructional supervision were not provided to teachers and, as a result, they were not assisted adequately.

The following were suggested by participants: that classroom observation by internal supervisors such as head teachers and colleague teachers should be a major means of addressing teachers' instructional concerns, and that all the stakeholders in the school, including students, should be educated about this supervisory practice to avoid potential confusion. The participants agreed that examining teachers' artefacts of teaching such as lesson plans and lesson notes should be a practical, alternative strategy for monitoring teachers' level of preparedness for classroom teaching. Participants concurred that head teachers and HoDs would be the most suitable internal instructional supervisors. They also agreed that changing teachers' negative attitudes towards supervision of instruction would enable teachers to view supervision as being beneficial to them.All participants believed that feedback and follow-up support given to teachers especially through shared discussions would facilitate their awareness about their instructional performance, techniques and methods. They also advocated a collaborative form of instructional supervision in which teachers and headteachers work as a team to devise strategies for improving teacher performance for the benefit of students.

The author further recommended that instructional supervisors develop consistent assessment procedures for teacher performance. In defining the

procedures, teachers' experiences and levels of competence ought to be considered.Incompetent and inexperienced teachers should be observed more frequently than competent and more experienced teachers. For further research, the author recommended that studies be conducted in order to determine the long-term effects of the practices of internal instructional supervision and staff development on school improvement. He also recommended that observational study focused on the current practices and procedures of internal instructional supervision be conducted. Both studies on instructional supervision show clearly that HoDs in many countries are not prepared for the job they undertake. Such is also the case in a South African context. Without thorough preparation,HoDs are likely to be incompetent in doing their job.

2.3.3 Heads of Department preparation for leadership of teaching and learning

Anecdotal evidence and empirical research suggest that in South Africa and other countries, teachers are promoted from post level one to HoD positions based on their teaching experience and ability to market themselves during the interviews (Turner, 2000).HoDs are the ones closer to the teachers and teaching and learning despite the lack of preparation.Research shows that HoDs learn about their job in various ways.Turner (2000) conducted a qualitative study using semi-structured interviewsto investigatethe main methods used by HoDs to improve the quality of teaching and learning in their departments, and to ascertain which of those methods were deemed to be the most successful. The researcher interviewed thirty-six HoDs in ten secondary schools in Wales.The study revealed that all the participating HoDs experienced some form of professional socialisation as junior staff members, because they appeared to useother HoDs as role models in order to develop their own knowledge and understanding of the role of the HoD. The role models were respectively perceived in a positive sense, or in a more negative way. Those who were perceived in a positive manner were role models who were delegating to others in their departments. Those who were perceived in a negative mannerwere those who were perceived as treating their colleagues badly. The study also revealed that HoDs learned from management courses like their principals. Those courses

23

were perceived to be limited in terms of their impact on the work of HoDs to improve teaching and learning, although they provided a better understanding of this role. This study is applicable in the South African context, where most HoDslearn from previous HoDs. They also take general management courses.Despite the lack of formal preparation, HoDs are expected to fulfil different roles in their positions.

2.3.4 Competences and skills required of HoDs

In addition to formal preparation for leadership positions, HoDs need certain competences to fulfil their roles and responsibilities.A review of literature yielded one study on the competences of HoDs.Bak (2010) examined the competences of secondary school HoDs and their implication on professional development in Malaysia. She found that HoDs perceived themselves as highly competent only in interpersonal skills. Their competency level was only average in administration of subject departments, curriculum development, supervision and mentoring, as well as in professional development. In addition to the above, there were certainHoDs who were unable to explain the curriculum plan to teachers.Although the HoDs unanimously agreed that the above five competencies were crucial, the competences they possessed were contrary to what they were supposed to have. Recommendations were made to the Ministry of Education to ensure that HoDs underwent professional development and that the training course content ought to be relevant to the needs of the HoDs. When becoming the HoD without the necessary skills, it can hardly be seen as a surprise when HoDs encounter challenges in fulfilling their role as leaders of teaching.

2.3.5 Challenges faced by Heads of Department

Some of the challenges that HoDs are facing in leading teaching are revealed in a study that was conducted by Stephenson (2010), which examined the issues facing the HoDs in New Zealand secondary schools, through a small-scale qualitative study. He collected data through five individual semi-structured interviews and one focus group, where participants were taken from five urban

24

secondary schools in New Zealand. In his findings, HoDs identified skills, qualities and knowledge that the HoDs need to have for them to be able to fulfil their role as managers and leaders. HoDs rated subject knowledge very highly, together with assessment knowledge. A broad base of pedagogical knowledge was also identified as important skill for HoDs as leaders of a subject.There was a perceived need for HoDs to lead and develop their department through the use of shared vision and strategic planning. HoDsrecognised the importance of team development,by providing different types of appropriate and relevant professional development as departmental leaders. People management was also identified as an important role forHoDs. Participants emphasised the need for HoDs to be good listeners, flexible, open to change and to have broad shoulders. Time management and organisational skills of HoDs emerged as being important for HoDs to be able to survive the demands of their role. Delegation was viewed as a skill in order to develop team members and to assist in reducing the HoD workload.

Participants viewed appraisal as another important role of the HoD as a leader. It was seen as a way of improving the practices of members of the department through diagnosed areas of need.Challenges identified were educational issues encountered by the HoD within their role as a leader in learning. HoDs revealed that the quick changes in education had intensified and increased their quantity of work.The second was the issue of leadership knowledge which was about training or professional development directed at HoDs. There was continuous training for different subjects; however there was no professional development that aimed to assistHoDs as leaders. It also emerged that other leaders within the leadership hierarchy received professional development in order to help them fulfil their role as leaders,whereHoDs were overlooked. Time and enormous workload were also identified as challenges that constrained HoDsin completing their tasks to the required standard. HOD workload included a large amount of administration,involving both appraisal and moderation.

In addressing the challenges HoDs were facing, the study found that while some HoDsimproved themselves, others delegated some of their work to teachers as a way of helping them to develop. The study also revealed that HoDs undertook professional dialogues with others with the intention of solving problems through collective intellectual problem solving. Others used a personal strategy to cope,taking work home in order to be free of the work environment where possible.

2.4   CONCLUSION

Both international and South African literature indicates that HoDs have a major role to play in teaching and learning in schools.It suggests that HoDs have never received any formal training for their job however the role of instructional leadership is delegated or distributed to them.They take initiative to learn about their job.Despite the lack of training, HoDs have different roles to fulfill in schools. Their roles include the following:they have to be administrators who deal with a lot of paperwork, resource providers who ensure that teachers have the necessary teaching resources, supporters of teachers to keep them motivated, monitors and supervisors of teachers' work who have to ensure that there is teaching and learning every school day while at the same time they are expected to teach.They are also expected to be managers who have to ensure that policies are adhered to within their departments or phases, liaisons between the senior management and staff.They are the departmental representatives who give reports on behalf of their departments.Literature suggests that due to the lack of training,HoDs are facing a lot of challenges in doing their job.

The challenges included the lack of understanding of how to fulfill their roles, role ambiguitywhich is described as insufficient knowledge of what to doand role conflict which refers them being torn between senior management and teachers (Bennett, Newton, Wise, 2003; Zepeda, 2007).Research suggests that HoDs also lackskills and time to fulfil their role to the standard set for them.Basically the literature suggests that; the education system puts people in positions that they are

not ready for.The next section will discuss the concepts that guided me in getting answers to my research questions, the conceptual framework.

2.4.1   Conceptual Framework

In reviewing literature, a number of different concepts emerged. For the purpose of this study, a focus was placed on the following concepts, which guided my data collection and analysis: preparation and development; knowledge and skills; roles and responsibilities; and challenges.

Figure 2.1: Conceptual Framework

PREPARATION ANDDEVELOPMENT
- Teacher Preparation
- Teacher Development
- Leader Preparation
- Leader Development

KNOWLEDGE, SKILLS & COMPETENCE
- Pedagogical content knowledge
- Subject matter knowledge
- Interpersonal skills

LEADERSHIP OF TEACHING

CHALLENGES
- Role ambiguity
- Role conflict
- Time constraints

ROLES& Responsibilities
- Curriculum leaders
- Administration
- Instructional supervision/Appraisal
- Support

2.4.2   Preparation and Development

There are three stages of development for HoDs in the education system. It begins with in-service training, whereby students are equipped to teach different subjects. When teachers start working in schools, they are supposed to receive an in-service training that is similar to learning on the job. Development in the teaching profession never ends because there should be continuous professional development.When teachers aspire to be HoDs, they are supposed to be prepared for leadership positions. This preparation is to supplement subject training that they received when training to be teachers. Only this is more focused on the leadership aspect of their job. Literature suggests that HoDs are not prepared for the job they are doing (Turner, 2000). Going through all these development stages is likely to equip HoDs with knowledge and skills to do their job effectively.

2.4.3   Knowledge and skills and competence

In order for the HoDs to lead the teaching in schools, research suggests that they require a deep understanding of pedagogy and subject matter (Hang & Marsh, 2009). Pedagogical content knowledge (PCK), which includes subject matter knowledge (SMK), also emerged as an important asset. In this study, PCK and SMK will be used. This is the knowledge they are supposed to acquire from the educational institutions where they were prepared as subject teachers. In literature, PCK has been defined as an understanding of the way in which students learn, as well as an understanding of the way in which the subject is taught to enhances their learning (Robinson, 2006). According to Nilsson (2008), SMK is the knowledge of a subject, which subject leaders need to possess. When the HoDs have no knowledge of what is being taught, as well as how it is supposed to be taught, it is unlikely that they could be of assistance to those teachers they are expected to lead.

A study that was conducted by Bennett et. al. (2003) revealed that the authority of subject leaders depended on their competence as teachers, and on their subject knowledge. However, primary schools subject leaders were not sure if they

had enough knowledge with which to advise teachers they were leading. Spillane & Seashore (2002: 97),cited in Robinson (2006), explicitly explained that

> without an understanding of the knowledge necessary to teach well (content knowledge), general pedagogical knowledge, content specific pedagogical knowledge, curricular knowledge and knowledge of learners, school leaders will be unable to perform essential school improvement functions such as monitoring instruction and supporting teacher development.

In addition to knowledge, subject leaders also need certain skills to be able to do their job competently.

The specific leadership skills that have been linked to the work of HoDs in literature are interpersonal and communication skills. Interpersonal skills were viewed as key to managing change effectively, and to influencing others (Heng& Marsh, 2009). These skills are defined as the ability to have good relationships with stakeholders. It also relates to the ability to motivate and encourage team work (Bak, 2010). She suggests that interpersonal skills enable HoDs to gain support and the collaboration of different stakeholders. Communication skills also emerged as important in the leading of teaching. HoDs are expected to translate policies into practice in their departments and classrooms. They are also required to negotiate with senior leadership and external actors on behalf of the members of the department (Harris, 2000). This calls for effective communication skills (Feeney, 2009). These skills come in handy when the subject leaders have toprovide feedback to teachers about their work, based on the suggestion that it should be provided in a non-threatening environment (Monyatsi, 2006).Therefore, the possession of skills is likely to enable HoDs to provide the kind of feedback that is constructive to teachers.

Both skills are linked to the leadership preparation of subject leaders that is supposed to take place before their assumption of leadership duties. The challenge is that subject leaders do not receive training for the role they are expected to play.

These subject leaders get appointed to the position based on their work experience as subject teachers. The training that some received wasthrough learning from the work of experienced subject leaders (Turner, 2000;Zepeda&Kruskamp, 2007). Knowledge and skills are linked to the work of subject leaders because the possession of the two enables them to be competent in doing their job.

In literature, competence is described as "an integrated package of knowledge, skills, attitudes and personal characteristics" (Kruger, 2009: 117).HoDsought to be equipped with the knowledge and skills to prepare them for leadership positions. Research however suggests that they are not competent in performing most of their leadership duties (Ali & Botha, 2006; Bak, 2010). Both authors recommended professional development for HoDs in order to enable them to do their jobs efficiently.

2.4.4   *Role and responsibilities of HoDs*

Subject leaders have different roles and responsibilities which they are expected to fulfil in leading the teaching of Mathematics in schools.In this study, the focus will be on the following roles: curriculum leadership; administration; instructional supervision; and appraisal and support.

2.4.5   *Curriculum leadership*

Curriculum leadership and instructional leadership are used interchangeably in the available literature, presumably because they are both linked to the leadership of teaching and learning.For the purpose of this study, I will use curriculum leadership throughout. In her study, Bak (2010) described curriculum leadership as ensuring quality teaching and student learning. She went on to say that this role will help the HODs to know whether the teachers understand the subject content in order to take the required steps if needs be. Curriculum leadership is linked to instructional supervision, in the sense that both are done in order to ensure that teachers give quality education to learners in the classrooms. The implication is that; HODs or subject leaders should ensure that teachers have all the necessary resources

to teach such as the subject policies that give them guidance in terms of what to teach and how to assess learners. According to Harris (2000), it is the role of the HODs to explain the policies to teachers.They (HODs) should be conversant with the requirements of those policies in order to ensure they are being adhered to by teachers, as it is their duty to oversee curriculum delivery in classrooms (Poopedi, 2011). As curriculum leaders, subject leaders are required to provide support to teachers at all levels of experience.

2.4.6   Support

Teachers always need support from subject leaders in doing their work.According to Fletcher & Bell (1999), subject leaders should listen to teachers' problems and provide the necessary help. They should facilitate communication channels, and negotiate with senior leadership and external officials on behalf of teachers. They are also supposed to share ideas with teachers, to be approachable and to be sensitive. Another way to support teachers as proposed by Harris (2000), is for HODs to facilitate opportunities to keep in touch with other teachers who teach the same subject.

2.4.7   Instructional supervision and appraisal

The leading of teaching requires the HoDs to supervise and appraise teachers in their departments. It is another form ofmonitoring and evaluation. A study by Zepeda &Kruskamp (2007) revealed that the department chairs that participated in the study used their intuition in performing this task, due to the lack of preparation and training. The authors suggest that the leading of teachersshould include regular formal and informal classroom observations in order for department chairs to know what goes on in the classrooms; and that supervision should be according to the needs of the teachers being supervised. Bennett et al. (2003) found that the subject leaders opposed the idea of monitoring teachers' work, especially of doing classroom observations. They viewed this as an invasion of privacy and as a lack of trust. Bennett et al. revealed that the primary school subject leaders participating in

their study had doubts about the sufficiency of their subject knowledge when it came to monitoring colleagues' work.Nevertheless, the visibility of the administrators at all times was recommended (Marable& Raimondi, 2007).

Supervision goes hand in hand with appraisal, which is viewed as important in an attempt to improve quality in teaching and learning.The appraisal of teachers is one of the strategies used to provide support for their continuous growth (Education Labour Relations Council, 2002). If it is done properly, it could motivate teachers to enhance their efficiency, because during theprocess, they gain the skills and knowledge that enable them to enhance their performance (Monyatsi, 2006). In South Africa, there is a policy known as the Integrated Quality Management Systems (IQMS), which is supposed to be implemented to ensure quality in schools. HoDs are expected to lead the Developmental Support Groups (DSGs), which refer to groups of appraisers during the appraisal process (DoE, 2005). The roles and responsibilities of DSGs includementoring and giving support to the appraisees. They are also required to assist the teachers in the development of their Personal Growth Plans (PGPs). HODsare further required to conduct the diagnostic assessment of teachers for development purposes, as well as the summative evaluation at the end of the year, for Performance Measurement.It is expected of the subject leaders to provide teachers with feedback, and together, to set targets for professional development after supervision and appraisal.

2.4.8 *Coordinating professional development*

Teachers are required to "learn, unlearn and re-learn" (Bak, 2010:464).Therefore, HoDs are expected to facilitate the professional development of teachers in order to help them grow professionally. Mundry (2005) views professional development as a key instrument to supporting better practice, and to helping teachers meet the goals for student learning.Many studies have emphasised that the HoDs themselves need to undergo professional development in order to do their job effectively (Ali & Botha, 2006; Tam, 2010).Professional development could take place on-site in the form of in-service training, or off-site in the form of

workshops, seminars, conferences, courses etc. There are different views in previous studies about which type of professional is more effective. Rosenfeld, Ehrich& Cranston (2008) believe that professional development should be conducted within a particular school context.On the other hand, Guskey& Yoon (2009) say that there is no proof that the school-based professional development is efficient. They furthermore say that the involvement of experts from outside has brought about improvement in student learning.

The effectiveness of professional development activities is dependent on their content. According to Mundry (2005), if teachers were to develop knowledge of teaching, the professional development ought to includestrong content and pedagogical content knowledge. The focus ought to be on student knowledge, because, in order for teachers to be effective in teaching, they need to understand the subject matter. This implies that the activities should address what to teach and how to teach it. Guskey& Yoon (2009) recommend that teachers be given opportunities to practice what they have learned in a classroom context. This could assist HoDs in monitoring the progress and evaluating the success of professional activities. In addition to the above tasks, subject leaders are still responsible for the administration of their departments.

2.4.9 Administration

In leading various subject departments or phases, HoDs are expected to ensure that their departments run smoothly. Administration involves the analysis of results,by means of which HoDs are supposed to monitor teacher performance.According to Poopedi (2011),this also involves checking lesson plans, teachers' files, work schedules and moderation of assessment tasks. The challenge of tension, lack of time and too much paper work has emerged when it comes doing this task. HoDs are primarily teachers and are responsible for their own subjects.However, they also head the departments, which is another responsibility. A selection of studies hasshown that HoDs lacked competence in carrying out this task. In them, HODswere observed not to have enough time to complete both

teaching and administrative work. They found it difficult to reschedule time to fit both tasks.

Some HoDsparticipating in these studies revealed that they are not productive in performing their tasks due to a lack of understanding of what to do and when (Mayers& Zepeda, 2002; Ali & Botha, 2006). Nevertheless, in order to do their duties, the available literature suggests that HoDs must be able to conduct departmental meetings;they must prepare and allocate departmental budget forthe year; procure and take care of the teaching and learning resources; and they should also draft the departmental programs and allocate teachers accordingly to ensure that the programs are implemented effectively (Bak, 2010).In doing the above tasks, the subject leaders will be fulfilling different roles they are supposed to play as leaders in their departments. TheHoDs are facing some challenges in leading their departments.

2.4.10 Challenges

HoDs are primarily teachers and secondarily administrators. Research evidence shows that HODs are facing challenges of role ambiguity and tension (Zepeda &Kruskamp, 2007; Rosenfeld et.al., 2008). Role ambiguity has been defined as an inadequate knowledge of what is expected in an assigned position (Huse, 1980 as cited in Mayer & Zepeda, 2002). Role tension, on the other hand,has been described as a situation where an individual has to meet two or more expectations of a given role in such a way that if she complies with one, it makes it difficult to comply with the other (Katz &Kan, 1978, cited in Mayer & Zepeda, 2002). Their study also discovered that HODs were subject to time constraints to accommodate administrative duties. This was further confirmed in a South African study (Ali & Botha, 2006). Subject leaders are caught between demonstrating loyalty to the senior management, while having to promote a good working relationship with the members of their departments. Role ambiguity and conflict was thus seen as a barrier to subject leader efficiency (Bennett et.al. 2003). The same study also found

34

that subject leaders were uncomfortable in supervising the work of people who had more experience than them.

Literature on the above concepts suggests that HoDsrequire knowledge and skills in order to prepare them for their positions. Having these skills makes them competent in performing their tasks and to fulfilling their roles as leaders of teaching in schools.

CHAPTER THREE
RESEARCH METHODOLOGY

In this chapter, the research approach, design and methods are discussed, the relevance of the chosen research approach, design and methods are highlighted andthe chapter also details the importance of ethical conduct and indicates the strategies used in this study to ensure sound ethical procedures. The size and choice of the sample used in the study are also discussed.

3.1   RESEARCH APPROACH

The study explored the perspectives educators hold about the leadership role of the HoD in the teaching of Mathematics inprimary schools. In order to investigate this phenomenon, qualitative approach was deemed to be appropriate in order to gather the viewpoints of the participants. A qualitative approach is distinguished by its "ability to represent the views and perspectives of participants" as emphasis is placed on hearing their voices (Yin, 2011:8). A qualitative approach enables a researcher to gain a deeper understanding of this phenomenon, through interaction with the participants in a natural setting. It also allows the researcher to explain behaviors which are not easy to measure by using questionnaires (Creswell, 2012). In addition, a qualitative approach allows the researcher to study a small sample and to ask open-ended questions. In this study, aqualitative approach enabled me to sample only two schools wherein I interacted with tenparticipants, listening to accounts of theirperspectives during one-on-one semi-structured interviews.

◄

3.2   RESEARCH PARADIGM

A paradigm is "a set of beliefs that guide action" (Denzin& Lincoln, 2008:245). This study was conducted within the interpretive paradigm,which assumes that knowledge can be constructed and that there are multiple realities that can be determined from any given situation (Cohen, Manion& Morrison (2011). Through this paradigm, I managed to ascertain different perspectives and different realities of the participants regarding the leadership role of the HoD in the teaching

© University of Pretoria

ofMathematics in both research sites. By means of this paradigm, I was able to interpret data based on the perspectives of participants.

3.3   RESEARCH DESIGN

A research design is a plan that the researcher draws upon to determine the way in which she will go about conducting research, since my intention was not generalize findings, but to explore the phenomenon with a certain specificity, and to interpret the meaning of the experiences of the participants. I decided to use a qualitative case study in this regard, for its ability to provide limitations in as far as the number of people to be interviewed, while providing reliable data (McMillan and Schumacher, 2010).The case study design enabled me to interview ten participants. It also allowed me to capture and describe the complexity of real life experiences (Jacobs, Razavieh& Sorensen, 2006).

A case study enables researchers to work in a bounded context,namely that of two schools in a Gauteng district (Creswell, 2012). According to Jacobs and others (2006:457), case studies are "anchored in real life and can provide richly detailed accounts of phenomena."Case study allowed me to conduct my study in school contexts and conduct interviews in natural settings. Yin (2003) contends that in using case study design, the researcher is able to use multiple sources to collect data, which for this studywere the semi-structured interviews with three groups of participants. I also collected and analysed documents that deemed appropriate and relevant to assistme in answering the research questions. Thedocument analysed were instruments used by HoDs to monitor the work of teachers.

3.4   SAMPLING

For this study, I employed purposeful maximal variation sampling method to select the research sites. Creswell (2012) has described this method as a purposeful sampling strategy that allows a researcher to sample cases that differ in certain characteristic. Initially, I had planned to select two schools as research sites based on two dimensions, namely: difference in performance in Numeracy and similar

performance in Literacy in the Annual National Assessment (ANA) standardized test. One school had to be performing relatively well, and the other one poorly in Numeracy, while they were both achieving similar scores in Literacy. The rationale for looking at Literacy results was that as the research suggests, there is a correlation between performance in Language and in Mathematics (Bohlmann&Pretorious, 2008). For this study, those that performed well in Numeracy scored seventy percent and above, while those that performed poorly scored below 30 percent. I could not find any similarities in the Literacy scores.Therefore, I was obliged to look at schools that had scored fifty percent and above in Literacy.

Table 3:4.1: Sampled schools

Top schools in Numeracy	Numeracy scores	Low schools in Literacy	Literacy scores
School A	89	School A	59
School B	52	School B	50
School C	72	School C	53
School D	69	School D	50
School E	68	School E	56

I sought permission from four schools among the top performing schools in ANA Numeracy, and two schools from the lower performing schools in ANA Numeracy. In addition, the uppermost and lowermost performing schools showed scores ranging from fifty percent upwards in ANA Literacy. I managed to obtain permission from the two lowest performing schools, as well as one top performing school.I then used one low performing school as a pilot site.

3.5   PARTICIPANTS

There were ten participants in this study. The number comprised four Mathematics HoDs, two school principals and four Mathematics teachers. There were two HoDsincluded per school. The initial intention was to interview one HoD from the foundation phase with another from the intermediate phase.

However, upon arrival at the school I discovered that there were no HoDs for Intermediate Phase, but rather Inter-SenHoDs. Inter-Sen stands for Intermediate and Senior Phase combined. I decided to interview the HoD that was in the school. I also selected one principal per school. In as far as subject teachers are concerned; there were two teachers per school. One was teaching at foundation Phase, while the other was at the Inter-Sen Phase. I aimed at selecting one beginner, and one experienced teacher per school.

Concerning demographics, I intended to select one male and one female teacher per school. However, since the study focuses on primary schools where most of the teachers are female, it proved challenging to identify a male teacher to involve. Ultimately I was able to involve one male teacher.HoDs were selected based on the fact that they are the leaders of Mathematics teaching in schools, and therefore, were potentially information-rich.On the other hand, the school principals were selected as the heads of the schools that were responsible for the functioning of the school and the support of teaching and learning. The subject teachers were selected based on the subject that theytaught.In addition, both the principals and subject teachers enabled me to corroborate the data gathered from the HoDs.

3.6   DATA COLLECTION

In order to obtain permission to collect data in the selected schools, I first applied to the Gauteng Department of Education. I also applied to the University of Pretoria ethics committee for ethical clearance, which was granted. In addition, I wrote letters to school principals and governing bodies requesting permission to conduct research in their schools, as well as letters to invite participants to partake in the study. In one school, I was granted an opportunity to brief the potential participants on the purpose of my study. In another school, I explained the purpose of my visit to the principal, who welcomed me. In both schools, the principals assigned 'gatekeepers' to assist me in identifying the participants for the study. I explained to them the purpose of the study and what is expected of the participants, in an effort to gain the trust and support of the gatekeepers, as suggested by

Creswell (2012). I requested for the gatekeepers to provide a quiet space where I could conduct interviews without disruption. The data sources for this study were individual interviews and documents.

3.7   SEMI-STRUCTURED INTERVIEWS

Interviews are useful in providing information that cannot be obtained through observations such as opinions, beliefs etc. (Jacobs et.al. 2006). These authors contend that it is advantageous to use interviews, due to the large volumes of in-depth data they provide and the relative speed with which they can be collected.However they also highlight the shortcoming in using interviews, which may include the unwillingness of interviewees to share information, or their tendency toprovide unreliable data. Keeping these shortcomings in mind, I prepared an interview protocol to guide me in asking questions and conducted individual interviews with ten participants. During the data sense-makingprocess, I found it necessary to follow up on some participants for clarity. I made calls to one HoD and one principal.

3.8   DATA ANALYSIS

Data analysis refers to a process of reducing and interpreting data (Vithal& Jansen, 2001). According to Cohen etal. (2007) In qualitative research data, analysis refers to making sense of data from the perspectives of participants, while taking into account the context, pattern, themes, categories and regularities. I conducted analysis of data throughout the research process.I transcribed the interview data and employed content analysis and constant comparison methods in order to analyse it. Constant comparison is an analysis strategy that allows the researcher to compare new data with existing categories and theories that have been developed to be able to accomplish perfect fit between categories and data" (Cohen, Manion&Morrison, 2007: 473).

I analysed documents by using the content analysis method. Content analysis refers to making and summary of and reporting written data (Cohen et al., 2011).

The method enabled me to code and categorise data, and to compare and draw theoretical conclusions from text (Cohen et al., 2007). For this study, I adopted steps suggested by Flick (2009:326) as cited in Cohen et al. (2011), which are: defining the units of analysis; paraphrasing the relevant passage of text; defining the level of abstraction required of paraphrasing; reducing data and deletion of paraphrases that duplicate meaning; reducing data by integrating paraphrases it into the required abstraction; putting together new statements into a category system; and reviewing the new category system against the original data.

3.9   THE TRUSTWORTHINESS OF THE STUDY

3.9.1   *Credibility of the study*

Credibility refers to the correspondence between what the participants of a study have said and how the researcher portrays their viewpoints. Jacobs et.al. (2006: 504) defines credibility as the term that is used in qualitative research to refer to the "internal validity in quantitative research". It concerns the truthfulness of the findings of the inquiry. I ensured credibility by doing the following as suggested by Creswell (2012): triangulation; member checking; peer debriefing; accompanied by an external audit. According to Jacobs et.al. (2006), triangulation refers to using more than one method or participants and groups in a study. For this purpose, in this study I interviewed three groups of participants, namely: the HoDs, the principals, and the teachers. I also retrieved the documents that seemed relevant to answering the research questions. Lastly, I examined each information sources and looked for evidence to support the theme to ensure accuracy. I also conducted member checking.

Member checking refers to a process whereby the researcher asks the participants to review and critique data for accuracy and meaning (Jacobs et.al., 2006). In this study, I asked two participants in writing to check the accuracy of my report. I also asked the participants to check whether my description of their account was complete and realistic, and whether the themes on the report were accurate to be included, and lastly, whether my interpretation was fair and representative. In

addition, I documented all procedures that I followed in case my research methods and processes were requested for public disclosure and to provide an audit trail (Cohen et. al., 2007).

3.9.2   *Dependability*

Dependability is a term used in qualitative research to refer to the extent to which disparities can be explained or tracked, and is termed reliability in quantitative research. Jacobs et al. (2006) suggest that dependability can be achieved through an audit trail. In this study, I preserved all transcripts, notes andaudiotapes in order to be able to refer to them in future where necessary. I did my best to present all perspectives equally and to enable readers to arrive at neutral decisions.(Creswell & Miller, 2000).I guarded against power relations as suggested by Cohen etal. (2007), by treating participants as partners. I acknowledged past experiences and biases that might have an effect on my interpretation of the findings as the researcher. I avoided asking leading questions.Lastly I ensured alignment between the interview questions and the research questions.

3.10   ETHICAL CONSIDERATIONS

In order to collect data for a qualitative research project, the intention of the researcher is to gather an in-depth account of the phenomenon, which may require the participants to talk about their private experiences. This implies that trust is crucial between the participants and the researcher. The following were the ethical issues that weretaken into account when conducting qualitative research, as suggested by Creswell (2012): informed consent; voluntary participation; being respectful towards the participants; right to privacy; maintaining confidentialityand protection from harm.Before I could begin with the interviews, I explained the purpose of the study to each participant and the role they had to play. I informed them of their right to refuse to participate,and that they could withdraw from the study at anytime. I thereafter gave them consent forms to sign as proof that their participation was voluntary.

In addition, I requested permission from each participant to use the audio recorder to capture the interview as abackup for the notes which they all allowed me to take during the interview sessions. I ensured that I treated participants as human beings,with respect. I further observed their right to privacy through anonymity and confidentiality.Due to my sample size, I could not guarantee anonymity.However, I used pseudonyms for participants and schools instead of real names, for example, School A&School B. I assured participants that all their responses would be confidential and would not be shared with outsiders.Lastly, I promised participants safety from harm of anyshared with outsiders.Lastly, I promised participants safety from harm of any kind. I revealed everything found in the study and acknowledged m**y** biases

CHAPTER FOUR
DATA ANALYSIS AND RESULTS

4.1   INTRODUCTION

This chapter presents the analysis of responses from participants involved in the study. Themes and sub-themes emerged from data collected from the ten participants in two different schools (School A and School B). In these schools I interviewed the ten participants, two principals, four Mathematics/Numeracy teachers, two of which were from the Foundation Phase and two from the Intersen Phase, respectively; along with four Heads of Department (HoDs), two of which were from the Foundation Phase and two from the Intersen Phase, respectively.

Table 4.1.1:Introducing the research participants

Participant pseudonym	Site	Years of teaching experience	Years of Mathematics/ Numeracy teaching	Years in leadership	Qualifications
SP	A			10years	Junior Secondary Teachers Course, B.Com, Accounting & Economics, Ace Education Management and Leadership
HoD1	A	19 years	0	8years	Senior Primary Teachers Diploma, Further Education diploma, Ace Certificate and Honours in Education Management.
HoD2	B	16 years	16 years	3years	Senior Primary Teachers Diploma and B Tech Public Management
ED1	B	16 years	16 years		Senior Primary Teachers Diploma , ACE in Maths Science and Technology
ED2	B	13years	13years		

Key: ED = Educator; HoD = Head of Department; SP = School principal

HoDs in both sites have between 16 and 24 years of teaching experience. Their Mathematics expertise and experience varies from zero to sixteen years, and they

have been HoDs for between one and thirteen years. The zero represents one HoD who has never taught Mathematics. In both research sites only three participants held Mathematics-specific qualifications. Teacher participants had different opinions about being HoDs. Half of them indicated that they did not aspire to be HoDs, but preferred teaching. On the other hand, another half pointed out that they aspired to be HoDs,where one has applied for the position and another one has acted as the HoD.

4.2 THE PILOT STUDY

My study commenced with the piloting of interview questions to ensure that all questions were clear, as well as to ascertain the amount of time it would take to conduct each interview. A pilot study is described as a small-scale methodological test conducted in preparation for the actual study (Kim, 2010). The intention of conducting a pilot study, according to Kim, is to make certain that theplanned methods and ideas would be practical. He contends that pilot study is beneficial, as it enables the researchers to adjust and revise the main study.

One of the three schools that had granted access for the purposes of this research, served as the site for the pilot study. Although I intended to interview five participants in each of the schools, two HoDs, two teachers and one principal, I only managed to interview one HoD and one teacher from the Inter-Sen Phase. Others, on hearing that the interview was about Mathematics, disappeared.Another potential participant left to fetch another participant but never returned. The participant she went to fetch came, but did not agree to be interviewed. On explaining the purpose of my visit, she said, "I need a second opinion from the teacher union representative because here in our school we do not like one another." After explaining the purpose of my study to an educator union representative, one teacher and one HoD agreed to be interviewed. The HoD indicated that there was no Intermediate Phase HoD, but only the Inter-SenPhase HoD. Based on this information, I then took the decision to approach potential participants in the Inter-Sen Phase, instead of the Intermediate Phase.

The HoD participant in the pilot study indicated that he did not receive any formal preparation to become the HoD, but learned from being assigned some HoD responsibilities when the HoD was unavailable. He would sometimes even assist the HoD with other management tasks. In response to a question about the leadership role of the HoD in the teaching of Mathematics, this participant noted:

As a leader of Mathematics teaching, HoDs have several roles to play: such as ensuring quality teaching, arranging collaborative planning and working with teachers under their charge, to improve the quality of Mathematics teaching.

The HoD also referred to the induction of HoDs as important, but described the induction process as quick and inadequate. The comment below illustrates his/her experience of the induction process:

It was just an induction where they explained basic things, roles and responsibilities and what is expected of us and that was it.

The HoD participant referred to ensuring that teaching and learning in the specific phase takes place, teachers meet submission deadlines, monitor the work of teachers and moderating of assessments; being in charge of IQMS and teacher development, as the roles and responsibilities of HoDs.

The HoD mentioned different challenges he faced in leading teaching of Mathematics, especially in a small school where HoDs are in charge of more than one subject. Another challenge the HoD participant mentioned was that he finds it difficult to lead more experienced teachers, where the HoD participant indicated that he leads by example, and arms him/herself with knowledge to earn respect of teachers.

The teacher participant indicated that it would be helpful for HoDs to lead professional development workshops at school. This participant made a profound statement about application for and appointment into HoD positions at school, saying:

There are so many things that happen in various schools, sometimes you find that maybe if you apply for a position, you find that other people, what they normally do is there are people for those positions.Immediately you apply for those positions, you normally waste your time because they just go with the process and yet, they know who their people are.

The participant also commented that it is necessary for HoDs to have a forum to have discussions about the kind of support their teachers need to effectively teach Mathematics.

Based on the participant responses and my experience during my pilot phase of the study, I decided to work harder on finding gatekeepers that will help make gaining access to research sites less difficult. The participants seemed to have understood all the interview questions and were able to answer them.

4.3 PARTICIPANT RESPONSES - PRINCIPALS

The themes *administration; curriculum management* and *supervision and support* emerged from principal participant responses to sub-research question one:**What are the perceived roles and responsibilities of HoDs in leading the teaching of Mathematics in primary schools?**

Administration

Principal participants mentioned that administration is a key responsibility of HoDs because as school-level administrators, HoDs are responsible for controlling teacher and learner attendance registers. This administration's responsibility also includes administration at phase/grade or subject/learning area level. The

administration at school level was emphasised by one principal who said the following:

They are there to see to it that there is administration of attendance registers of learners, and educators.

With regard to phase/grade level administration, HoDs were described as being responsible for ordering and outsourcing resources for the teaching of subjects in their phases (LTSM). The principal participant added:

They are there to see to it that there is administration of Learner Teacher Support Materials.

This was supported by the second principal participant who said:

They are supposed to choose those resource books that the teachers need.

Curriculum management, supervision and support

Principal participants made reference to subject-specific leadership or management, which includes the monitoring of teachers' work, specifically the pace-setters, and checking for compliance. They indicated that HoDs should check lesson plans and assessment plans to see whether they are in place, and whether they are in line with required standards. A number of responses from the principal participants indicated that HoDs were not exclusively responsible for subject leadership and phase/grade leadership or management, but should also supervise teachers and learners work. This was what one participant indicated:

Their role is to manage the curriculum, in managing the curriculum, they have to ensure that the teachers that they lead are on par and able to complete the syllabus before the end of the year so, they must ensure that they gather information of new tactics that can be applied in the subject.

Another principal added that:

48

HoDs are there to manage a particular phase or a particular learning area and also to ensure that their colleagues are equipped with skills of managing their classes.

Principals shared similar perspectives with regard to administration being a key role and responsibility of HoD. They also emphasised that HoDsare expected to do administrative work at school/phase and subject levels. Principal participants also indicated that HoDs should manage the curriculum and oversee the daily operation of different subjects/learning areas and phases. All principals believe that HoDs should provide support to both experienced and new teachers, with regards to subjects taught in the different phases of which they take charge.

4.4   PARTICIPANT RESPONSES - HEADS OF DEPARTMENT

Similar themes, namely *administration curriculum management, supervision and support,* emerged from HoD participant responses related to the first sub-research question: **What are the perceived roles and responsibilities in leading the teaching of Mathematics in primary schools?** In addition, HoDs added that teaching is also their main role and that they also have to support and monitor teachers' work.

Administration

The majority of HoD participants pointed out administration as a role they have to fulfil.This role of administration included providing resources by ordering textbooks for the school or phases. It also involved general tasks, such as taking minutes during school staff meetings, to more subject-specific tasks such asmoderating activities given to learners, handling paperwork used as monitoring instruments.

I'm engaged to see that there are textbooks, that is Learner Teacher Support Materials' (LTSM's) ordering.

Curriculum management, supervision and support

HoD participants emphasised their management role, indicating that they are phase managers, curriculum managers and subject managers. As phase managers they are responsible for ensuring that there is teaching and learning taking place in their phases. This is how one HoD participant highlighted his/her role:

> *My role is to manage the phase, for effective teaching and learning.I have to see to it that there is teaching and learning taking place in the phase.*

Managing curriculum according to one participant entailed checking the quality of Mathematics teaching. The HoD participant stated:

> *My main responsibility is to see to it that Mathematics is implemented to the fullest.*

The subject management role of HoDs, as perceived by participants, involved ensuring that teachers adhere to the subject policy and work schedule. This was what one HoD participant noted:

> *I check to see if the teacher has completed all the activities that are set for that particular term. I also check the assessment plan to seewhether the activities that are being stipulated for that term are available.*

In support of the above another HoD participant added:

> *I try to equip myself with what the policy says in terms of Mathematics.*

Monitoring teachers' work

Closely linked to teacher support, is monitoring the work of teachers.All participants indicated that they had to monitor the work of teachers. They made reference to checking lesson plans, learners' activities, as well as teachers' files. HoDs should also check whether interventions are done by teachers in classrooms. Two participants related as follows:One HoD added by comparing HoDs to scorpions

50

and explained that given that the scorpion has many legs, so are the responsibilities of HODs.

> *I have to do monitoring when teachers submit lesson plans, formal activities and question papers. I have to moderate them, return them back if they are not up to standard, ask them to rectify. After the learners write, I also have to moderate the marked scripts.*

> *As an HoD, I have got a monitoring tool where I check learners books; whether there are enough activities, and whether the activities are relevant and inline with the work schedule. There are too many roles. I remember the district told us that as the HoD, you have to be a scorpion, that is, we have to plan, do admin work, be a teacher, and support educators. You have to be a lot of things; hence I'm saying you have to be a scorpion.*

Support

HoD participants variously referred to teacher support as mentoring, arranging professional development for and guiding teachers. The following quote best describes the mentoring role of the HoD:

> *I have to do the classroom observations, and mentoring. This is what I have to do.*

Two HoDs further indicated that they are responsible for arranging professional development for teachers. This is what they said:

> *I have many responsibilities; some of them are developing and supporting educators.*

> *My role is to support educators and develop them more especially with our new curriculum. It started last year because most of our educators are not sure about what they should do.*

51

Guiding teachers emerged as a key role of HoDs, as evidenced by the following quote:

My role is to guide educators in a right direction.

On the whole, HoDs mentioned that their roles and responsibilities were to support teachers by mentoring, guiding and developing them professionally.They also pointed out administration, whereby they were expected to provide resources to teachers and to do paperwork, as well as to take minutes during meetings. They brought up the fact that they are first and foremost teachers, while they were also expected to monitor other teachers' work by checking lesson plans; controlling books; and checking interventions and teachers' files. HoDs mentionedvarious levels of management as their responsibility. They were managers at subject level, whereby they were required to ensure that policy was adhered to by teachers. They were expected to manage phases and the curricula offered in them, where phase and curriculum management entailed checking the effectiveness of Mathematics teaching.

4.5 PARTICIPANT RESPONSES - TEACHERS

The theme *support,* detailed below,also emerged from teacher participant responses to sub-research question number one:**What are the perceived roles and responsibilities of HoDs in leading the teaching of Mathematics in primary schools?**

Support

All teacher participants indicated a key expectation of the HoDs as arranging the professional development for teachers, though they also pointed out that most HoDs are not well equipped to provide support.In the words of one participant:

We need them to arrange school based works for us.

Another participant said:

What can they do? They don't even know Maths. There is not much that they can do, absolutely, there is not much.

In both schools, teacher participants noted that HoDs have no credentials in the Mathematics field and that, as a result, teachers with the required credentials and know-how step in to assist the HoDs or the HoDs or teachers seek help elsewhere.In this regard, teacher participants had the following to say:

The one person who has been chosen as the HoD, really, we are trying by all means to help her make arrangements for Progression, Learning Guidelines (PLGs) that I'm talking about. She has no experience and she has never even taught Maths.

A recurring response was the teacher participants' lack of confidence in the HoD's ability to provide support and guidance. They commented:

My HoD does not even know Maths.S/he does not teach Maths (laughing). So it is like helping is not the task of HoDs; it is more on teacher's shoulders because we sit together in a meeting and teach one another and also share best practices in our school/clusters.
Our help comes from clusters where we meet with other teachers. We also have CAPS (Curriculum Assessment Policy Statement) where there are coaches that come to see how teachers and learners are coping, and they support us. So, it is a Non-Governmental Organisation(NGO) that comes now and then, after two weeks or in two weeks' time.

Teacher participants regarded support as the HoDs' role and responsibility. They indicated that they expected HoDs to provide teachers with resources, to encourage and motivate them and to arrange for assistance with experts in order to equip teachers in handling learners with special needs. They also expected HoDs to provide professional development, which the majority of the teacher participants said is not happening. Instead of HoDs providing support, teachers got support

from one another. Coaches from Gauteng Primary Language and Mathematics Strategies (GPLMS) were also pointed out as teacher-supporters.

Summary of all participants

In response to research sub-question one; participants indicated a mix of role expectations and actual roles fulfilled by HoDs. Role expectations mentioned were: the provision of support to teachers; administration and management of curriculum, subjects and phases; as well as monitoring teachers' work. All three groups of participants were in agreement about the role of HoDs in supporting teachers. However their understanding of support differed in that, the principal and HoD groups perceived support as a process whereby HoDs mentor, guide and develop teachers. On the other hand, teacher participants believed that support would mean the provision of resources, with the teachers receiving motivation and development. Teachers noted that they did not receive development from HoDs, but instead that they as teachers found support in one another. They also referred to the coaches from Gauteng Primary Languages Mathematics Strategies (GPLMS) as their supporters.

4.6   PARTICIPANT RESPONSES - PRINCIPALS

For sub-research question number two, namely: **What kind of preparatory and on-the-job training did HoDs in two Gauteng primary schools receive to lead the teaching of Mathematics?** The theme *lack of formal preparation* emerged from the responses of principal participants.

Lack of formal preparation

Both principal participants agreed that HoDs did not receive any formal preparation before they were appointed to their positions.One participant mentioned that the reason was that, it is assumed that they are ready for the job, based on their teaching experience, noting:

> *The number of years that they have been teaching, back their knowledge. So, they are really adequately equipped.*

There was an agreement between both participants that, the professional development HoDs received on the job came in the form of induction by the district through workshops.However in one school, a principal participant mentioned that HoDs also received induction at school level, while a participant in another school indicated that at school level, the deputy coached the new HoDs during structured SMT meetings.

A principal participant emphasised the importance of an on-going development for HoDs as leaders of teaching.In his own words he noted:

> *It is very important that the HoD development is on-going because you know Mathematics is very key in any school or to learners themselves.*

Adding that:

> *In leadership you need to be constantly work-shopped, you cannot say:'I am now a rounded leader'. You know strategic planning is one of the key issues that HoDs must have, dealing with resource materials, how to outsource. They need lots of workshops around that.*

Overall, principal participants say that their HoDs were never prepared for the positions they were appointed into. They received induction from the district, while others also received a school-based induction and coaching.Participants also acknowledged that their HoDs still needed to be developed in various areas of their job. For example,HoDs needed to be equipped with subject expertise as well as leadership and management skills.

4.7   PARTICIPANT RESPONSES - HEADS OF DEPARTMENT

One theme emerging from responses to research number two: **What kind of preparatory and on-the-job training did HoDs in two Gauteng primary schools receive to lead the teaching of Mathematics?***Lack of formal preparation*

All participants revealed that they did not receive any preparatory training before they were appointed into their positions. One participant stated:

Nothing! They take you from teaching as a teacher you go through interviews, you prepare yourself in terms of the interviews to say ok let me see, they say, for the HoD these are needs for the post, what can I prepare myself for in terms of questions and all that? There is nowhere where I go and they say, to become the HoD you must do this and that, they only need qualification for Management that is it, But there is no preparation per se for being the HoD.

It appeared from the responses of HoD participants that HoDs were driven by their interest to be leaders to learn about being HoDs. They mentioned various activities that equipped them for HoD positions. These activities included taking initiative to facilitate their own learning; participating in professional development activities offered by external actors;looking at how other HoDs and her deputy were doing their job in her previous workplace.S/he also mentioned that her union capacitated her with management duties. These were his/her own words:

In-service training, from staff development here in the school, and also by also upgrading myself by attending workshops. I was not prepared to be an HOD. It is self-development, and just by looking at how the deputy was running the school, the principal and the HODs around the school what they were doing and also by engaging in professional bodies like Union (X).Union (X) is the one that capacitated me around HoD management position.

In one school one participant indicated that s/he prepared herself through facilitating Mathematics workshops for the district and volunteering to do administration at school.S/he commented,

I was a lead teacher for Mathematics in our district. I was helping them in facilitating Mathematics.

I used to volunteer before I was an HOD I used to volunteer in helping them as a Learner Teacher Support Materials (LTSM) coordinator.It developed me a lot.

In the same school, another participant indicated that she learned while she was acting as the HoD, as she was inducted by the district, noting:

I acted for a year as the HoD, so in that year of acting we did some workshops from the district. We interacted with the district showing us what to do as HoDs.

Concerning the manner of development thatHoDs received on the job, all participants mentioned that they were inducted by the district. The HoD participant in one school pointed out that the workshops by the district were on-going. In this school, no participant mentioned a school-based induction that was mentioned by the principal. It looked like the induction process offered by the district officials was not enough to equip HoDs. A participant in one school described an induction process as:

An afternoon, where they just brief us about our responsibilities, expectations from them.

In one school, both HoD participants indicated that they needed development with regards to administration. Their administration needs differed, where one participant needed to be capacitated on dealing with lots of paperwork. One the other hand, the other participant indicated feeling thatinstruction was needed on how to purchase correct resources. This participant expressed a need for the capacity to implement IQMS and facilitate subject development training in her school. For paperwork, the participant indicated:

I need development in dealing with paperwork.

In relation to the appraisal, another participant indicated:

I need development in facilitating Integrated Quality Management System (IQMS) and subject development training around the school so that I can develop teachers.

In another school, one participant indicated in the interview,that a lot of information was available, but that this did not rule out a need for further development. On the other hand the other participant indicated that development would be welcomed on how to coach and motivate teachers under one's charge, stating that:

I have taught for a longer period but, I can say, it is how to mentor my colleagues, particularly in our department, how to coach them, how to raise their level. I am not saying their level is low but to motivate them to feel like what they are doing is appreciated and like, to lift their morale also, I think if I can know how to be on that level, we can go far.

In summary, HoD participants revealed that they were never explicitly trained to be HoDs. They prepared themselves for this position in various ways, which included: facilitating workshops; self-upgrading; looking at how others worked; attending NGOs workshops; and capacity-building by a union. The other one was prepared by first acting as the HoD and getting inducted. HoDs also brought up induction by the district as how they were developed on the job. However they acknowledged that they still needed further development, which included how to support teachers through motivation and coaching, administration in terms of filing and purchasing relevant resource, as well as how to appraise and develop teachers. None of the HoD participantshowever mentioned subject knowledge development as a need.

Summary of two groups of participants

In response to research sub-question two, both principal and HoD participants noted that HoDs were never formally prepared for the positions to which they were appointed. They both confirmed that HoDs were inducted by the district after they were appointed. HoD participants indicated using various methods to prepare themselves for HoD positions. They upgraded themselves,assisted the district in facilitating workshops, and received capacity-building by the union, learned from their previous SMT members or acted as HoDs. Both groups of participants agreed that HoDs needed further development in various aspects of their job, which included supporting, appraising and developing teachers as well as administration and procuring relevant resources.

4.8 PARTICIPANT RESPONSES- PRINCIPALS

From theprincipals' responses to sub-research question number three:**What are the perceived activities of HoDs in leading the teaching of Mathematics inprimary schools?** The theme of*monitoring* emerged as a theme from principal participants.

Monitoring

Both principal participants mentioned monitoring as what HoDs do to provide leadership in two primary schools. They reported that monitoring included: checking lesson plans to ensure thorough preparation by teachers; doing class visits; checking if teachers had marked learners' books; if teachers did recording; if remedial work was done; and checking if there wasa re-evaluation in order to ensure that there was intervention for learners with special needs.

In short, both principals agreed that HoDs monitor teachers' work, which involved checking as to whether teachers prepared before going to classes, as well as doing class visits, book control and follow ups.

4.9   PARTICIPANT RESPONSES - HEADS OF DEPARTMENT

From HoD participants' responses to sub-question number three: **What are the perceived activities of HoDs in the teaching of Mathematicsin primary schools?** The theme that emerged was*monitoring and support.*

Monitoring and support

Participants mentioned different activities they did to provide leadership for Mathematics teaching. The majority seemed to focus more on monitoring. They referred to checking lesson plans; checking if learners' books had enough relevant activities; pacing; adherence to the stipulated formal assessment; work schedule coverage; and interventions.In addition to what HoD participants agreed upon,twoHoDs seemed to also include subject-specific support to teachers, as they highlighted that they led by example. One of them stated:

> *I invite them to my class and I present the lesson, if the educator does not understand or does not know what to do, I present the lesson to his/her class.*

The other HoD, who was not a Mathematics teacher, reported that s/he arranged with those who had Mathematics knowledge to provide subject support to teachers underneathhim/her. The expert was his/her deputy principal, who happened to be a Mathematics teacher. The HoD indicated:

> *When it is specifically talking to the Mathematics, because I have a shortage in terms of Maths knowledge, I rely on my deputy a lot.*

In addition to the above one HoD demonstrated her belief in collaboration as another way of providing leadership.S/he mentioned that s/he held meetings with teachers under his/her in which discuss progress and challenges and come up with collective solutions.

We hold meetings where we discuss the progress of the learners. We also discuss the difficulties we encounter in classes, and we find solutions to what we experience in class.

Overall the responses of HoD participants revealed that HoDs in those two primary schools had different perspectives on providing leadership for Mathematics teaching.However, they agreed on monitoring teaching.There were those who led by example and delegated.There were also those who collaborated with staff to discuss progress and difficulties and solve problems.

4.10   PARTICIPANT RESPONSES TEACHERS

For sub-research question number three:**What are the perceived activities of HoDs in leading the teaching of Mathematics in primary schools?** the theme that emerged was *support.*

Support

Participants from the same school had different views about leadership that is provided by HoDs for Mathematics teaching.One teacher participant indicated that; due to the fact that his/her HoD does not have Mathematics knowledge, the HoD arranges meeting in which teachers share Mathematics information.Another teacher participant mentioned that the HoD avails her/himself to teachers and outsources assistance:

S/he even makes extra time to be with us, even if s/he is not so knowledgeable, extra time to see how far we are. Even if s/he may not assist, s/he arranges where we can get assistance.

In another school, despite the fact that one teacher participant indicated that theHoD did not have knowledge of Mathematics, both teacher participants mentioned that their HoDs are doing their best to support them by arranging teacher gatherings for knowledge sharing, and by providing teachers with teaching resources:

The HoD does not even know Maths, but she is trying her best. S/he is organising gatherings with other educators to discuss and share information because from her side s/he does not have the knowledge.

Overall, the responses of teacher-participant showed that some HoDs could not directly provide support for the teaching of Mathematics/Numeracy, but that instead, they arranged for assistance for subject teachers in the form of teacher gatherings for subject knowledge sharing. It appeared that coaches had taken over the work of HoDsso as to provide subject-related support to teachers. However,HoDs provided support in the form of resources, and by being available to teachers wherever possible/necessary.

Summary of all participants

In response to research sub-question three, both principal and HoD participants agreed that HoDs monitor teaching and teachers' work. They also agreed that monitoring ought to include checking lesson plans, doing class visits, checking learners' books and doing follow up. HoD participants as a group had different views in addition to monitoring. Some HoDs demonstrate lessons for teachers and delegated, while others preferred to hold meetings and discuss progress and hindrances with teachers. The teacher participants on the other hand, pointed out that HoDs arranged teacher gatherings for the exchange of subject knowledge, because they could not provide direct or specific support when it came to Mathematics teaching. Teacher participants also indicated their dependence on coaches for subject support, however, they pointed out that HoDs provide them with resources and are accessible to teachers.

4.11   PARTICIPANT RESPONSES - PRINCIPALS

From the responses to sub-research question number four:**Whatdo HoDs identify as challenges face in providing leadership in the teaching of Mathematics primary schools?**The themes that emerged from principal participants were:*management and leadership issues, trainingand support.*

62

Leadership and management issues

Principal participants offered various challenges they felt HoDs faced.These challenges range from a high rate of teacher absenteeism toa heavy workload of HoDs. In referring to teacher absenteeism one participant stated:

The challenge that they face is the lack motivation in educators and also, there is a high rate of absenteeism amongst the teachers. We have cases whereby a teacher is absent six to ten times in a month. That is a real challenge and it is beyond their means. As I'm speaking to you, I have a Maths teacher who has been absent for thirty five days since January, so it's a challenge for the HoD.

Regarding the workload as a challenge HoDs face, the principal participant said:

HoDs have their own classes. They have a high number of periods as well. So it is a very great challenge on their side.

Training

One principal participant indicated that there is a lack of training that is specific to the job of HoDs, and that instead, they participate in workshops at the same time as the teachers they are supposed to lead. In this regard, the participant noted:

There is no training of HoDs for the changing of the curriculum first and thereafter people that they manage. They attend the workshops simultaneously with the people that they manage so that is a bit of a challenge as you know that, as managers, you need to be more knowledgeable, you should be trained before people under you are trained.

Both principal participants made reference to inadequate workshops from the district that might support HoDs with necessary skills to lead teaching of Mathematics. Another participant also mentioned a lack of support from the Department of Labour in dealing with teacher absenteeism. He said:

63

Labour itself is not supportive enough to our HoDs to ensure that the child receives education every day.

An unexpected finding was that because of high rate of teacher absenteeism in one school, HoDs end up having more classes, because they sometimes teach for absent teachers.

In summary, principal participants indicated that HoDs do not get enough support either from the Department of Education or Department of Labour. They have leadership, management and educational issues in the sense that they have to deal with demotivated teachers and knowledge gaps in learners, resulting fromhigh rate of teacher absenteeism on top of their high workload. HoDs are also trained at the same time as the teachers they are expected to lead.

4.12 PARTICIPANT RESPONSES - HEAD OF DEPARTMENT

From the responses of HoDs to sub-research question number four: **Whatdo HoDs identify as challenges face in providing leadership in the teaching of Mathematics primary schools?**The themes that emerged were *knowledge-related and management issues.*

Knowledge-related and management issues

Responses in relation to the above sub-research question varied among HoD participants and schools. They included both knowledge-related and management issues.Knowledge-related issues included a lack of subject knowledge on the part of some HoDs, and a lack of curriculum knowledge on the part of some teachers. Management issues included a lack of teaching resources, too much paperwork and limited time. With regards to educational issues on the part of HoDs, one HoD participant commented:

I'm not a Maths teacher, which is challenge number one.

Regarding lack of knowledge for teachers, another HoD participant noted:

With the new curriculum, not all educators are sure of what they are doing and with the Gauteng Province Literacy and Mathematics Strategy (GPLMS) so, they get so confused sometimes.

Challenges with regards to management issues such as lack of teaching resources, heavy work load, too much paperwork and over-crowded classes, were illustrated in the following statements:

The challenge is lack of apparatus, resources.If you don't have the resources, it becomes very, it is.There is no effective teaching and learning because some learners learn by seeing, touching and seeing real thing.

Concerning the workload, the HoD participant noted:

It is difficult, if you can look at the work of HoDs now, it is not like before when we were in the nineties.

When commenting about too much paperwork, one HoD participant said:

We are dealing with lots and lots of paperwork, writing, reporting, filling and all that, and you know, to tell you the truth, we are struggling. We are struggling because all we want to do sit down and open our books but, instead we sit there and start filling forms, and it is a hassle, because it is something that is new to us as educators. That is why when they come and say they want this paper, we don't know where it is.

4.13   PARTICIPANT RESPONSES - TEACHERS

From teacher participants' responses to sub-research question number four**: What do HoDs identify as challenges they face in leading the teaching of Mathematics teaching in primary schools?** *Knowledge*emerged as a theme.

Knowledge

The majority of teacher participants mentioned that HoDs lack Mathematics knowledge. According to teacher participants' responses, there seems to be nothing that the HoDs can directly do to support teachers in teaching Mathematics.

In summary, the teacher perspectives on the challenges faced by HoDs is mainly an inability to provide subject-specific support, due to their (HoDs) lack of Mathematics knowledge.

Summary of all participants

In response to research sub-question four, all groups of participants highlighted leadership, knowledge and management challenges forHoDs in leading the teaching of Mathematics. For principal participants, HoDsface challenges in leading demotivated teachers. Knowledge-related issues included a lack of workshops directed at HoDs, where instead,they are trained at the same time as teachers. Two groups of participants indicated management issues, such as teacher absenteeism, which results in gaps in learners' levels of knowledge, as well as a lack of teaching resources, a heavy workload, and too much paperwork.Knowledge-related issues included the fact that some HoDs lacked Mathematics knowledge, and according to teacher participants, they are unable to provide subject-specific support to them (teachers). HoD participants raised a concern about teachers' lack of curriculum knowledge.

4.14   PARTICIPANT RESPONSES - PRINCIPALS

From the principal participants' responses to sub-research question number five:**What do HoDs do to respond to the challenges they face in leading the teaching of Mathematics in primary schools?** It emerged that HoDs sometimes take over the work of absent teachers as a way of intervening, so as to ensure that the learners are taught every day. These were his/her comments:

At times they intervene by helping those learners that are behind and also
they have got their own classes.

4.15   PARTICIPANT RESPONSES - HEAD OF DEPARTMENT

From the responses of HoD participants tosub-research question five, different perspectives on addressing HoDchallenges emerged, as the challenges differed.There were those participants who indicated that they discussed challenges in phase or grade meetings and came up with solutions. For example, one participant noted:

I call the educators and then we sit together and then I find out from them
how we can solve the problem that they put as a team. We collect
information before I can give them my solution then we look at both sides
and we agree as a collective that this is what we should do to solve the
problem.
We talk about the challenges, more especially at our grade, normally we
have a phase meeting or grade meetings and it is whereby we discuss the
challenges.

One participant indicated using the expertise of the teachers through delegation, as well as choosing to lead by example. This is better illustrated by the following comments:

If I know that in Grade One, 'teacher x' at least knows what needs to be
done, then I ask that teacher to assist.

With regard to the challenges such as lack of teaching resources, heavy workload and too much paperwork HoD participants indicated different ways in which they address these issues.This is what some participants said:

I engage the whole school community, the principal, LTSM committee, School Governing Body and sometimes we look for sponsors ask for donations from parents.

Sometimes I take work home, sometimes you are fatigue but that's how it is.

The child comes first, paperwork comes the second. That is how I try to balance my work.

Overall,HoD participants address different challenges in various ways. Some engage in discussions with teachers in an attempt to collectively find solutions, while some use the expertise of other teachers, some make a learner the first priority, followed by paperwork and others engage with some stakeholders for support.

Summary of two groups of participants

In response to research sub-question five, the principal and HoD participant groups have different perspectives on how HoDs respond to the challenges they face in leading the teaching of Mathematics. The principal participant in a school where there is a high rate of teacher absenteeism indicated that HoDs substitute absent teachers in order to ensure that the learners are taught. HoD participants' responses showed that some HoDs engage in discussions with teachers in an attempt to collectively find solutions, while others use the expertise of other teachers, with yet others noting that they make learners the first priority above paperwork. Finally, some HoDs engage with other stakeholders for support.

Similarities

There were some similarities from the responses of principal and HoD participants with regards to the preparation and professional development of HoDs. Both participant groups indicated that HoDs were never prepared for the job they are doing. Both group also reported that HoDs were inducted after their appointment to learn about their roles and responsibilities. The three groups of participants were in agreement about some of the roles and responsibilities of

HoDs,showing that consensus proves important in providing support to teachers when leading the teaching of Mathematics.

Differences

In the high-performing school, the principal revealed that in addition to the induction by the district, the school had its own way of introducing teachers to their new job. On the other hand, not even one HoD mentioned that from this school.There were differences in the way in whichHoDs prepared themselves for their job, with some stating that they learned by acting, while volunteering as subject facilitators, as well as assisting the SMT. Some of the HoDs never mentioned the importance of subject knowledge. However,HoD lack of subject knowledge proved to be the major concern for teachers. Principals believed in continuous workshops for HoDs, while HoDs spoke about self-upgrading. HoDs mentioned that they provided support to teachers in teaching Mathematics. In contradiction to that, a majority of teachers said they relied on coaches as well as on one another for support.

4.16   DOCUMENT ANALYSIS

I receiveddocuments that are used for monitoring by HoDs in two schools under study.The following were from the first school: INTERSEN Book Control Monitor Tool (IBCMT), INTERSEN Phase Class Visit Instrument (IPCVI) and ECD/Foundation Phase Class Visit Monitoring Instrument (E/FPCVMI).The IBCMT from the first school consists of seven sections which are: the general appearance of books/files; quality and quantity of learners' work; educators control and marking of work; educators planning; assessment; evidence of remedial work and expanded opportunities and educators' comments.The INTERSEN documents had a rating scale and space for comments next to each item, while the ECD/Foundation phase document had an added Yes/No option for each item. The documents are called monitoring tools but the items suggest that they are meant to measure compliance.

69

A small amount of emphasis is placed on curriculum delivery.For example, sections four(Knowledge of Curriculum and Learning Programmes withitems knowledge of learning area, skills, goal setting and involvement in learning programme) and five (Lesson planning, preparation and presentation with items lesson planning, lesson presentation, recording and management of learning programme).The completed instruments provide a glimpse into the classroom and also show us where the focus of the HoD is.HoD comments on these documents suggest low levels of understanding what to look for.For example, the comment next to "lesson presentation" on the IPCVI reads, "Educator confident" and next to "knowledge of learning area", "Educator is knowledgeable".The few comments on the E/FPCVMI suggest a basic search for compliance.For example in sections six "written work", the comment is "Some learners did not write dates on their workbook."On the section of "Assessment" the sub-section is "Sufficient volume of quality work done" the comment is, "Only five written activities were done".It says nothing about the quality of those activities.Thus, these documents basically show us that HoDs conduct classroom observation in one of the two schools but, that the quality leaves much to be desired.

From the second school, I received a Pre-Moderation Form (PMF) for the Foundation and INTERSEN Phases, Monitoring Instrument: Class Visit (MICV) both prescribed by the District.I also received Teacher File Monitoring Tool (TFMT), Monitoring Tool: Learners' Books (MTLB) and Class Visit Tool (CVT) for both the Foundation and INTERSEN Phases.The three forms were school-based.The content of the PMF are about checking whether teachers adhere to the subject policy guidelines.For example, it is for checking whether teachers are assessing according to the prescribed assessment standards.The MICV is divided into two sections namely, a section whereby the HoD checks the contents of the teachers' files.The last section checks the classroom practices of teachers.

The TFMT is for monitoring whether every document that is needed is available in the files of teachers.For example, time table, annual teaching plan, lesson

plans, records of marks, assessment tasks and memoranda. The MTLB is for monitoring the activities given to learners if they are in line with the work schedule and lesson plans of teachers.It is also for checking if the learners's books are marked and homework are given to learners.The CVT is for checking whether there is a class timetable, the classes are organized, and the teacher is managing discipline.It does not say anything about the quality of teaching that is observed by the HoDs during class visits.The documents suggest that HoDs are not sure what to look for when monitoring except compliance.All the documents from the second school were blank. Blank forms may suggest that HoDs have instruments but that at the time of data collection, no classroom observations or book control had been conducted.

CHAPTER FIVE
MAIN FINDINGS AND RECOMMENDATIONS

5.1   INTRODUCTION

In this chapter, the research findings from the interviews with the HoDs, principals and teachers were presented. This chapter focuses on a summary of the findings, recommendations and conclusions.The chapter will discuss the interpretation of the findings on the perspectives of educators about the leadership role of the HoD in the teaching of Mathematics in two Gauteng primary schools.The limitations, strengths and the contributions of the study are highlighted. The main findings that emerged from responses to interview questions that were aligned with the sub-research questions, which constitutedthe main research question "**What perspectives do educators hold about the leadership role of the Head of Department in the teaching of Mathematics in two Gauteng primary schools?**" were:

- Role expectations for HoDs were provision of support to teachers, administration and management and monitoring of teaching and teachers' work.
- Preparation for the job of HoDs included enrolling for further studies to upgrade themselves, assisting the district in facilitating workshops, capacitation by the union, learning from previous SMT members and acting as HoDs.
- On the job training available to HoDs was induction.
- Actual roles fulfilled by HoDs monitoring of teaching and teachers' work; demonstrating lessons; delegation of tasks;collaboration with staff; sharing subject knowledge in meetings; classroom observations; checking for compliance and providing teachers with resources.
- Challenges faced by HoDs as they lead Mathematics teaching are leading demotivated teachers; high rates of teacher absenteeism; lack of teaching resources; heavy workload; too much paperwork; lack of curriculum

knowledge among teachers and lack of Mathematics knowledge among HoDs.

- HoDs addressed the challenges they faced through standing in for absent teachers; discussions with teachers; using the expertise of other teachers through delegation and involving stakeholder groups for support.

These findings aligned with the sub-research questions.

5.2   DISCUSSION

The purpose of this study was to explore the leadership role of the HoD in the teaching of Mathematics in primary schools. Overall, the data suggests that principals expect HoDs to provide support to teachers, do administrative work, manage the phases/subject and monitor teachers' work while Post level one teachers expect support from HoDs in leading the teaching of Mathematics.HoD participants indicated that their roles and responsibilities are to support teachers by mentoring, guiding and professionally developing them.They are also expected to do administrative work such as providing teachers with resources, paperwork such as filling in monitoring instruments and taking minutes.They have to teach, monitor teachers' work by checking lesson plans, learners' books and teachers' files. They are expected to manage Mathematics teaching, phase as well as curriculum. These findings are consistent with the findings of Fletcher & Bell (1999) who found that the roles and responsibilities of subject leaders were to provide resources, do administrative work in the form of paperwork.

Subject leaders were also responsible for monitoring and evaluatingteachers' work, checking the planning of teachers, doing classroom observations, moderating learners' work and how records were kept by teachers.They had to provide professional development to teachers. Subject leaders were also expected to be supportive and accessible to teachers in their departments and to ensure on-going teaching and learning in their different departments.The findings are also consistent

73

with the findings of Feeney (2009) who found that the role of department chairs was being managers.

Participants indicated mixed perspectives about what they expect ofHoDs.Role expectations mentioned were administration, management of curriculum, subjects, and phases, supervision and provision of support as well as monitoring of teachers' work.All three groups of participants agreed that providing support is another role of HoDs.However their understanding of support differed in that, the principal and HoD groups perceived support as a process whereby HoDs mentor, guide and develop teachers.On the other hand, teacher participants believed that support means provision of resource, being motivated and developed.Even the retrieved documents provide evidence that even though HoDs understand their role, they still lack understanding of how to do it.Teachers raised a concern that they did not get subject specific support from HoDs instead they (teachers) supported one another. They also referred to the coaches from Gauteng Performance Languages Mathematics Strategies (GPLMS) as their supporters.These findings are in line with the findings ofFletcher & Bell (1999) who found that the roles and responsibilities of HoDs in UK were, to be administrators, monitors of teachers' work, supporters, motivators as well as resource providers.

The data from two primary schools under study suggests that HoDs were never formally trained before they were appointed.They prepared themselves in various ways such as self-upgrading, assisting the district in facilitating workshops, participating in professional development activities provided by outside actors such as unions, learning from previous SMT members and acting as HoDs.The only professional development they received after appointment was induction by the Department of Education at district level.This finding is consistent with the findings of Turner (2000), Zepeda &Kruskamp (2007) who found that HoDs were never trained for the roles they were expected to fulfill.The training that some HoDs received was through learning from others' work.

74

All participants agreed that HoDs monitor teaching and teachers' work by checking lesson plans, doing class visits, checking learners' books and assessment tasks as well asdoing follow ups.From the collected instruments it is evident that in one school HoDs monitor the teaching and learning tasks.However HoD comments on these documents suggest low levels of understanding what to look for.In another school there was no evidence that monitoring had taken place because the instruments were blank.It is possible that at the time of data collection no monitoring had been done.Further additions to HoDs tasks were leading byexample, delegating tasks to competent teachers and meeting with staff to discuss difficulties encountered in teaching Mathematics as well as strategies to address these; however HoDs are not clear about what to look for in order to be able to capacitate teachers.This finding that HoDs monitor teaching and teachers' work in a manner that has been indicated is contrary to what Hammersley-Fletcher (2002) found in UK that, some HoDs felt uncomfortable about observing lessons despite attaching importance to it. Bennet et al. (2003) in their study also revealed that subject leaders wereagainst doing classroom observations to monitor teachers.They preferred to check pupils' assessment results and records.Participants in this study reported that they do both.

Of all educator participants interviewed, HoDs and principals expressed several challenges related to the leading of Mathematics teaching as lack of teaching resources, HoDs' lack of Mathematics knowledge, teachers' lack of knowledge of the new curriculum, heavy workload, over-crowded classes, demotivated teachers, teacher absenteeism and too much paperwork.The issue of over-crowded classes and demotivated teachers are consistent with what Ali& Botha (2006) found in Gautengsecondary schools that, class sizes were too big for HoDs to be able to manage effectively, and this resulted in low teacher morale. Some of these challenges were also revealed in a New Zealand study by Stephenson (2010) who indicated that the enormous work load and paper work constrained HoDs from completing their tasks to a required standard.

Data shows that HoDs use various strategies to address the challenges they face in leading the teaching of Mathematics. They substitute absent teachers in order to ensure that the learners are taught every day.Some engage in discussions with teachers in an attempt to collectively find solutions, take work home, some use the expertise of other teachers through delegation, some lead by example by presenting lessons for teachers while others make learners the first priority followed by paperwork and others engage with some stakeholders for support.Delegating work to teachers is consistent with what Stephenson (2010) found in New Zealand that, some HoDs addressed the challenges they faced by delegating work to teachers as a way of developing them.He also found that HoDs engaged in dialogues to come up with solutions to the challenges.

5.3   RECOMMENDATIONS

Recommendation 1:Roles and responsibilities

Given the volume of roles and responsibilities that the HoDs are expected to fulfil in addition to teaching, as well as different understandings amongst educator about the what exactly HoD should do to fulfil the role of support, it is recommended that the job description of HoD be made simpler, clearer and be allocated enough amount of time in order for HoDs to be able to balance their leadership duties and teaching effectively.

Recommendation 2: Preparation and training in leading Mathematics teaching

Based on the fact that HoDs are expected to monitor teaching and learning, I recommend that the HoDs who have been appointed are trained in both the subjects they are expected to monitor as well as the generic leadership part of their job in order for them to be able to meet the expected standards of their job.However for the teachers who aspire to be HoDs, I recommend that the Department of Education develop a specific programme to prepare prospective HoDs in the subjects they are going to lead as well as generic leadership aspects of the job of the HoD before they can be appointed as HoDs.This is likely to improve the job of HoDs since they will be in a position to identify teachers who need development in the teaching of

Mathematics.The professional development of HoDs should be continuous and according to their needs in order for them to be able to do their job more effectively, since the success of their leadership role in schools is judged by the outcomes achieved by learners.

Recommendation 3: Teacher involvement in the development of monitoring tools

HoDs of Mathematics should involve Mathematics teachers in the development of the monitoring tools since Mathematics teachers are familiar with a sensible blend of tools, methodologies and approaches that can meet the needs of their learners.HoDs should also be developed on what they should look for as they monitor teachers' work.In that way they may be able to effectively use the results of their monitoring to support teachers.

Recommendation 4: Continuous development and appointment of administrative staff

I recommend that HoDs be continuously developed in order to gain and increase knowledge of what and how they are supposed to do in leading the teaching of Mathematics.HoDs should no longer deal with administrative tasks; these should be allocated to school administrators in order to reduce workload and paperwork for HoDs.In that way, HoDs may be able to focus on improving the teaching and learning by focusing on teachers and their teaching

Recommendation 5: Reduction of HoD workload

Based on the above strategies HoDs use to address challenges, I recommend that the work load of HoDs be reduced by appointing HoD assistants such as subject heads who should be given incentives in order for HoDs to be able to do justice to both their leadership and teaching tasks instead of prioritizing one while the other suffers.In cases where HoDs should substitute absent teachers, I recommend that they are given a portion of the absent teacher's salary in compensation to carrying out the tasks of that particular teacher in line with the no work no pay principle of

the Labour Law.Where a teacher has taken an authorized leave, on return, the teacher should be monitored to provide a catch up program to close the knowledge gap of learners.

5.4   CONCLUSION

This study explored the perspectives that educators hold about the leadership role of the HoD in the teaching of Mathematics in primary schools.Based on the responses of HoDs and the content of the retrieved documents, it looks like they are using linear instructional leadership.This type of instructional leadership according to Rietzburg, West & Angel (2008) is about alignment whereby more focus is on a formal curriculum through which leaders check thepace setter coverage; make use ofdata to improve instruction; monitor lesson plans.

The role of HoDs in the teaching of Mathematics is among other things that of a manager, an administrator, they have to provide resources to teachers; they have to monitor teachers' work, support and develop teachers.In addition, they have to teach their own classes.This study and literature suggest that some HoDs do not have knowledge of the subjects they are expected to supervise and they lack leadership and management skills.According to Bennet et al. (2003), the authority of HoDs depends on their competence as teachers and their subject knowledge.The implication of the results of this study is that the majority of HoDs do not have much authority on Mathematics teachers under their supervision due to them not having adequate knowledge of the subject they are supposed to lead which in this case is Mathematics.

Bak (2010) indicates that HoDs should ensure that quality teaching and learning is maintained, and if HoDsfulfill this role, they will be in a position to know if teachers understand the subject content and take necessary steps if the need arises.In South Africa and other countries, it is questionable how possible it is for HoDs to know if teachers understand the subject content if some of the HoDs themselves do not understand the very same subject content they are supposed to

lead since they were never given proper subject specific training prior their appointment.Despite their lack of formal training, HoDs in this study seemed to have various strategies to deal with the challenges they face.Some rely on their immediate supervisors, on the subject policy while others lead by example and use the expertise of the teachers under their supervision.Based on the above, it could be concluded that the leadership role of HoDs is a complex one and it needs thorough preparation in order to be done effectively.

REFERENCES

Adey, K. (2000). Professional Development Priorities : The views of Middle Managers in secondary schools, *Educational Management, Administration & Leadership*, 28(4), 419-431.

Alexandria, VA: National Association of Elementary School Principals.

Ali, A. F. & Botha, N. (2006). The role, importance and effectiveness of Heads of department in contributing to school improvement in public secondary schools in Gauteng. *Matthew Goniwe School of Leadership and Governance,* Johannesburg.

Andrews, S.P., Gilbert, L.S., & Martin, E.P. (2007). The first years of teaching: Disparities in perceptions of support, *Action in Teacher Education*,28(4), 4-13.

Ary, K. D., Jacobs, L. C., Razavieh, A. & Sorensen, C. (2006). *Introduction to Research in Education,* Canada.

Association for Supervision and Curriculum Development.

Bak, S. O. S. (2010). Competencies of secondary school Heads of department; Implications on continuous professional development, *European Journal of Social Sciences*, 14(3), 464-470.

Bambi, A. (2012).*The role of head of departments as instructional leaders in secondary schools: implications for teaching and learning* (Masters Thesis).University of Johannesburg, South Africa

Bass, B. (1990). From transactional to transformational leadership: Learning to share the vision, *Organisational Dynamics*, 18(3), 19-31.

Bennett, N., Newton, W., Wise, C., Woods, P. A. &Economou (2003). Research report.

Bohlmann, C. &Pretorious, E. (2008). Relationship between Mathematics and Literacy: Exploring some underlying factors,*Pythagorus Journal of the Association of Mathematics Education of South Africa,*67(4), 48-55.

Brown, S. L. &Arnell, A. T. (2012).Measuring the Effect Teacher Absenteeism Has on Student Achievement at A "Urban but not too urban:" *International Journal of Humanities and Social Science,*2 (17), 172-183

Bush T & Glover D. (2002). School Leadership: Concepts and Evidence. Nottingham:

Bush, T. (2003). (3rd Ed.).Theories of Educational Leadership and Management.United Kingdom: Sage Publications.

Bush, T. (2007). Educational leadership and management: theory, policy, and practice. *South African Journal of Education*, 27(3), 391–406.

Busher, H. & Harris, A. (2000), Subject *leadership and school improvement,* SAGE.

Busher, H., Hammersley-Fletcher, L. & Turner (2007), Making sense of middle leadership: community, power and practice, *School Leadership and Management*, 27(5), 405-422.

Chase, G., & Kane, M. (1983). The principal as instructional leader: How much

closer look at middle leadership in primary schools in Singapore, *Educational Studies*, 35(5), 525-536.

Cohen, L., Manion, L. & Morrison, K. (2011). *Research methods in education,* London: RoutlegeFalmer.

Cotton, K. (2003). Principals and student achievement. Alexandria, VA: Association for supervision and curriculum development.

Creswell, J. W. & Miller, D. (2000). Determining validity in qualitative enquiry,*Theory into practice*, 39(3), 124-130.

Creswell, J. W. (2012). *Educational research: planning, conducting, and evaluating quantitative and qualitative research, (*4th edn), Pearson, Boston.

Creswell, J.W. (2009). *Research design*, Sage, Los Angeles, London, New Delhi, Singapore.DC: The Albert Shanker Institute.

De Lima, J.A. (2008). Department networks and distributed leadership in schools, *School Leadership and management*, 28(2), 159-187.

Denzin, N.K. &Lincoln, Y.S. (2008). *The landscape of Qualitative Research*, SAGE.

Department of Basic Education (2011). Report on Annual National Assessment. Pretoria: Government Printers.

Department of Education (1998). Employment of Educators Act, No. 64, Government Printers.

Southworth, G. (2002). Instructional Leadership in Schools:Reflections and empirical evidence, *School Leadership & Management: Formerly School Organisation,*22 (1), 73-91.

Department of basic Education (2011). Report on National Senior Certificate Examination: Technical report. Pretoria: Government Printers.

Department of Education (2000). School Management Teams: Instructional leadership, Education Human Resources.Pretoria: Government Printers.

Department of Education (DoE). Educators' Manual, (2005). *Integrated Quality Management Systems.* Mpumalanga Department of Education: Government Printers.

Dinham, S. (2007). The secondary Heads of department and the achievement of exceptional student outcomes, *Journal of Educational Administration,* 45(1), 62-79.

DiPaolo, M., &Tschannen-Moran, M. (2003). The principalship at a crossroads: A study of the conditions and concerns of principals. *NASSP Bulletin*.87(634), 43-65.

Earley, P. &Weindling, D. (2004). *Understanding school leadership*, Paul Chapman Publishing.

Eddy, P. L. & Van Der Linden, K. E. (2006). Emerging definitions of leadership in higher education: New visions of leadership or same old?, 34(5), *SAGE.*

Elmore, R. (2000). *Building a new structure for school leadership*. Washington,

Elmore, R. F. (2002). *Bridging the gap between standards and achievement: Report on the imperative for professional development in education*, Washington DC, Albert Shanker Institute.

ELRC, (2003). Intergrated Quality Management System.Pretoria: Government Printers.

Feeney, E. J. (2009). Taking a look at a school's leadership capacity: The role and function of high school department chairs, The clearing house:*A Journal of Educational Strategies*, 82(50), 212-219.

Fletcher, L. & Bell, D. (1999). Subject leadership in the primary school: Views of Subject Leaders, Paper presented at the British Educational Research Association Annual Conference, University of Sussex at Brighton, September 2-5.

Friedrichsen, P., Chval, K. B. &Teuscher, D, (2007). Strategies and sources of support for beginning teachers of Science and Mathematics, *School of Science and Mathematics*,107(5),169-181.

Gagnon, E.M. (2012). The perspective and practice of leadership by managers within a state correctional agency: an instrumental case study. International Journal of Leadeship Studies, 7 (1) 48-70.

Guskey, T. R. & Yoon, K. S. (2009). What works in professional development? *Delta Kappa*, 90(7),495-500.

Hammersley-Fletcher, L. & Kirkham, G. (2007). Middle leadership in primary school communities of practice: distribution or deception, *School Leadership &Management: Formerly School Organisation*,27(5), 423-435.

Hammersley-fletcher, L. &Brundrett, M. (2005). Leaders on leadership: the impressions of primary school head teachers and subject leaders, School Leadership & Management: Formerly School Organisation, 25(1), 59-75.

Harris, A. (2008. Distributed leadership: According to evidence, *Journal of Educational Administration*, 46(2), 172-188.

Heng, M.A. & Marsh,C.J. (2009).Understanding middle leaders: a closer look at middle leadership in primary schools in Singapore

Hoerr, T. (2005).*The art of school leadership*. Alexandria, Virginia: Association for Supervision and Curriculum Development. Hoff.

Hofstee, E. (2006). *Constructing a good dissertation: A practical guide to finishing a Masters, MBA or PhD on schedule*, EPE.

Kim, Y. (2010). A pilot study in Qualitative inquiry: Identifying issues and learning lessons for culturally competent research, *Qualitative Social Work,* SAGE.

Hoadley, U., Christie, P. & Ward, C. L. (2009). Managing to learn: Instructional leadership in South African schools, *School leadership & Management*, , Pam Christie & instructional leadership in South African secondary schools,*School Leadership &Management:Formerly School Organisation*, 29(4) 373-389.

King, D. (2002). The changing shape of leadership. Educational Leadership,

Koh, H.H., Gurr, D. &Ang, L.L. (2011). How school leaders perceive the leadership role of middle managers in Singapore primary schools? *Educational Research Institute,*12, 609-620.

Krauss, S.E. (2005). Research Paradigms and Meaning Making: A Primer, *The Qualitative Report,* 10(4),758-770.

Kruger, A. G. (2003). Instructional leadership: The impact on the culture of teaching and learning in two effective secondary schools, *South African Journal of Education*,23 (3), 206-211.

Kruger, A. G. (2003). Instructional leadership: The impact on the culture of teaching and learning in two effective secondary schools, *South African Journal of Education*, 23(3),206-211.

Leithwood, K. A. &Riehl, C. (2003). What do we already know about successful school leadership? *American Educational Research Association* Chicago: AERA.

Leithwood, K., Day, C., Sammons, Harris, P. & Hopkins, D. (2006). *Seven strong claims about successful school leadership*, Nottingham, England, National college of school leadership.

Ling, L. H. (2010). Impact of instructional leaders' roles on work culture in a Malaysian Private College: A case study, online publication, 3(1), 73-85, http://www.online review. SEGI.EDU.MY.

Luft, J.A. (2003). Contrasting Landscapes: A comparison of the impact of different induction programs of beginning secondary Science teachers 'practices, beliefs, and experiences, *Journal of Research in Science Teaching*, 40(1),77-97.

Marable, A. M. & Raimondi, S. L. (2007). Teachers' perceptions of what was most (and least) supportive during their first year of teaching, *Mentoring and Tutoring*, 15(1), 25-37.

McMillan, J.H., Schumacher, S. (2010). Research in Education: Evidence-Based Inquiry Seventh Edition Pearson

Monyatsi, (2006). Motivating the motivators with developmental appraisal, *Journal of Social Sciences*, 13(2),101-107.

more time before we act? Denver, CO: Education Commission of the States.

Mundry, S. (2005). Changing perspectives in professional development, *Science Educator*, 14(1), 9-15.

Murphy, J. (2005). Connecting teacher leadership and school improvement, *Thousand Oaks*, CA: Corwin.

National Association of Elementary School Principals, (2001). Leading learningNational College for School Leadership.

Nilsson, P. (2008). Learning to teach and teaching to learn: Primary Science student teachers' complex journey from learners to teachers, Doctoral thesis, Linkopink University.

Odhiambo&Hii (2012). Key stakeholders' perception of effective school leadership, *Educational Management Administration & Leadership*, 40(2),232-247.

Ovando, M.N. (2005). Building instructional leaders' capacity to deliver constructive feedback to teachers, *Journal Perspectives and Evaluation in Education*, l(18), 171-183, Spinger Science.

Poopedi, K.G. (2011). An exploration of successful leadership in challenging circumstances: Case study of two Kathorus secondary schools, Med Dissertation, University of Witwatersrand.

Poultney, V. (2007). The role of effective subject leader: perspectives from practitioners in secondary schools, *British Educational Leadership, Management & Administration Society,*2(2),8-14, www.sagepublications.com.

practice: A distributed perspective. Evanston, IL: Institute for Policy Research.

Reitzburg, U. C., West, D. L. & Angel, R. (2008). Conceptualising instructional leadership: the voices of principals, *Education and urban society*, 40(6), 694-714.

Ritchie, S. M., Mackay, G. &Rigano, D. L. (2005) Individual and collective leadership in school Science departments, *Research in Science Education*, Springer.

Robinson, V.M.J. (2006). Putting education back into Educational leadership, Leading and managing, 12(1),62-75.

Robinson, V.M.J., Lloyd, C.A. & Rowe, K.J. (2008). The impact of leadership on student outcomes: Analysis of the differential effects of leadership styles, *Educational Administration Quarterly*, 44(5), 635-674.

Rosenfeld, P., Ehrich, L.C. & Cranston, N. (2008). 'Changing roles of heads of department': A Queensland Case, Proceedings of the Australian Association for research in education, Brisbane conference, November- December.

Schwartz, T. (2011). The Secret to Dealing With Difficult People: It's About You. Harvard Business Review, October 2011.

Southworth, G. (2002). Instructional leadership in schools: Reflections and empirical evidence, School Leadership and Management, 22(1), 73-91.

Spillane, J., Halverson, R., & Diamond, J. (2000). Toward a theory of leadership

Stephenson, A. (2010). An examination of the issues facing Heads of department in New Zealand secondary schools, (Masters thesis), Unitec Institute of Technology.

Spillane, J. P., Diamond, J. B. &Jita, L. (2003). Leading instruction: The distribution of leadership for instruction, *Journal of Curriculum Studies*, 35(5),533-543.

Tam, A.C.F. (2010). Understanding the leadership qualities of a head of department in coping with curriculum changes in a Hong Kong secondary school, *School Leadership and Management*: Formerly School Organisation, 30(4), 367-386, Routledge.

Taylor, N (2008). *What's wrong with South African Schools?* Presentation to the Conference,

Teacher Training Agency (1998). *National Standards for Subject Leaders.* TTA

The Star (2012 December 4). 13 Percent: Shocking Maths score for Grade 9 Pupils.

Turner, C. (2000). Learning about leading a subject in secondary schools: Some empirical evidence, *School Leadership & Management*, 20(3),229-313.

Turner, C. (2006). Subject leaders in secondary schools and informal learning: towards a conceptual framework, School Leadership & Management: Formerly School Organisation, 26(5), 419-435.

Vithal, R. & Jansen, J. (2001). D*esigning your first research proposal*: *A manual for researchers in education and the social sciences,* Durban.Juta.

Wanzare, Z. (2012). Instructional supervision in public schools in Kenya, *Educational Management Administration & Leadership* 40(2), 188-216.

Whitehorn, T. (2010). School Support Staff. Topic Paper. Schools Analysis and Research Division, Department for Education: United Kingdom.

Williams, C.G. (2011). Distributed leadership in South African schools: Possibilities and Constraints, *South African Journal of Education*, 31, 190-200.

Yin, R. K. (2003). *Case study research: Design and methods*, (2nded), Thousand Oaks, CA; Sage.

Yin, R. K. (2011). Qualitative *Research from start to finish,* The Guilford Press, New York, London.

Yukl, G. (2006). *Leadership in organisations*, (6th ed.), Upper SaddkeRiverm NJ: Pearson-Prentice Hall.

Zepeda, S.J. &Kruskamp, B. (2007). Perspectives on instructional supervision, *The high school Journal,* 90(4), 44-54.

APPENDIX 1

	SUB-QUESTION	PRINCIPALS	HoDs	TEACHERS	CONCEPTUAL FRAMEWORK
1	What are the roles and responsibilities of HoDs in leading the teaching of Mathematics	Administration, management of curriculum, subjects, and phases supervision support monitoring of teachers' work.	Administration Curriculum management Supervision Support	Support	Roles and responsibilities of HoDs
2	What do HoDs do to provide leadership in the teaching of Mathematics in primary schools?	Monitoring	Monitoring Support	Support	Roles and responsibilities of HoDs
3	What kind of preparation and on –the job training did HoDs receive to lead the teaching of Mathematics in primary schools?	Lack of formal preparation Induction	Lack of formal preparation Induction		Preparation and Development
4	What challenges do HoDs face in providing leadership in the teaching of Mathematics in primary schools?	Demotivated teachers High rate of teacher absenteeism Heavy workload Lack of HoD workshops Lack of Support from Labour department	Too much paperwork Teachers'lack of new curriculum knowledge HoD's lack of Mathematics knowledge Lack of teaching resources	HoDs' lack of SMK and PCK Lack of HoDs' subject specific support	Knowledge and skills

Challenges |
| 5 | What do HoDs do to respond to challenges faced in leading the teaching of Mathematics in primary schools | Standing in for absent teachers | Leading by example Holding meetings Prioritising Delegating Engaging stakeholders | | |

APPENDIX 2

RESEARCH ETHICS COMMITTEE

CLEARANCE CERTIFICATE **CLEARANCE NUMBER: EM** 13/05/03

DEGREE AND PROJECT MEd
The leadership role of the Head of Department in the teaching of Mathematics

INVESTIGATOR(S) Nosipho Immaculate Jaca

DEPARTMENT Educational Management and Policy Studies

DATE CONSIDERED 13 November 2013
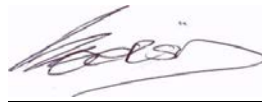
DECISION OF THE COMMITTEE APPROVED

Please note:

For Masters applications, ethical clearance is valid for 2 years

For PhD applications, ethical clearance is valid for 3 years.

CHAIRPERSON OF ETHICS COMMITTEE Prof LieselEbersöhn

DATE 13 November 2013

CC Jeannie Beukes

LieselEbersöhn

Dr CEN Amsterdam

Dr ST Mampane

This ethical clearance certificate is issued subject to the following condition:

1. It remains the students' responsibility to ensure that all the necessary forms for informed consent are kept for future queries. Please quote the clearance number in all enquiries.

APPENDIX 3

GAUTENG PROVINCE

Department: Education

REPUBLIC OF SOUTH AFRICA

For administrative use:
Reference no. D2014/037 P

GDE PROVISIONAL RESEARCH APPROVAL LETTER

Date:	30 April 2013
Validity of Research Approval:	30 April 2013 to 20 September 2013
Name of Researcher:	Jaca N.I.
Address of Researcher:	818 Church Street
	Pretoria
	0002
Telephone Number:	072 115 3598
Email address:	sipho.mangi@gmail.com
Research Topic:	Leadership for Mathematics teaching in two Gauteng schools
Number and type of schools:	TWO Primary schools
District/s/HO	Tshwane South

Re: Approval in Respect of Request to Conduct Research

This letter serves to indicate that approval is hereby granted to the above-mentioned researcher to proceed with research in respect of the study indicated above. The onus rests with the researcher to negotiate appropriate and relevant time schedules with the school/s and/or offices involved to conduct the research. A separate copy of this letter must be presented to both the School (both Principal and SGB) and the District/Head Office Senior Manager confirming that permission has been granted for the research to be conducted.

The following conditions apply to GDE research. The researcher may proceed with the above study subject to the conditions listed below being met. Approval may be withdrawn should any of the conditions listed below be flouted:

1. The District/Head Office Senior Manager/s concerned must be presented with a copy of this
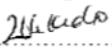
2013/05/02

1

Making education a societal priority

letter that would indicate that the said researcher/s has/have been granted permission from the Gauteng Department of Education to conduct the research study.

2. *The District/Head Office Senior Manager/s must be approached separately, and in writing, for permission to involve District/Head Office Officials in the project.*
3. *A copy of this letter must be forwarded to the school principal and the chairperson of the School Governing Body (SGB) that would indicate that the researcher/s have been granted permission from the Gauteng Department of Education to conduct the research study.*
4. *A letter / document that outlines the purpose of the research and the anticipated outcomes of such research must be made available to the principals, SGBs and District/Head Office Senior Managers of the schools and districts/offices concerned, respectively.*
5. *The Researcher will make every effort obtain the goodwill and co-operation of all the GDE officials, principals, and chairpersons of the SGBs, teachers and learners involved. Persons who offer their co-operation will not receive additional remuneration from the Department while those that opt not to participate will not be penalised in any way.*
6. *Research may only be conducted after school hours so that the normal school programme is not interrupted. The Principal (if at a school) and/or Director (if at a district/head office) must be consulted about an appropriate time when the researcher/s may carry out their research at the sites that they manage.*
7. *Research may only commence from the second week of February and must be concluded before the beginning of the last quarter of the academic year. If incomplete, an amended Research Approval letter may be requested to conduct research in the following year.*
8. *Items 6 and 7 will not apply to any research effort being undertaken on behalf of the GDE. Such research will have been commissioned and be paid for by the Gauteng Department of Education.*
9. *It is the researcher's responsibility to obtain written parental consent of all learners that are expected to participate in the study.*
10. *The researcher is responsible for supplying and utilising his/her own research resources, such as stationery, photocopies, transport, faxes and telephones and should not depend on the goodwill of the institutions and/or the offices visited for supplying such resources.*
11. *The names of the GDE officials, schools, principals, parents, teachers and learners that participate in the study may not appear in the research report without the written consent of each of these individuals and/or organisations.*
12. *On completion of the study the researcher/s must supply the Director: Knowledge Management & Research with one Hard Cover bound and an electronic copy of the research.*
13. *The researcher may be expected to provide short presentations on the purpose, findings and recommendations of his/her research to both GDE officials and the schools concerned.*
14. *Should the researcher have been involved with research at a school and/or a district/head office level, the Director concerned must also be supplied with a brief summary of the purpose, findings and recommendations of the research study.*

The Gauteng Department of Education wishes you well in this important undertaking and looks forward to examining the findings of your research study.

Kind regards

Makado
....

Dr David Makhado
Director: Knowledge Management and Research

DATE: 2013/05/02
....

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA
Faculty of Education

LETTER TO THE SGB/PRINCIPAL

Dear Sir/ Madam,

REQUEST FOR PERMISSION TO CONDUCT RESEARCH IN YOUR SCHOOL

My name is Nosipho Immaculate Jaca, a student at the University of Pretoria, Faculty of Education, in the Department of Education Management and Policy Studies. The research I wish to conduct for my Master's dissertation is titled "Leadership for Mathematics teaching in two Gauteng primary schools". The study aims to explore the perceived leadership practices of HoDs for Mathematics/Numeracy teaching in primary schools.

Semi–structured interviews will be conducted after school hours so that there will be no disruption of teaching time or the daily management of the school. In addition to interviews, I will have to study and analyse documents such as annual plans for Foundation and Intermediate phase, HoD moderation reports, and classroom observation instruments, in order to get a clear picture of HoD practices as it relates to Mathematics/Numeracy teaching.I therefore request access to these documents and undertake to use them for purposes of this research project only. All information that may result in tracing or identifying individuals or schools will be removed and pseudonyms (false names) will be used where specific reference may be made to a school or individual.

Participation in this study is voluntary and the participants have the right to withdraw at any stage of the study with no negative consequences to them. All the participants will be given letters of informed consent which will explain the nature, purpose and objectives of the study. The letter will also include the title of the study

as well the details of the researcher. Confidentiality of all participant responses will be guaranteed as no identifiable information will be disclosed in the research report or transcripts. There are no known risks to participants resulting from their participation in this study. To minimize any risk that may arise, one on one interview will be conducted.

This project will be conducted under the supervision of Dr CEN Amsterdam and the co-supervision of Dr S.T. Mampane (University of Pretoria). I hereby seek your permission to approach the educators in your school to ask for participant consent.

Upon completion of the study, I undertake to provide the school with information about the availability of the research report. If you require any further information, please do not hesitate to contact me on Cell: 0721153598 & Email: sipho.mangi@gmail.com or, the supervisor, Dr. Amsterdam at 081 4830 427/ 012 420 5513 or christina.amsterdam@up.ac.za.

Thank you for your time and consideration in this matter.

Yours sincerely,

Nosipho Immaculate Jaca

Student number: 24523349

Signature: ………………………………………….

Supervisor's Signature: …………………………..

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Faculty of Education

INVITATION AND INFORMED CONSENT TO PARTICIPATE IN A RESEARCH PROJECT

Dear Participant

You are cordially invited to participate in a research project for my Masters of Education Degree entitled "Leadership for Mathematics teaching in two Gauteng primary schools".The study aims to explore the perceived leadership practices of HoDs for Mathematics/Numeracy teaching in primary schools.

Semi–structured interviews will be conducted after school hours so that there will be no disruption of teaching time or the daily management of the school. Your participation in this study is voluntary and confidential. You will not be asked to reveal any information that will allow your identity to be established, unless you are willing to be contacted for individual follow up interviews if they are necessary. Should you declare yourself willing to participate in an individual interview, confidentiality will be guaranteed and you may decide to withdraw at any stage should you wish not to continue with an interview.

In addition to interviews, I will have to study and analyse documents such as annual plans for Foundation and Intermediate phase, HoD moderation reports, and classroom observation instruments, in order to get a clear picture of HoD practices as it relates to Mathematics/Numeracy teaching. I therefore request access to these documents and undertake to use them for purposes of this research project only. All information that may result in tracing or identifying individuals or schools will be removed and pseudonyms (false names) will be used where specific reference may be made to a school or individual.

If you are willing to participate in this study, please sign this letter as a declaration of your consent, i.e. that you participate in this project willingly and that you

94

understand that you may withdraw from this research project at any time. Participation in this phase of the study does not obligate you to participate in follow-up interviews; however, should you decide to participate in follow-up interviews your participation is still voluntary and you may withdraw at any time. Furthermore, confidentiality will still be guaranteed.

The research will be conducted in English.However, I shall provide a translator if participants feel more comfortable communicating in another language. If you have any questions about this research project, please contact Nosipho Immaculate Jaca at Cell: 0721153598 & Email: sipho.mangi@gmail.com or the supervisor, Dr. Amsterdam at 081 4830 427/ 012 420 5513 or christina.amsterdam@up.ac.za.

Thank you for your time and consideration in this matter.

Yours sincerely,

Nosipho Immaculate Jaca

Student number: 24523349

Signature: ……………………………………….

Supervisor's Signature: …………………………..

CONSENT:I have read the information on this page and I understand that I am not waiving any of my legal rights by signing this form.

Name _____

Signature_____

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA
Faculty of Education

INTERVIEW PROTOCOL FOR HEADS OF DEPARTMENT

Questions

1. How long have you been teaching Mathematics?

2. What kind of preparation did you receive before you became the HoD?

3. What kind of professional development have you received as the HoD?

4. How prepared do you feel about fulfilling your responsibilities as the HoD?

5. Which areas do you think you need development in at present?

6. Have you looked for any opportunity to learn about being the HoD?

7. What are your roles and responsibilities as the HoD in general?

8. What are your roles and responsibilities as a leader of Mathematics teaching?

9. What do you do to provide leadership for the teaching of Mathematics?

10. Would you elaborate on how you go about doing all that you have mentioned?

11. What are the challenges that you face in leading the teaching of Mathematics?

12. How do you address the challenges you have identified?

13. Is there anything else about your leading the teaching of Mathematics that you would like to add?

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA
Faculty of Education

INTERVIEW PROTOCOL FOR SCHOOL PRINCIPALS

Questions

1. What preparation have your HoDs received before they occupied their positions?

2. What kind of professional development have your HoDs received on the job?

3. How prepared do you think your HoDs are to can fulfil their responsibilities?

4. What kind of development do you think your HoDs need at present?

5. In your opinion, have your HoDs looked for other opportunities to learn about being HoDs?

6. What are the roles and responsibilities of HoDs in general?

7. What are the roles and responsibilities of HoDs as leaders of Mathematics teaching?

8. What do your HoDs do to provide leadership for the teaching of Mathematics?

9. Would you elaborate on how they go about doing what you have mentioned?

10. What would you say are the challenges your HoDs face in providing leadership for the teaching of Mathematics?

11. What do your HoDs do to respond to the challenges you have identified?

12. Is there anything else you would like to add on the leadership provided by HoDs for the teaching of Mathematics?

APPENDIX 8

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA
Faculty of Education

INTERVIEW PROTOCOL FOR MATHEMATICS TEACHERS

Questions

1. Have you ever applied for an HoD position?

2. What are your professional development needs with regards to Mathematics teaching?

3. In your opinion, how can your HoD help you to address these needs?

4. What does your HoD do to support/assist you in the teaching of Mathematics?

5. Where do you think your HoD can improve in his/her provision of support/assistance?

6. Is there anything else you would like to add on the leadership provided by HoDs for the teaching of Mathematics?