

https://dspace.org/

Perceived practices of primary school mathematics heads of department

Slabbert, Brian

2019

https://hdl.handle.net/10539/29336

Slabbert, Brian (2019) Perceived practices of primary school mathematics heads of department, University of the Witwatersrand, Johannesburg, <http://hdl.handle.net/10539/29336>

Downloaded from a DSpace repository. https://dspace.org/



Masters Research Report

Perceived practices of primary school mathematics heads of department

Name: Brian Slabbert

Student Number: 1791412

Contact Number: 061 154 5967

Ethics clearance number: 2018ECE008M

Email: brian.slabbert@gmail.com

Supervisor: Professor Brahm Fleisch

Research report submitted to the School of Education, Faculty of the Humanities, University of the Witwatersrand, Johannesburg, in partial fulfilment of the requirements for the degree of Masters in Education Johannesburg, July 2019.

Abstract

In this study the researcher investigates what educators perceive the practices of mathematics HoDs to be in independent primary schools. A literature review was conducted and it was determined that there is a need for further research into the practices of HoDs at independent primary schools. A qualitative research approach was decided on and two case studies were done at two independent primary schools in Johannesburg. The data collected was recorded, compared and analysed to provide further insight into the perceived practices of HoDs. The findings show that there is not one set of practices of a HoD but multiple and that the practices of the HoD depend on the institution. The vision, mission and the culture of the institution, as well as the approach by senior management, will play a major role in what the practices of the HoD at that institution will be. It also leads us to conclude that arguing that there are set practices for HoDs is incorrect, instead it is the school context that will determine the practices of HoDs. From the findings the researcher attempts to provide a better understanding of the topic and makes suggestions into possible future research that could be conducted.

Declaration

I declare that this research report is my own unaided work. It is submitted for the degree of Masters in Education at the University of the Witwatersrand, in Johannesburg. It has not been submitted before for any degree or examination at any other university.

Brian Slabbert

Name of candidate



Signature of candidate

5 day of July 2019

Acknowledgements

I wish to express my sincere appreciation and gratitude to Professor Brahm Fleisch for his guidance, supervision and mentoring.

I would also like to thank:

- My colleague and friend, Dr. Claudette Müller, for her input and willingness to assist me with any questions that I had on any particular day.
- My parents who have always believed in me and provided me with the best education possible to allow me to pursue my dreams.
- My amazing wife for the support and encouragement provided throughout this entire process.
- Mr Joseph Gerassi for providing me with the opportunity to further my studies.

Table of Contents

Abstract 2

Declaration 3

Acknowledgements 4

Abbreviations 8

Chapter 1: Introduction 8
1.1 Background and context 8
1.2. Problem statement 11
1.3. Purpose statement 11
1.4. Research questions 11
1.4.1 Main question 11
1.4.2 Sub questions 11
1.5. Rationale 12
1.6. Significance 12
1.7. Limitations and delimitations of the study 13
Chapter 2: Literature review 14
2.1 The practices of HoDs in primary schools 14
2.2 The challenges faced by HoDs in their daily practices 18
2.3 Identification of the gap that exists within the research 21
2.4. Conceptual framework 22
Chapter 3: Research methodology 24
3.1 Research approach: A qualitative approach 24
3.2 Research design 24
3.3 General selection criteria 25
3.4 Data collection 25
3.4.1 Semi–structured interviews 26
3.4.2 Participant observations 27
3.5 Data analysis 27

3.6 Trustworthiness and credibility 28
3.7 Ethical considerations 29
3.8 Participant codes 29
Chapter 4: Presentation of findings 30
4.1 Case studies 30
4.1.1 School A: HoD as supervisor 30
4.1.2 School B: HoD as innovative leader 46
Chapter 5: Cross case analysis 62
5.1 Similarities between School A and School B 62
5.1.1 Monitoring duties 62
5.1.2 Administrative duties 63
5.1.3 Curriculum development duties 63
5.1.4 Teacher development duties 64
5.1.5 Challenges experienced 64
5.1.6 Support structures 65
5.2 Differences between School A and School B 65
5.2.1 Monitoring duties 65
5.2.2 Administrative duties 66
5.2.3 Curriculum development duties 67
5.2.4 Teacher development duties 68
5.2.5 Challenges experienced 69
5.2.6 Support structures 70
5.3 Findings 70
Chapter 6: Conclusion 72
Appendix A 80
Interview questions 80
Appendix B 82
Interview questions 82
Appendix C 84
Interview questions 84
Appendix D 86

Abbreviations

HoD	Head of Department
ISASA	Independent Schools Association of South Africa
IEB	Independent Examination Board
NAPTOSA	National Professional Teachers Organisation of South Africa
GDE	Gauteng Department of Education
TIMMS	Trends in International Maths and Science Study
ANA	Annual National Assessment
SACMEQ	Southern and Eastern Africa Consortium for Monitoring Educational Quality
SMT	School Management Team
EEA	Employment of Educators Act

Chapter 1: Introduction

1.1 Background and context

The South African education system is facing a very dire situation. South Africa is ranked as one of the worst performing countries in the world. According to the latest Trends in International Maths and Science Study (TIMSS) study, South Africa is ranked 56th out of 57 countries (Mullis et al., 2016). This despite the fact that while most countries tested pupils in Grade 8, the South African version of the test was done by Grade 9 pupils. Many of the recent standardized assessments that South Africa participate in, including the Annual National Assessments (ANA); Trends in International Mathematics and Science Study (TIMMS); Southern and Eastern Africa Consortium for Monitoring Educational Quality (SACMEQ); and the matriculation examinations every year, all indicate the poor performance levels of our pupils in Mathematics.

Globally, Mathematics has become the measuring stick of a nation's health with regard to education and to a lesser extent development (Jansen, 2012). If this is the case then South Africa is currently facing an epidemic of note.

Unfortunately, there is no panacea for the challenges that South Africa faces in Mathematics education. However, we need to start somewhere on the journey to improvement. We need to do better with our current valuable asset, our teachers. Prominent researchers believe that teachers are one of the most influential factors to improving education (Fullan, 2001; Barber & Mourshed, 2007; Sammons et al., 2008). The driving force behind the further development of our teachers will be school leadership, especially HoDs as they are at the coalface of monitoring teaching and learning within schools and therefore find themselves in the ideal position to have a

positive influence on learner achievement (Harris et al., 1995; Busher and Harris, 1999; Harris et al., 2000).

South African schools traditionally have a school leadership structure which is known as a school management team (SMT), which consists of the principal, deputy principals and the Heads of Department (HoDs). [1]The HoDs are the leaders who work most closely with the teachers and thus have the most opportunity to help develop and manage effective teacher practices. Research has shown that HoDs are in critical positions within schools to influence school effectiveness and improvement (Harris et al., 1995; Busher and Harris, 1999; Harris et al., 2000). Burrows (2004) refer to HoDs as "a key element of leadership and management in primary schools" (p. 4). This highlights the important role that HoDs have within schools and the education system as a whole, therefore, they will be the focus of this study.

Although HoDs have a crucial role to play within the education system, they are seldom prepared for the position or the responsibilities that come with it. In many cases, HoDs are unaware of what their roles and responsibilities are as these are not always clearly defined (Blanford, 1997). There is also a lack of specific research on the practices of HoDs, especially within primary schools (Hammersley-Fletcher and Kirkham 2005, 2007).

Many HoDs are appointed to the position because of their teaching experience and not because of their leadership and management abilities. Furthermore, in many cases little to no professional development is offered to HoDs (Adey, 2000). Most

[1] In South Africa we use the term HoDs, but around the world they are known by different titles. In the United States of America, they are referred to as administrators and in the United Kingdom they are referred to as middle managers or middle leaders as well as curriculum coordinators. For the purpose of this study, I will use the term HoDs as it is used in a South African context, unless an alternative term is used in cited work.

professional development that is offered at schools is aimed at enhancing classroom practices. Seldom, if ever, are HoDs offered opportunities to attend professional development aimed at developing their leadership and management skills, or assisting them in developing best practices for their roles as HoDs.

There are various roles and responsibilities that HoDs have including, monitoring and evaluating their subject areas; interpreting and implementing change initiated by senior management; managing teachers and resources; initiating professional development for teachers; and organizing intervention strategies for teachers and leaners where needed, to name but a few. In addition to the extra responsibilities bestowed upon HoDs, they are also expected to contribute to every aspect of school life as any other teacher would (Fleming & Amesbury, 2001).

Currently, there are major developments taking place within the education system, such as the adoption of ‘no homework’ policies by many private schools. Some schools are also doing away with the traditional marks based system and are experimenting with the skills based system. HoDs are expected to implement these changes in the approach to teaching and learning and, in many cases, develop policies that guide the teaching and learning process. All of these factors contribute to the ever increasing workload of HoDs (Mercer and Ri, 2006). Not only is the workload of HoDs increasing, it is also becoming increasingly demanding and complex (Brown and Rutherford, 1998; Earley, 1998; Sammons et al., 1997).

As indicated, there are a multitude of roles and responsibilities that HoDs have within primary schools, but these roles and responsibilities do not always relate to the practices. It would therefore be interesting to investigate what educators such as principals, deputy principals and HoDs perceive the practices of HoDs to be.

1.2. Problem statement

The purpose of this study is to advance the understanding of the leadership work of mathematics HoDs in independent primary schools. The proposed study will establish what HoDs perceive their roles to be, what educators[2] think about of the function of mathematics HoD, and what challenges HoDs face.

1.3. Purpose statement

The purpose of this qualitative research study is to examine the perspectives of educators, both teachers and HoDs, regarding the practices of mathematics HoDs in independent primary schools in Johannesburg.

1.4. Research questions

1.4.1 Main question

What perspectives do educators hold about the practices of mathematics HoDs in primary schools?

1.4.2 Sub questions

- What do educators believe is the function of a mathematics HoD in primary schools?
- What do mathematics HoDs regard as the biggest challenges they face?
- What improvements do educators believe can be made to enhance the practices of mathematics HoDs?

[2] I have used the term educators as this refers to anyone who is teaching or providing professional services to a school (Republic of South Africa, 1998). This term encompasses principals, deputy principals, HoDs and teachers.

1.5. Rationale

The rationale of my study arises from my own experiences. I have recently been appointed Mathematics HoD at an independent primary school in Johannesburg. However, I have never been for any training pre or post my appointment. I have also not been told what is expected from me or given a job description pertaining to my position. The only document that somewhat best describes my roles and responsibilities is the Employment of Educators Act (Republic of South Africa, 1998), notwithstanding that this Act is not applicable to independent schools. This has prompted me to explore what perspectives educators hold about the practices of Mathematics HoDs.

1.6. Significance

There are many studies that have been done with regard to the roles and responsibilities of HoDs (Bennett et al., 2007; Fleming and Amesbury, 2001; Harris, 2000; Mercer and Ri, 2006), but not much has been done on the practices of HoDs. This is especially true within primary schools as most research studies have been conducted within secondary schools (Hammersley-Fletcher and Kirkham, 2007). Much of the research on effective schools has traditionally focused on principals and classroom teachers, thereby neglecting the crucial role that HoDs play in the effectiveness of a school (Koh et al., 2011).

This study hopes to contribute to the field of school leadership, especially in relation to the practices of primary school Mathematics HoDs, by outlining what is perceived to be effective practices and highlighting the challenges that HoDs could expect to be faced with. It will hopefully provide a platform to assist future studies within the field of school leadership, specifically with the focus on HoDs.

1.7. Limitations and delimitations of the study

The research study is limited to independent schools in the Johannesburg area and may not be representative of all schools, both public and independent, in South Africa. These delimitations are as a result of the researcher's general selection criteria which, as previously mentioned, was based on the the geographical proximity and the willingness of the schools to participate in the research study.

Chapter 2: Literature review

The literature review focuses on the key areas of the research topic, namely, the practices of HoDs in primary schools. The literature review hopes to highlight the need for this research as well as what we know about the research topic with reference to literature; what we do not know about the topic and what the gap is that we would like to fill. In other words, what is it that researchers would like to know about this topic and what can be contributed by this research study?

When conducting the literature review the researcher specifically searched for research which relates to practices of HoDs/middle managers/middle leaders within primary schools. Unfortunately, these parameters did not produce many published papers, indicating that this is indeed an under researched topic. Given the scarcity of research, the researcher had to include some articles where the research was conducted in both primary and secondary schools.

Most of the relevant articles were published around the early 2000's. This is because during the late 1990's we witnessed the move "towards middle leaders becoming accountable to line managers for the quality of the work in their responsibility area" (Bennett et al., 2003, p. 6). This meant that many researchers elaborated on these early studies during the early 2000's. Since then there has been a few studies on the topic but they have been sparsely distributed.

2.1 The practices of HoDs in primary schools

The main focus of the literature review was on articles by Hammersley-Fletcher (2002); Bush et al. (2009); and Koh et al. (2011). Hammersley-Fletcher (2002) conducted research, in the United Kingdom, on what subject leaders perceive their roles to be. Bush et al. (2009) reported on the significance of leadership and

management in the managing of teaching and learning. In their article they focus on the tasks of HoDs within primary and secondary schools. Koh et al. (2011) investigated how school leaders perceive the leadership role of middle leaders in primary schools in Singapore.

Although there has been some research in the roles and responsibilities of HoDs, there have been little on the practices of HoDs in primary schools (Hammersley-Fletcher and Kirkham 2005, 2007). Nevertheless, many researchers make reference to the tasks associated with the position of HoD (Cardno, 1995; Blanford, 1997; Hammersley-Fletcher, 2002). Cardno (1995) contends that HoDs are seen as middle managers within schools. They occupy the space between the teachers and the senior management within the management structure of the school. Hence, the terms middle manager and middle leader which we encounter in the United Kingdom schooling system. Cardno (1995) elaborates that HoDs are seen as specialist teachers in their subjects and are tasked with leading learning and teaching within schools because senior management are primarily involved with school-wide operations. Bush et al. (2009) corroborate this statement by Cardno, from a South African perspective by emphasizing that HoDs are expected to ensure effective teaching and learning takes place in their subjects.

Few South African studies, but various international studies, have looked at what practices HoDs should employ if they are to ensure effective teaching and learning takes place (Bennett, 1995; Fletcher and Bell, 1999; Adey, 2000; Harris, 2000; Busher 2005). From these studies common practices are identified but not limited to:

1. Managing and guiding teaching and learning;
2. Monitoring and developing teacher practices;

3. Managing and distributing resources;
4. Evaluating learner performance and introducing interventions if needed;
5. Keeping up with new research and trends in their subjects and relaying it to teachers.

These above-mentioned practices link up with what Hammersley-Fletcher (2002) identify as four key task areas for primary school HoDs. These are strategic direction and development of the subject; teaching and learning; leading and managing staff; and the efficient and effective deployment of staff and resources.

Strategic direction and development of the subject

HoDs develop plans and policies for their subject and continually update these as changes are made and new policies and practices adopted. They monitor progress through observation and analysis, thereby identifying and implementing improvement plans (Hammersley-Fletcher, 2002). They also develop clear visions for their subject or department, which is aligned with that of the principal, and they ensure that they clearly express this vision to the teachers through setting clear directions. By involving the teachers, HoDs create a sense of shared ownership among the teachers (Koh et al., 2011). These visions and plans are communicated to teachers through departmental meetings that the HoDs conduct or through informal conversations with staff. At the departmental meeting, HoDs convey their ideas and expectancies of teachers, including the formulating of work plans, assessment guidelines, setting of deadlines, setting of performance targets and aligning the curriculum between the grades.

Teaching and learning

Senior management in schools regard HoDs as excellent classroom teachers whose main focus is teaching and learning (Koh et al., 2011). HoDs need to possess sound subject knowledge, pedagogical knowledge and content knowledge. This goes hand in hand with keeping abreast of the latest developments and research within their subject. They advise teachers on new teaching strategies and assist teachers in introducing new approaches to certain concepts to improve the quality of instruction. HoDs identify areas that the teacher needs to improve in through regular classroom visits and providing feedback to the teachers. “Classroom observation is mandated for South Africa’s Integrated Quality Management System (IQMS) but also occurs in some schools as a monitoring device.” (Bush et al., 2009, p. 4). HoDs also indicate that they develop assessment procedures and guidelines, as well as methods of recording and reporting on learner achievement, in order to monitor the effectiveness of the teaching programme (Hammersley-Fletcher, 2002).

Leading and managing staff

Teachers are seen as one of the most important, if not the most important, asset which we have in education. Prominent researchers also believe that the teacher is one of the most influential factors to improving education (Fullan, 2001; Sammons et al., 2008; Barber & Mourshed, 2007). This is why HoDs regard the fostering of good relationships with their teachers, as one of the most important practices which they partake in. They identify the building of trust and respect as a key factor to having an effective department. HoDs invest in their teachers through identifying their individual and group needs, and addressing these needs through professional development programmes (Hammersley-Fletcher, 2002). Through careful observation, HoDs

identify and leverage individual strengths and expertise of teachers within the department to optimize effectiveness and elicit the best out of the teachers (Koh et al., 2011). The planning of team building exercises also falls within the practices of HoDs. It is important for HoDs to lead from the front and by example, thereby portraying model behaviour and setting the tone for the rest of the department.

Efficient and effective deployment of staff and resources

The effective and efficient deployment of resources has more relevance in primary schools than that of staff (Hammersley-Fletcher, 2002). Generally, teachers in primary schools are classroom teachers which mean that they will mostly be expected to teach a variety of subjects including Mathematics. Resources, however, is at the opposite end of the spectrum compared to teachers. In primary schools, resources such as apparatus and textbooks are sought after commodities and most private primary schools will have many resources, especially apparatus. HoDs are tasked with the controlling of the stock and ordering new equipment. With this comes the responsibility of setting a budget and managing that budget throughout the year (EEA, 1998).

2.2 The challenges faced by HoDs in their daily practices

Having looked at the practices of HoDs, it is clear that each of these practices could also potentially become a challenge. They each present their own difficulties and, if not managed correctly, could escalate to major pitfalls for HoDs in their ability to be effective in their positions.

Time constraints

Apart from the above mentioned challenges, there are a number of challenges that researchers continuously identify when studying the practices of HoDs in primary schools. The main challenge that researchers have identified, and that HoDs always

point out, is that of time constraints (Koh et al., 2011; Chetty, 2007; Bush, 2011; Busher, 2005). The challenges to time constraints arise from the multitude of responsibilities that HoDs have. Koh et al. (2011) mention that, not only are HoDs expected to fulfil the duties of a regular teacher, but they are also tasked with leading and managing a department. On top of this, they are often asked to contribute to the co-curricular programme. In most cases, when HoDs are appointed, they are given the extra roles and responsibilities without relieving them of any of their current duties or commitments. This places considerable pressure on HoDs to carry out their tasks effectively. Furthermore, HoDs are facing rising expectations and increased demands (Mercer and Ri, 2006; Sammons et al., 1997). Instead of their workload decreasing, it is increasing and more and more HoDs are finding it difficult to keep up with these rising demands. Koh et al. (2011) mention that one of the skills which HoDs need to refine is that of prioritizing. They need to accept that they might not get everything done which they hope to complete, but they should decide which is more important and do them first.

Hammersley-Fletcher (2002) also identifies time constraints to be a challenge but makes reference to the fact that HoDs struggle to find the time to give teachers and senior management feedback from courses which they attended. Busher (2005) shares the same view and makes mention that these time constraints even filter through to the HoDs classroom. He points out that HoDs are often late for their own class because they were busy assisting others or they had to address issues with pupils that teachers in their department could not resolve.

Managing change

The second big issue that researchers identified is that of managing change (Koh et al., 2011; Hammersley-Fletcher, 2002; Chetty, 2007). According to Koh et al. (2011), HoDs have to manage changes with regard to staff turnover and curriculum changes, as well as deal with the resistance to change from the staff. People are mostly creatures of habit and they find security in knowing that things stay consistent. However, change is inevitable and often necessary, especially in the ever evolving field of education. They mention that many of the teachers have a fixed mindset and are reluctant to change.

In her article, Hammersley-Fletcher (2002) makes reference of micro politics, which links up with the notion of change. She finds that senior management often force their views and vision for the school onto HoDs, who they then expect to relay these to teachers. This often leads to frustration on the part of HoDs because they have to subordinate their own vision for their department in order to promote the vision of senior management. This finding is corroborated by Bush (2011) and Koh et al. (2011).

Monitoring teachers

One of the issues that are repeatedly mentioned in various studies is that of HoDs having to monitor teachers by observing their lessons. Numerous studies state that HoDs express that they feel uncomfortable with having to go into another teacher's class and critiquing the lesson (Bennett, 2002; Bush, 2007; Koh et al., 2011; Hammersley-Fletcher, 2002). Hammersley-Fletcher found that most HoDs are reluctant to go into another teacher's class to observe and critique a lesson. Bennett (2002) and Bush (2007) also reported on this issue and like Hammersley-Fletcher they found that HoDs feel that it is a controversial issue and that it undermines the

professional identity of the teacher. Furthermore, it creates resentment on the part of many teachers because it is seen as a lack of trust.

Lack of support

The final significant challenge that will be mentioned is that of lack of support. Researchers have found that the majority of HoDs feel that they are not receiving the adequate support from senior management (Chetty, 2007; Fleisch, 2008). This lack of support, according to Chetty (2007) includes lack of mentoring, lack of clear role definition, inadequate preparation for the role, minimal professional development, as well as the lack of a comprehensive induction programme. Fleisch (2008) identifies that in many cases, the senior managers lack the necessary knowledge of the curriculum to be able to support HoDs in their roles.

2.3 Identification of the gap that exists within the research

In reading through the literature, the researcher discovered that there is a need for more research with regard to the practices of HoDs in primary schools. It is also clear that the emotional or humanistic role that HoDs have, with regard to teachers in their department, is under researched and under emphasized. Much of the research is also mainly focused on senior management and their practices and there is little research on middle management, which includes HoDs, and their practices. These studies were mainly conducted in other countries around the world and the research that was done in South Africa was mostly conducted in government schools and not independent schools. These findings encouraged the researcher to pursue this study and attempt to contribute to the field. The aim of this research report is to have identified what some of the perceived effective practices of an independent primary school mathematics HoD are, as well as what challenges they face.

2.4. Conceptual framework

“The purpose of a conceptual framework is to learn from the experience and expertise of others as you cultivate your own knowledge and perspective. A conceptual framework allows you to make reasoned, defensible choices about how you might explore research topics or themes heretofore underexplored, explore existing research questions in new contexts, or re-examine established topics or questions using different theoretical or epistemological frames.” (Ravitch and Riggan, 2012, p. 14).

With this in mind, the conceptual framework was constructed (Figure 1) based on the evidence encountered in the literature review. At the centre of this study is the practices of HoDs and on the one side it will be focusing on the perspectives that educators hold with regard to the practices of HoDs, and on the other side it will be looking at the challenges that HoDs face in their practices. It is the researcher’s belief that the practices of HoDs feed the perspectives of educators as well as the challenges which HoDs face, and vice versa, meaning that the perspectives which educators hold and the challenges that HoDs face, determine the practices of HoDs to an extent.

The researcher’s theories are based on the literature review carried out. One theory that had a major influence in developing the conceptual theory was the four key task areas identified by Hammersley-Fletcher (2002), previously discussed.

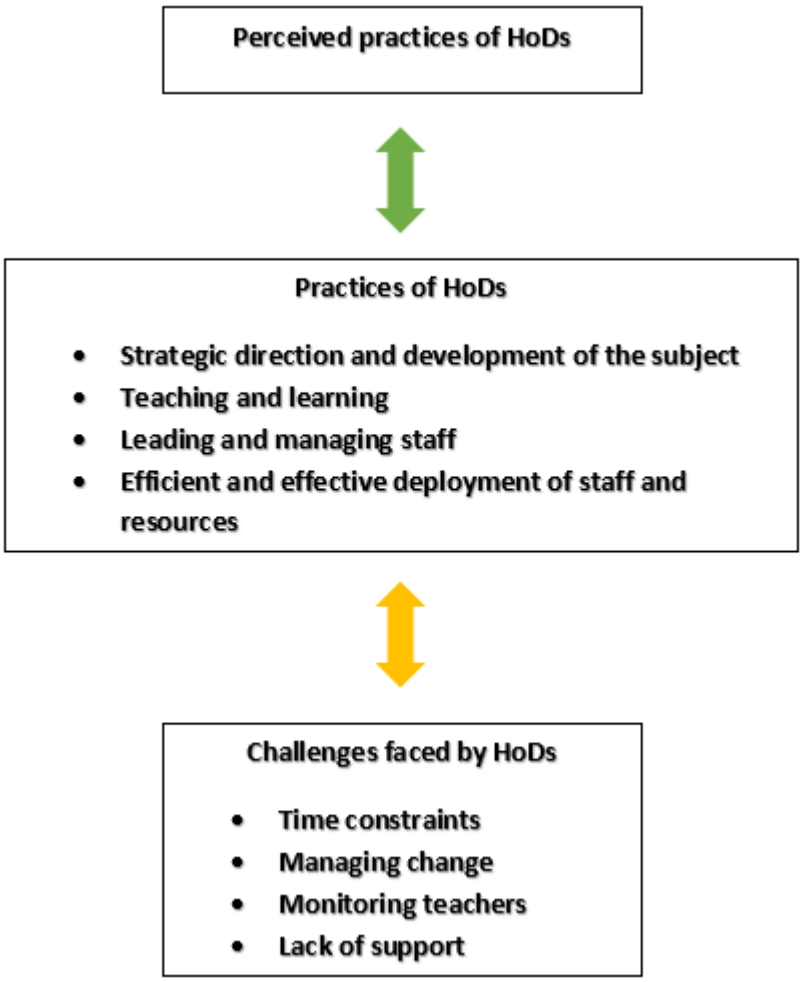


Figure 1: Conceptual Framework

Chapter 3: Research methodology

3.1 Research approach: A qualitative approach

Creswell (2007, p.645) mentions that a “qualitative study is defined as an inquiry process of understanding a social or human problem, based on building a complex, holistic picture, formed with words, reporting detailed views of informants, and conducted in a natural setting”. The research approach employed is that of a qualitative approach as the researcher is looking at what perspectives educators hold about the practices of HoDs in primary schools.

3.2 Research design

The research will incorporate a multi-case study. According to Luck et al. (2006), a case study will assist the researcher to gain knowledge of contextual phenomena about an individual, group, organisation, institution, or a situation where people are affected by the same contemporary phenomenon.

Another reason for the use of the case study approach is because of the methodological flexibility (Denzin and Lincoln, 2000). The flexibility of using a case study means that the researcher can choose the methodological approach that will best suit the research and provide the freedom to choose between strategies of inquiry and the methods of analysis.

The research will be conducted at two private primary schools in the Johannesburg area. The research will be based on one-on-one, semi-structured interviews with various role players within the school leadership structures and in the Mathematics department.

3.3 General selection criteria

Convenience sampling was used in the selection of the participants. According to Etikan et al. (2015), convenience sampling is used because the members of the target population meet certain criteria, such as geographical proximity, willingness to participate or they are easily accessible to the researcher. This sampling will work well for the study because the criteria used to select the two schools was the geographical proximity to the researcher and their willingness to participate in the research.

For this study, the researcher interviewed various participants, which included mathematics HoDs, deputy principals and principals.

This group of participants include educators from various demographic classifications including race, gender and age. They vary in their teaching experience, ranging from novice teachers to veterans with more than 30 years of experience. The idea behind this reasoning was to include all stakeholders and draw on the various experiences of the participants. This provided the researcher with a good overall representation of the perceptions of educators within differing contexts.

3.4 Data collection

Data was captured by making use of semi-structured interviews and interviewing the principals, deputy principals and the Mathematics HoDs of both schools selected.

Before the research was conducted, the principals and trustees of both schools were contacted to obtain permission to conduct research in their schools. After permission was granted, the researcher contacted the principals who assisted with arranging dates and times that would suit them and their staff for the interviews. The participants were interviewed on the days and at the times which suited them the best. Interviews were done on the premises of their schools and at the venue of their choice. Before

the interviews it was made clear to the participants what the purpose of the research is and that their participation was completely voluntary. They were again informed that they could, at any time, decide to withdraw from the research process without any repercussions or consequences to them. It is worthy to note that all participants were happy to complete the research process and not one of them opted to withdraw.

The participants were selected based on the positions which they hold at the schools. Participants included the principal, deputy principal and the HoD of both schools.

3.4.1 Semi–structured interviews

Semi-structured interviews, according to Barriball and While (1994), are considered to be well suited when trying to capture the perceptions and opinions of respondents. It also allows the interviewer to probe for more answers or clarification. They mention that in semi-structured interviews the wording and sequence of questions remains constant which means that any differences in answers can be attributed to the different perceptions of the respondents.

Therefore, semi-structured interviews served the purpose of this research well because the researcher attempted to understand the perspectives educators hold about the practices of HoDs.

The researcher used open-ended questions to avoid getting “yes” or “no” answers as they do not yield in depth understanding of the topic being discussed. Open ended questions are more flexible and allowed the interviewer to probe (Cohen, Manion & Morrison, 2000). At the beginning of each interview the researcher stated the purpose of the interview and the research question. This formed the basis of the discussion.

During the semi-structured interviews, specific questions were asked deliberately to determine the perceptions that the participants held. The responses to these questions

then allowed me as the interviewer to probe further and uncover other interesting and meaningful information which contributed to my research.

3.4.2 Participant observations

“Participant observation is the process enabling researchers to learn about the activities of the people under study in the natural setting through observing and participating in those activities.” (Kawulich, 2005). Participant observation provides the researcher with the opportunity to observe the body language and emotional reactions to the questions asked and the responses given. This allowed the researcher to observe the participants and cross reference their responses to the interview questions with the observations made, thereby increasing validity. The researcher recorded observations by using field notes as it is the primary way in which data is collected from participant observations (Kawulich, 2005).

3.5 Data analysis

After the interviews were transcribed, the researcher meticulously read through each participant’s responses and identified words, phrases and sentences which were of interest. Pattern seeking involves examining the data in as many ways as possible to try and understand the complex links among various aspects of people’s situations, mental processes, beliefs, and actions (McMillan & Schumacher, 2014). The texts identified were then classified into codes. Similar codes were then grouped together to form categories and within these categories, sub-categories were identified. Hereafter, similar categories were classified into themes. According to MacMillan and Schumacher (2010, p.3), themes can be used to give meaning to different codes. The data was transferred onto an Excel spreadsheet to assist in identifying the similarities and differences between the responses, as well as assist in identifying new and relevant information that was revealed.

3.6 Trustworthiness and credibility

From the onset of this study, the researcher wanted to ensure that the findings were credible and trustworthy. Well established research methods in qualitative research studies were adopted and the researcher familiarised himself with the schools and educators, before he commenced formal research, so that a rapport was established with all involved.

Audio recordings were used to document the interviews, after which transcripts of the interviews were sent to the respondents for them to verify that it is indeed what had transpired. This process is known as member checking (Maxwell, 1996). Furthermore, follow up interviews were conducted with respondents where clarity in certain areas was needed.

Validity, within qualitative research, refers to the degree of congruence between the explanations of the phenomena and the realities of the world (MacMillan and Schumacher, 2010, p. 330). The researcher is aware of the limitations that exist within the research. It is possible that the participants were not truthful in their answers and that the researcher may have influenced their responses with his line of questioning. The researcher did, however, attempt to avoid asking closed ended questions or to influence the responses of the participants in any way as he was well aware that as the interviewer he might have an influence on the respondent. This is referred to by Maxwell (1996) as reactivity. In some cases, follow up interviews were conducted to get clarity on certain statements made or to delve deeper in an attempt to get a better understanding of the perceptions of the participants. It was ensured that each participant is mindful of the fact that their participation is completely voluntary and they can choose to opt out of this research study at any given time.

3.7 Ethical considerations

Ethical clearance was obtained from the Ethics Committee at the University of the Witwatersrand before the research was conducted. (See appendix D).

Participants were assured of the confidentiality of their participation and anonymity. It was also communicated to the participants that participation in the research is voluntary and they are welcome to withdraw from the study at any given time.

3.8 Participant codes

Participant codes were used to ensure anonymity and to make data analysis easier. Capital A was used to denote participants from school A and a capital B was used for participants from School B. Table 4.1 further describes the coding of the participants.

Table 3.1 Participant's codes

School A		School B	
Participants	Participant codes	Participants	Participant codes
Principal	AP	Principal	BP
Deputy principal	ADP	Deputy principal	BDP
Head of department	AHD	Head of department	BHD

Chapter 4: Presentation of findings

4.1 Case studies

The goal of the research was to make a contribution to the understanding of the role and function of mathematics HoDs in primary school. It was clear from the onset that both schools chosen for this study, although both are independent preparatory schools in the Johannesburg area, were very different to one another. The history, demographics and various other differences between the schools had a major impact on what was expected from the mathematics HoD. As the research data is unpacked, it will hopefully become clearer to the reader why the researcher has classified the roles of the HoDs as he has. The role of the HoD at School A was perceived as being a supervisory one, although it does sometimes also come across as being perceived to be an administrative role. The perceived role of the HoD at School B was that of an innovative leader. Both these roles are vastly different from one another and they have come about due to the contrasting situations that both schools currently find themselves in. The researcher will attempt to explain the classification of the role of the HoD within both these schools by analysing and synthesizing the research data gathered.

4.1.1 School A: HoD as supervisor

Context and Background

To best understand how the role of the mathematics HoD is envisioned at School A, it is important to understand as much as possible about the context and the background of the school.

School A, as previously mentioned, is 21 years old. It started as a co-educational high school only but it now has a preparatory wing as well. It was established in the late

nineties to serve the growing, working class in the Midrand area. The school does have boarding facilities and many of the pupils are international pupils from countries such as Botswana and Zambia. All the pupils are of black and coloured ethnicity. It is not linked to any educational group and it functions completely independently. It has a trust of four members who oversee all the different aspects of the school, but they do not get involved in the day to day activities which include teaching and learning, this is left to the principal and his management team. They will, however, take action should they feel that the principal or someone on the management team is not doing what is in the best interests of the school.

About three years ago the trust had a big decision to make. The school was having difficulty with its pupils, including drug and alcohol problems. Their grade 12 results were also deteriorating and the discipline had become an issue. They were also offered a huge donation from a corporate company and they had the opportunity to open a primary school on the same premises. The preparatory school was opened in 2018 and only has one class per grade with about 12 to 25 children in a class. The trust members realised that they had to take drastic measures if they wanted to turn the school around and get it back on the path that they envisioned.

They decided to appoint a new principal, deputy principal and many new teachers. Their plan was to get rid of the bad elements within their school, whether it was teachers or pupils, and improve their school as a whole.

The principal, who has been there for two years, is a teacher who has also practiced law. He has the final say in decisions within the school and he reports only to the trust. His background in law has helped him in chairing disciplinary hearings and expelling pupils. He admits that he spends a lot of his time handling staff and pupil matters and

therefore he has limited time to give attention to the actual teaching and learning. The deputy principal was a HoD at another school before she was appointed deputy principal at School A two years ago. She is also the head of academics for the high school and the preparatory school. The HoD only joined the school in 2018 and has recently returned from working in the Middle East as a teacher.

It is clear to see that the school is currently reinventing itself and trying to tighten the reigns on both the teachers and the pupils.

Monitoring duties

One of the key questions posed to the participants was what they perceive the practices of primary school mathematics heads of department to be. Both the principal and deputy principal from school A indicated that they believe the HoD should monitor staff within their department and to ensure that they are doing what they are supposed to be doing.

> AP: *The head of department should monitor the teachers within the department and make sure that everything they do is of a high quality.*
>
> ADP: *...to ensure that they (teachers) are doing what they're supposed to do.*

The deputy principal of school A conveyed that she felt that she needed to check up on her HoDs to ensure that they are doing their job effectively.

> ADP: *So I basically made her type up the notes and now I have to make sure that I check up on the head of department that she is actually checking up on the teachers.*

She mentions an example of where they had an incident where parents complained about pupils not having access to the study material. She mentions that they do not

have enough textbooks for all the pupils and therefore, a lot of the time, the information is not copied by the pupils into their books. The deputy principal indicated that she was not impressed by the actions of the HoD as, in her opinion, the HoD should have picked up that the pupils, in this particular teacher's class, were not getting the required study material and therefore the HoD should have intervened. She further states that she made the HoD type up the notes and distribute it to the pupils.

From the above statements we can conclude that the both the principal and the deputy principal expect the HoD to monitor the teachers ensuring that they are doing the duties expected of them. The focus is on checking up on the teachers instead of it being on the teaching and learning happening. The message that comes across is that the teachers cannot be trusted to do their job and therefore the HoD has to play a policing role to monitor the teachers and what they do. According to the deputy principal, it is also the HoDs duty to fix problems that occur within his department.

The principal further stated that he would expect the HoD to guide teachers and their departments to function optimally and to attain the goals which they should be setting at the beginning of the year.

> AP: *Firstly, the head of department should guide the mathematics department to ensure that they achieve the goals which they have set at the beginning of the year.*

In this statement the principal contradicts his previous statement by mentioning that the HoD should guide the teachers in his department. Guiding teachers is different to monitoring teachers because guiding teachers suggests that the HoD assists the teachers in improving teaching and learning, whereas monitoring teachers suggests

that the HoD should be checking up whether or not the teacher is actually doing their job.

Administrative duties

Form the above statement made by the principal it seems as though there are specific administrative duties, for the HoD, which are set out at the beginning of the year and it is expected that they complete these timeously. These administrative duties referred to include monitoring children's books, moderating tests and exams, doing class visits and reporting on these visits.

> ADP: *I expect them to manage meetings and do book controls; to do class visits and checking teacher's files…*
>
> AHD: *What I think they do is a lot of administration, moderating papers…set papers and moderating papers; monitoring the books of the students…*

Both the HoD and the deputy principal mention the checking of books. This refers to the HoD checking to see whether the teacher has been marking the pupils' books on a consistent basis. The deputy principal also mentions that the HoD should be conducting class visits. The purpose of these class visits, again, is to check up on the teachers to ensure that they are actually doing what they are supposed to be doing according to her. They may also be to provide the teachers with feedback about how to improve their lesson presentations, however, this is not specifically stated by the deputy principal. Another duty mentioned is that of checking teachers' files. This duty is meant to supervise whether or not the teacher is preparing lesson plans and to check if the teacher is working at the right pace, thus ensuring that the teacher covers the entire curriculum. The HoD also makes mention of moderating papers and assisting in the setting of papers. The purpose of this duty is to check that the tests

and exams that are set by the teachers are of the desired standard. Again, it reiterates the supervisory role assigned to the HoD by senior management. The fact that the HoD says that he assists teachers in setting the papers links up with the principal's previous statement in which he mentions that the HoD should guide the teachers within his department. The deputy principal mentions that the HoD should manage meetings. From this we can deduce that the HoD is expected to call meetings and to chair these meetings. These meetings are held to check up on how things are going within the department and to discuss upcoming assessments. They also check to see whether all the teachers in the department are more or less working on the same concepts at the same time.

Curriculum development duties

Another key topic that was mentioned by the principal and the HoD, as being part of what they perceive to be an important practice of a HoD, is looking at different methodologies, identifying best practice and exposing teachers to new or improved methods of teaching. On three different occasions the principal mentions looking at introducing different methodologies of teaching:

> AP: *…looking at different methodologies; and ways of teaching.*
>
> AP: *The head of department should also assist the teachers to attempt different methodologies…*
>
> AP: *I would say we need to look at different methodologies and allow the teachers the opportunity to try new things.*

Similarly, when asked what he thought the practices of a HoD is, the HoD mentioned that he believes HoDs are expected to do a lot of administrative tasks but that he has

a different view of what he believes the practices of a HoD should look like. In his words:

> AHD: *What I think they do is a lot of administration, moderating papers and providing support to teachers, especially younger teachers such as first or second year teachers; helping them set papers and moderating papers; monitoring the books of the students and making sure that they are following the curriculum.*

Directly after he makes this statement he says that he thinks they should be doing something different.

> AHD: *What I expect HoDs to do is slightly different than what we are currently doing. I think that head of department should be in continuous professional development and training because we are experiencing a technological growth and there are new approaches and resources to be able to use and I think that if we do not use these then we are not going to improve our teaching or education system. I think we need to relook at what we are teaching and that should come from the head of department.*

Although the principal emphasizes the importance of the HoD identifying and introducing different methodologies, it is clearly not happening at School A. The principal and the deputy principal previously mentioned that the HoD has to fulfil a supervisory role with the focus being on checking up on the teachers. These statements from the principal, almost seem as though it is something that he thought he should mention because it is what the researcher might want to hear. The HoD actually confirms this theory when he says that he has a different view of what a HoD should be doing compared to what they are currently doing in their school. He

mentions that they should relook their approach to the teaching of mathematics and that the HoD should be investigating new approaches and resources that might help in improving the teaching and learning happening in their department.

The deputy principal repeatedly mentions and emphasizes the administrative work of HoD. She does not make mention of looking at new developments within education or at identifying best practice, instead, she is more focused on micro-managing her HoDs and ensuring that the administrative and supervisory role of the HoD's portfolio is executed effectively and efficiently.

During the interview with the HoD, the researcher observed that there was a sense of frustration when he mentioned what he perceives the practices of a HoD to be. It seemed as though the unfavourable past experience which the deputy principal had, with regard to the parents confronting the school about the lack of study material, has prompted her to tighten the reigns on her HoDs. She is expecting them to micro-manage the teachers in their department by constantly checking up on them and she in turn regularly checks up on the HoDs.

It is evident that the principal entrusts his deputy principal, who also is head of academics, to oversee and manage the HoDs and his attention is more focused on the overall, day to day, operations of the school. Many of the tasks that take up his time are issues outside of teaching and learning, thus he needs to have someone else to ensure that the teaching and learning continues to happen.

> [3]AP: *The senior staff such as the deputy principal and head of academics ensure, throughout the year, that they are working towards their goals.*

[3] It is important to keep in mind that the deputy principal is also the head of academics at the school.

The frustration expressed by the HoD with regard to the practices of HoDs appears to be as a result of not being able to have more freedom in pursuing new methodologies and trends. This is an important finding within the study that was not anticipated and which did not appear in the literature review. We see that the practices of a HoD are directly influenced by the management style of senior managers.

Teacher development duties

It is evident from the statements made by the HoD regarding the pursuit of new methodologies and educational trends, that he believes more should be done to enhance the teaching and learning within his department. Although he does not mention this directly, we can interpret that he knows that he can do more, if given the opportunity, to improve the quality of the teaching and learning in the mathematics department. He does not specifically mention the upskilling of the teachers in his department or that he would want to send them on professional development courses, but he realises that more can and should be done instead of only supervising teachers.

The researcher was interested in finding out what all three participant's thoughts are on professional development offered to HoDs and also the professional development on offer for teachers within the mathematics department. It was noted by the principal that staff, including HoDs, get sent to roadshows which are organised by the Department of Education.

> AP: *We send our heads of departments to cluster meetings and roadshows that are organised by the Department of Education. We also send our staff to training organised by ISASA and the IEB.*

These roadshows are not specifically aimed at HoDs, instead, it is aimed at teachers in general. The principal could not specify what type of training happens at these

events arranged by the DoE, ISASA or the IEB. The HoD mentioned that they are sent to roadshows and both the principal and the HoD conveyed that they do not think that these roadshows are beneficial and stated that in many of the cases these roadshows are poorly organized and facilitated.

> AHD: *I only know about the roadshows that we have been sent to as part of the Gauteng Department of Education's initiative to improve the professional development of teachers, but I feel that most of these have been a waste of time and the same topics are being talked about again and again and they do not benefit the teachers or the head of departments.*
>
> AP: *If I can be honest, I don't think that it is helping especially not the ones organised by the Department of Education. Many times, the facilitators don't arrive for the training or the teachers report that the facilitator was only reading out of a file.*

The principal also mentioned that they send educators to the training organized by ISASA (Independent Schools Association of South Africa) and the IEB (Independent Examination Board) as well as by some teachers' unions such as NAPTOSA (National Professional Teachers Organisation of South Africa).

> AP: *The feedback that we get from the ISASA and IEB training is much better.*

The deputy principal did not make mention of the roadshows and stated that there aren't any external programmes, that she is aware of, that is aimed at upskilling HoDs. She indicates that if there were such programmes then she will gladly send her staff to attend these as she believes that HoDs need to be further developed professionally, especially with regard to their communication skills.

ADP: *I think that is where some training in leadership skills and communication would be helpful.*

Likewise, the HoD believes that further development and training is needed for HoDs but he mentions that it should be more geared towards leadership and management.

AHD: *I definitely think there is a need for more training of head of departments in leadership and management.*

He goes further to mention:

AHD: *They (HoDs) should also be sent on professional development courses where they can grow as leaders and managers as well as within their own teaching. The difficulty is finding these courses.*

What was interesting to note was that the principal did not believe that HoDs need further training and development when it comes to leadership and management as he is of the opinion that HoDs do have experience with dealing with parents, pupils and teachers.

AP: *I think our HoDs are people that have experience in teaching and with dealing with other teachers and parents. I think they have a good idea of managing relationships with staff and parents, as well as students.*

The principal and the deputy principal referred to internal training that happens at the school. The principal mentions that two days in a month are reserved for staff training or professional development, whereas the deputy principal is of the opinion that it happens on a regular basis during scheduled sessions as well as during informal situations.

AP: *Well, here at our school we reserve two days in a month, usually on a Thursday, to conduct training internally.*

The deputy principal mentions that mentoring and professional development of HoDs happen on a daily basis.

ADP: *…at the moment most of it is happening internally because we deal with it on a daily basis.*

The principal and deputy principal have slightly different views on what occurs at these training sessions.

AP: *It can be academic training focusing on the setting of papers; looking at different methodologies; and ways of teaching.*

ADP: *They help with book checks and moderation and I meet with them on a regular basis. We also check marks and reports together.*

The principal believes that training should focus on looking at different methodologies and ways of teaching. This is not mentioned by the deputy principal, instead, she puts focus on the administrative duties of a HoD and improving on those. The principal also refers to the setting of papers, but places less emphasis on the administrative duties.

The HoD did not believe that there were enough professional development opportunities at his school to improve himself as a HoD.

AHD: *I am given the necessary space to manoeuvre and try something new, although I feel that there is not enough development happening in my school to improve me as a head of department.*

It is interesting to note the difference in the type of professional development that the HoD and the deputy principal believe is important for a HoD. The HoD believes that

more should be done to develop the leadership and management skills of a HoD, as well as exposing them to different teaching methodologies and trends in education, whereas the deputy places far more emphasis on the administrative duties of a HoD.

It is clear that the deputy principal is not interested in sending her HoD or teachers on external professional development courses and her lack of knowledge about the available courses are testament of this. Although she says that she thinks it is important for HoDs to receive further development and training in leadership and management, through the current practices at the school, this is clearly not a priority rather something that she thought the researcher might want to hear. She is more focused on doing internal professional development and even this is geared towards tightening the reigns and ensuring that the HoD supervises the teachers. None of the internal professional development mentioned was focused on improving the teaching practices of the teachers or the leadership skills of the HoD, instead, it was focused on making sure that the administrative duties of the teachers and the HoD were on in place and of the standard expected by the deputy principal.

Challenges experienced

Another theme which consistently appeared throughout the study is the challenges faced by mathematics HoDs. Some of these challenges stem from the day to day practices of a HoD and others are out of the control of HoDs. These challenges, when looked at in context, contribute to the researcher's classification of the HoD's role as that of a supervisory one and, sheds more light on the reasons behind this classification.

When asked what they thought were the challenges that mathematics HoDs faced, the participants had various responses, but the most common being time constraints.

All three participants at School A consistently mentioned time as the biggest challenge that mathematics HoDs face.

> AP: *There is also a lot of paperwork and administration that takes up a lot of time.*
>
> ADP: *We tried to give them a reduced timetable but it is not always possible, therefore I think that it is quite an issue because they do not have time to get around to everything they need to do. Also, mentoring new staff is quite difficult because of time constraints.*
>
> AHD: *I also think that they do not have enough time to investigate new ways of teaching and new approaches as well as assisting teachers within their department.*

It is the first time that the deputy principal mentions the mentoring of staff by the HoD. In many of her previous statements she has referred to the monitoring of staff by the HoD. Her description of the duties of the HoD has been consistent with monitoring staff and not mentoring staff. She also mentions in her statement that they try to give the HoD a reduced timetable, however, the current HoD does not have a reduced timetable and is expected to teach a full timetable and still perform the duties expected of him as the HoD. According to the principal, the HoD does have a reduced timetable which is contradicting what the deputy principal said.

> AP: *They do not have a full timetable which allows more admin lessons for them.*

This highlights the view previously mentioned that the principal is somewhat out of touch with what is currently happening within the academic wing of the school and the

reason for this might be because he has a lot going on in terms of disciplinary hearings and other matters pertaining to the overall functions of the school.

On top of the full timetable, it was mentioned to the researcher by the principal and the HoD, during the informal discussion with them after the interviews, that the HoD is also expected to contribute to the co-curricular activities during the afternoons. This could be a sporting activity, academic activity or cultural activity. The principal does mention that there is more than one staff member at each co-curricular activity which allows the HoD to attend to their administrative duties.

> AP: *There are also more than one staff member at extra-murals which frees up our heads of departments to attend to their admin duties.*

Unfortunately, this sentiment was not shared by the HoD who mentioned that he is still involved for the entire duration of the co-curricular activity.

Support structures

The researcher was interested in finding out what support structures there were for the HoD. He mentioned that he could go to the line managers which in this case means that the deputy principal is his first port of call.

> AHD: *At our school we have the head of academics who is also a deputy principal who is my first port of call.*

What was extremely fascinating was the fact that he mentioned something that was not encountered in the literature review and which the researcher had not thought about before, but it does make sense from a pragmatic point of view. He said that, in his experience, HoDs generally rely on one another as their first port of call when needing help. It may even be a HoD from another department.

AHD: My biggest observation was that heads of departments generally help one another.

He elaborates further by saying that:

AHD: *They would rather help each other before they go and ask for help from the deputy principal or head of academics.*

This can be interpreted that HoDs better understand the difficulties experienced by other HoDs and therefore are able to be of more assistance than a deputy principal or head of academics. It could also be interpreted as the HoDs not feeling comfortable taking their difficulties to the deputy principal thus exposing a somewhat strained relationship. Based on the previous observation about the level of frustration that the HoD is expressing, I would conclude that what we see at School A is more of the latter.

An interesting statement was made by the HoD. He mentioned that one of the biggest challenges that he has come across as a HoD is that of conflict management. According to him, many HoDs are afraid of engaging with their staff because they would rather not deal with the conflict that goes with it.

AHD: *I think the biggest issue is that head of departments are not always keen on helping other teachers within their department because they try and avoid the conflict that goes with it.*

He goes further to explain:

AHD: *I think that teachers always think that head of departments are just looking to criticize and they are taking the books to find fault and they don't see that the head of departments are actually assisting them or helping them improve their practice.*

When asked about whether, in her opinion, HoDs find it intimidating to conduct class visits and to give feedback to the teachers, the deputy principal said that she does think it is a challenge for the HoDs.

> ADP: *It is a challenge, to be brutally honest, but the way that you communicate it across is very important.*

In the context of School A it can be argued that the resistance and pushback shown by the HoD, with regard to doing the duty of classroom visits dictated to him by the deputy principal, demonstrates the centrality of the supervisory system described earlier as the role of the HoD. There seems to be a disconnect between the role envisioned by the HoD and the supervisory role enforced by the deputy principal. This disconnect becomes apparent through the HoD avoiding taking the problems that he faces to the deputy principal as well as offering resistance when it comes to doing the classroom visits.

4.1.2 School B: HoD as innovative leader

Context and background

School B is a co-educational school that is 111 years old. It has a pre-preparatory, preparatory and high school. It currently serves the upper class community and school fees are some of the highest in Johannesburg. School B is a completely independent school with no affiliation to any educational group. It is run by a trust that consists of members who are either current parents or parents of ex-pupils. There is an executive head who has the final say in what happens at all three schools. He is supported by the head of the high school, the head of the preparatory school and the head of the pre-preparatory school. They are in turn supported by their deputies. In the words of the preparatory mathematics HoD:

BHD: *The executive head manages and drives the whole school vision with regards to innovation and creativity and the administrative tasks and the individual school implementations thereof is handled by the Heads.*

The principal of the preparatory school has been involved with teaching for all of his working life and has been at the school for the past 9 years. The deputy principal has also been involved with teaching for her entire working career and has been at the school for the past 17 years. The primary school mathematics HoD has been at the school for the past 5 years but has only occupied the position of HoD for the past 2 years.

Although the school had been performing well in terms of academic results, the trust realised that the school needed to do something different to continue staying relevant, and at the forefront of private education in Johannesburg and also the country.

They decided to appoint the executive head four years ago to steer the school on this envisioned path. The executive head has a reputation for being forward thinking and unconventional in his approach to education.

He soon appointed various directors to assist him in realising his vision for the school. These included a director of professional development, a director of technological innovation and integration, and a director of critical and creative thinking.

These directors have the job of developing the skills of the teachers, and in turn the pupils, within their respective portfolios.

Since the appointment of the executive head, the school has reworked its vision and mission statements and its values. The reason behind this was to adjust to the current time which we find ourselves in. According to the School B’s website they aim to

educate tomorrow's leaders by equipping them to master the challenges that are presented in an ever changing world.

The preparatory school recently had two major initiatives which they launched. They did away with marks altogether and they stopped giving homework. According to the respondents the reason behind this is to equip the children with skills rather than teach them to memorize content. No homework is to allow preparatory school children the freedom of going home and being able to play and be children instead of forcing them to do more work and causing unnecessary anxiety. The principal explained it well in the following statement:

> BP: *The independent school system is changing and we are adding more and more critical thinking and problem solving components to it. Thinking skills are becoming a big part of it. We are moving away from content and moving into concepts and skills which means that the curriculum is becoming more packed as we try and become more relevant and the biggest challenge is to keep a balanced curriculum in terms of offering a balanced maths curriculum compared to the other components.*

It is clear to see that School B has a strong history and tradition of excellence which allows it to experiment with new methodologies and approaches in education, while working from a solid foundation built up over many decades.

Monitoring duties

When asked what they perceive the practices of mathematics HoDs to be, the participants of School B had various responses.

> BP: *I think that it is important for a head of department…to mentor staff and… to support teachers.*

BDP: *Also, how do you motivate staff because it is not easy because staff can be quite set in their ways…but that shift is there through that continuous encouragement that there are better ways…*

BHD: *So at this point it entails making sure that the [4]NumberSense programme is implemented from grade 1 to 6 and to support staff to implement the programme.*

The deputy principal of School B mentions that she believes HoDs need to motivate their staff and continuously encourage them to attempt new and better ways of teaching. The principal responded by mentioning that he believes that mathematics HoDs should be mentoring and supporting the staff within their department. Similarly, the HoD said that a HoD needs to support the teachers in their department with the implementation of new mathematics programmes. The focus from all three respondents is clearly on the HoD mentoring the teachers in her department by providing support and continuous motivation and encouragement.

BHD: *So the NumberSense books have allowed us to keep the standards the same across grades and also empower the teachers…*

The above statement speaks to the HoD supporting the teachers by empowering them. She believes that the new mathematics programme is assisting the teachers in improving their own understanding of mathematics and in turn it is improving the way that it is being taught to the pupils.

[4] The NumberSense programme is a mathematics programme that was implemented by the preparatory school of School B in 2018.

Teacher development duties

The HoD elaborates on the topic of supporting teachers in her department by mentioning that she is responsible for the professional development of these teachers in the subject of mathematics.

> BHD: *To offer opportunities for professional development this can take two forms. It can either be external training, for example, with the NumberSense programme, staff need to be trained in how to use it and how to implement it in class so they were sent for external training and we also had somebody come in to give internal training. Also, to offer individual support especially if there is a teacher that might need more individual support or skills development whether it is with regard to classroom management or administrative support.*

She explains that professional development of teachers can be done either internally or externally. The internal professional development can be done by getting an expert in to help with a specific issue or it could be the HoD herself assisting a teacher on a one to one basis. According to her it is the duty of the HoD to identify the strengths and weaknesses of the individual teachers and then to send the teachers to relevant workshops and conferences that might be of benefit to them and the rest of the department. Some of the teachers often inform her of events that they feel would be worthwhile to attend.

> BHD: *I also spend time looking for things that I feel is worthwhile for our staff but what also happens is that some of the teachers come across something through it being advertised at other conferences that they attend.*

It is important to note that the HoD mentions that she often assists teachers through internal professional development. This would mean that the HoD could be seen as

somewhat of an expert in her field. Although the HoD does not mention that she perceives herself as being an expert, she does mention that it is important for a HoD to have a good understanding of the developmental stages of the pupils in relation to the subject of mathematics.

> BHD: *Also, because there is such a wide range of development within a primary school if you look at a child who is in grade 1 and a child that is in grade 6, there is such a wide range of development and to be able to deal with all of the developmental stages that children go through during this time is a huge challenge, so if you do not have a very experienced head of department and staff in terms of child management and child psychology being able to deal with that makes your job very difficult.*

The principal shares this sentiment and believes that the HoD should be a specialist mathematics teacher.

> BP: *If I am looking to appoint a head of department it would have to be a math specialist, someone that understands maths and more importantly can relate to maths at primary school level.*

Likewise, the deputy principal agrees with the above notions that the HoD should be a specialist mathematics teacher. She mentions that the HoD occupies that specific position because they are seen as being a specialist and that they do have a passion for their subject.

> BDP: *…my area of expertise is not every subject that is why we do have a head of department and that is why they are there in those positions. I believe that if you want to teach maths then you have to have a passion for it and then it should be able to move you in your core…*

The views expressed by all three participants regarding the HoD as being a specialist strengthens the classification of the role of the HoD at school B as an innovative leader, for it is mentioned by Baumgartner (2010) that innovative leaders are leaders who have an expertise that is relevant to their specific innovative projects. He also mentions that innovative leaders are able to identify strengths and weaknesses within their staff and then develop these further through relevant professional development.

> BHD: *So at this point it entails making sure…to help staff develop their skills in terms of assessments and to provide any further training opportunities to staff as required. Also, to develop assessment policies that are aligned to the schools policies with not having any marks.*

In the above quote, we again read of the HoD having to cater for the professional development of the teachers in her department.

Curriculum development duties

Another interesting point is also raised, that of developing assessment policies and other teachers with developing their skills with regard to assessments and making sure that their assessments are aligned to the no marks system. As previously mentioned, School B has done away with a mark based system. This has forced the HoD, along with senior management, to develop an assessment policy for this system. Seeing that this is the first time, to their knowledge, that any school in South Africa has employed this system, it was difficult to know what these assessments should look like because there was no other example to work from. They had to do a lot of research to determine what has worked internationally and then evaluate whether they thought it could work in their school. From this it is evident that the HoD is expected to be innovative in her approach by finding ways to realise the vision that they as a school have bought into.

She is also expected to develop policies and assessments that are unconventional to say the least and to lead her team by assisting them to understand the new assessment policy and to be able to set assessments that are in accordance with this policy. What it does not directly refer to is the expectation that the HoD should garner buy in and support for these unconventional plans and strategies as well as motivate and encourage staff while convincing them that this is the best way forward. Getting this buy in from staff is also one of the biggest challenges that the HoD mentioned experiencing.

Along with the new assessment policy, the HoD introduced a new mathematics programme.

> BHD: *There was a need for a unified program in the school because we did not want there to be any gaps between the grades and phases. Many programmes were looked at including Singapore Maths and the NumberSense system seemed to fit best with a kind of development of thinking over just rote learning that our school vision and philosophy asks from us. We has a department decided on the system and presented it to management they then attended meetings with us and we invited the author of the program to come and present to us explain to us the benefits of the program and what it entails. We then did costing exercises to see how much it would work out to be so that it is not too expensive for our parent body. We then looked at research that supports the programme and how successful it has been. After that, it was a joint decision about what we wanted and how we would move forward with the NumberSense programme. The decision was very presented to our executive head and along with our headmaster they then approved the programme.*

The above statement is very important in the context of this study. It is rich in information providing us insight into some of the practices of the HoD at School B. Although the implementation of the new mathematics programme has been previously mentioned, it was not explained why it was done. In this statement we see that the HoD identified that there were gaps between the grades and phases and that there was a need for a unified programme. For the HoD to have noticed that it would have meant that she had to evaluate the entire preparatory school mathematics curriculum in her school and that she had to make a decision to change this when she determined that the system needed to be improved. She had to research and investigate the different programmes available and then decide on the one that she thought, based on research and the current vision of the school, would be the best fit. She also mentions that they had to look at the cost involved which brings in a new dynamic within her role, namely, budgeting. Lastly, she had to present this to the senior management, including the executive head, for approval. What is striking is how she constantly uses the term we instead of I. This leads us to believe that one or many of her colleagues were involved in this process and it again shows the leadership shown by the HoD by involving the teachers in her department and thus creating a sense of ownership among them.

Administrative duties

It was not only the senior management that the HoD had to convince, but also the parent body. She explains that a major part of her duties is communicating with the parents and keeping them informed of the developments within the mathematics department.

> BHD: W*e have also found that communicating with our parents in this way is also better because parents are more in the picture in terms of which things the children can actually do and which things their children need to work on.*

Similarly, the principal and the deputy principal make mention of the importance of the HoD engaging with the parent body.

> BP: *I think that it is important for a head of department…to engage with parents in terms of the maths programme and where we are going with it...*
>
> BDP: *I think also to get parents on board is a big thing explaining this and being completely open saying this is what we are doing, this is why we are doing it this and this is what it means.*

The HoD talked about getting the author, of the mathematics programme which they implemented, to come and address the parent body to explain to them the details surrounding the programme and the significance of it compared to other programmes available. The author was also able to answer the questions posed by the parent body.

Another matter relating to communication with parents was mentioned by the HoD in the following statement:

> BHD: *As a head of department the final decision of what communication goes out to parents regarding mathematics rests with me because we have to make sure that everything is uniform. If there are academic concerns from parents then staff may sometimes escalate to the head of department who then has to assist.*

Here we see that the HoD has to attend meetings with parents and teachers if the matters cannot be resolved by the teachers and the parents alone or if the matter is of

high importance. This entails that the HoD chair the meeting and try to find a way forward where all parties involved are satisfied.

Apart from meetings with parents, the HoD also has to schedule and attend meetings with her department and with her superiors.

> BP: *I think that heads of department should have a regular meeting and discussions with senior management as well as teachers within the department so that you can see what is lacking and what needs to be addressed.*

Support structures

The principal mentions something very important in the above statement while explaining his view on the expectations of a HoD with regard to meetings. He says that the HoD should have regular discussions with senior management and teachers in her department. This shows that there is a two way conversation happening and the idea that we get is that it is a joint decision making process. The HoD is not being told what to do, neither is she telling the teachers in her department what to do. There is a sense of a democratic or participative leadership style at play throughout the various management structures within School B.

The above observation is further qualified by the deputy principal when she says that she hopes that HoDs in her school are empowered and that they are not micro-managed. She later again says that she would like to think that her HoD is given the freedom to try new ideas.

> BDP: *…I hope school has moved into a space where heads of department are empowered instead of micro-managed.*

BDP: *…we see someone with potential and we say we don't want to take away from who you are by dictating to you. You come to me and you say this is what I want to do, is it possible or not and that is how we run it at our school.*

The HoD makes the following comment when asked about the support that she receives from senior management:

BHD: *I do think that we are actually quite privileged in terms of how much freedom we have with in our classrooms and department and how we teach.*

We can see that the HoD is trusted by the senior management and that they encourage her to apply her knowledge and expertise to take the mathematics department to greater heights. Senior management attempt to empower their HoDs rather than micro-manage them.

The HoD explains that she is well supported by the senior management team and that she also relies on the support of her peer HoDs at her school as well as from other schools.

BHD: *Both our deputy and headmaster are quite approachable and supportive when there are any discussions about the way forward with new things that we would like to try and there is a lot of freedom to experiment with new ideas in terms of different forms of assessment.*

She mentions that she has recently spent a day with a HoD from another independent school in their area.

BHD: *I think that training would be good in terms of meeting up with other heads of departments from other schools to see what best practices are and what they have implemented… it makes sense for us to meet with other schools in our*

region to share best practices and to see how others deal with certain issues and to get them to share their knowledge.

This was also mentioned by the principal and deputy principal.

BP: *I believe that heads of departments should be visiting other schools and meeting with their peers at other schools to help understand what best practice is and to find what can work in your school and what can't work in your school.*

BDP: *I advocate completely that there should be invitations for heads of department to come here as well as for our heads of departments to go and visit other schools both in public and private schools.*

The idea is to observe what they do at this independent school and to engage with the HoD and teachers to understand what their approach is and how they go about teaching and learning at their school. She then took what she had learnt back to her school and shared it with her department.

This is part of a new approach by School B, where they send a HoD to spend a day at another school and also invite HoDs from other schools to theirs, is aimed at collaborating with other schools to improve the system as a whole. They hope that this collaboration will grow to involve more HoDs and more schools.

Challenges experienced

Although it sounds as if things are going well at School B for the HoD and school, there are some challenges that are faced and which are preventing the HoD from investing all her time and energy into her department.

The biggest challenge according to the HoD, deputy principal and the principal, is once again time.

BP: *Time, time, time. It is something that we all battle with…I would say that we need more time together as heads of department to talk about the challenges.*

BDP: *Again time, to exhaust a head of department by saying here is your full time table and your co-curricular but here are also all the other responsibilities you have doing all that is a big challenge.*

BHD: *I think first and foremost is a lack of time.*

The problems that the HoD experience regarding the issue of time is that she does not have a reduced timetable. She is expected to perform all these duties associated with the position of HoD but she still has the same teaching load as the rest of her department. On top of that, she has sporting commitments in the afternoon and she has remediation classes for struggling pupils after school.

The principal acknowledges that too much time is spent by the HoD teaching her own classes and that it takes away from her mentoring the other mathematics teachers.

BP: *Least time, I think it is very difficult to say probably mentoring staff just because of all the other time is used for teaching their own classes.*

It is quite ironic that the principal says the least amount of time is spent on mentoring staff when he clearly stated the importance of it earlier on.

When asked what their thoughts are on the HoD having a reduced timetable, the deputy principal and principal responded by saying that, ideally, they would want to give the HoD a reduced timetable to free them up to go into classrooms and collaborate with the teachers, but that it was not always possible.

BP: *Yes, I believe that they need more time so that they can go into classrooms and observe lessons as well as help teachers in delivering the content and improving on the lessons.*

BDP: *I would like to get into a point where a head of department was almost not a full-time class teacher but was allowed the opportunity, through time, to see the work in action in the classrooms and interact in that way with staff on a collaborative level as opposed to being so busy in a classroom because your timetable is packed and it is your afternoon sporting commitments on top of that. I would like to see a head of department teaching less and it is a contradiction because it is them still having responsibility for their classes but also allowing the time to collaborate in other classes and for me that is quite important in mathematics.*

The HoD had a different take on having a reduced timetable. She felt that it is necessary but that it could also lead to resentment on the part of other teachers because the HoD might be seen as not working as much as the other teachers.

BHD: *Yes and no. In one way having a reduced timetable allows you more time to meet with staff and support them by going into their classrooms but having a reduced timetable can also lead to resentment from other staff because their perception might be that you do less work than them.*

What is very apparent from the research is that the HoD at School B is an innovative leader because she is working in an organization that has an innovative culture. The senior management at School B encourages the HoD to attempt new approaches and to work outside the box that most schools and HoDs have become accustomed to.

This approach by the senior management of the school rubs off on the HoD and influences her role that she takes on in her position as HoD.

Chapter 5: Cross case analysis

At the onset of the research study, the idea was to do two case studies on the schools identified. The researcher interviewed willing participants from each of the two schools by means of semi-structured interviews and then compared these two schools by making use of coding within a Microsoft Excel spreadsheet and using a cross case analysis which identified the similarities and the differences between the schools. The purpose of this approach is to determine whether there are commonalities between the roles of the HoDs at these schools, instead, what emerged from the two case studies was the differences rather than the commonalities. There are similarities between the practices of both HoDs but these were found to be superficial and it was the differences that provided more insight into the practices of mathematics HoDs.

5.1 Similarities between School A and School B

The most obvious similarity between the two schools is the fact that they are both IEB schools and that they have a similar management structure. Both schools have a top down management structure consisting of a principal, deputy principal, followed by a HoD. The only difference being that School B has an executive head who oversees all areas from academic to culture to sport. Other than this, the top-down approach of management is very traditionally setup and similar to one another.

5.1.1 Monitoring duties

It was clear from this section that there is a huge discrepancy between the two schools regarding their understanding of the perceived monitoring practices of a HoD. There is hardly any similarity between the two schools when analysing the data gathered. The one similarity is that both schools mentioned the importance of the HoD supporting staff within their department. This was unanimous throughout the

participants of School B's responses but it was only mentioned by the HoD of School A. Here we see that the HoD of School A has a similar understanding to the participants from School B regarding the supportive role of a HoD, but this view is not necessarily shared by the management team at School A.

5.1.2 Administrative duties

Both HoDs are expected to conduct meetings and to facilitate these meetings. School A mention that the HoD has meetings with the teachers within the department to address any concerns that he may have arising from his class visits as well as to check whether all the teachers are still on track with what was decided in the beginning of the year. School B also uses these meetings to gauge what concerns there might be coming from the teachers and determining how to best deal with these. The HoD also checks to see if they are on track with where they need to be with their new mathematics programme.

School A places high emphasis on the checking of the pupils' books and the checking of the teachers' files. School B does not explicitly mention that HoD physically checks the pupils' books and the teachers' files, instead, it can be deduced that in order for the HoD to have the insight to improve the practices within her department, it is necessary for her to have an idea of what the teachers are doing and what the pupils are doing. It might just be that this is not a stringent task associated with the practices of a HoD in School B.

5.1.3 Curriculum development duties

The data from the schools also indicated that both schools believe that it is important to keep up with new trends and to incorporate new methodologies and approaches in the classroom. School A and School B both mention that there are many new ideas

coming from research that enables us to enhance our teaching practices and that educators should be aware of these and employ these approaches and strategies to improve the quality of education we are delivering. Unfortunately, this is where the similarities between School A and School B, with regard to curriculum development as part of the practices of a mathematics HoD, ends. Both schools have a very different understanding and approach to curriculum development duties of a HoD.

5.1.4 Teacher development duties

The participants from both schools were in consensus when it came to the importance of teacher professional development within the department and school. Everyone, except the principal from School A, believed that both internal and external professional development of staff is of the utmost importance. The principal from School A was of the opinion that external professional development of HoDs is not needed because according to him they already have extensive experience in teaching. Both schools have dedicated internal professional development days for their staff.

5.1.5 Challenges experienced

The most similarities between the two schools were recorded in the *'challenges experienced'* category. It was interesting to note that, although these two schools differ so vastly in all other areas, the challenges experienced were almost identical in each case study. Both schools listed time constraints as the biggest challenge which HoDs experience. In each case study, the HoD had a full timetable and they were expected to fulfil their duties as a HoD as well as all the duties of a teacher. They were also expected to contribute to the co-curricular programme three afternoons per week.

5.1.6 Support structures

As expected, the participants at both schools mentioned that the HoD has the support of senior management and that the deputy principal, who in both cases also happens to be the academic head, is usually the first port of call.

5.2 Differences between School A and School B

The glaring difference between the two schools is their history and their current academic approach. School A is a relatively new school and is still trying to develop its own identity and building its reputation. They also follow a traditional approach to their academics by having a mark based system, writing exams and giving the pupils homework. School B is well established and has reputation of providing a quality education with excellent academic standards. They do not follow the traditional approach to academics in the preparatory school and have done away with the mark-based system, writing exams and giving the pupils homework.

5.2.1 Monitoring duties

School A views the monitoring of teachers and their work as a very important aspect of the practices of a HoD, whereas School B hardly mentions anything to do with monitoring teachers and checking up to see if they are doing their work sufficiently. Contrastingly, School A are more focused on the HoD monitoring the staff, ensuring that they are doing what they are supposed to and that they are doing these well, whereas School B is more focused on the HoD supporting teachers in successfully implementing new strategies and programmes. School B does not explicitly make mention of the HoD checking to see if the teachers are doing what they are supposed to, however, it is clear that the she is aware of what they are doing because she has implemented new initiatives to assist them with their teaching practice. The

observation made was that School B is more trusting of their teachers actually doing what they have agreed upon.

5.2.2 Administrative duties

Although it was mentioned in the previous section under similarities, the conducting of meetings also highlights a difference between School A and School B. School A only talks about meetings between the deputy principal and HoD as well as the HoD and the teachers. The participants from School A did not mention anything about the HoD and parent meetings. This does not mean that they do not believe a HoD should be engaging with parents, instead it might not be something that they see as a priority on the list of HoD practices. What was mentioned was that the deputy principal has been dealing with disgruntled parents which indicates that the HoD is bypassed by the parents and that they go directly to the deputy principal. This is in contrast with School B who explicitly mentions the meetings between parents and the HoD. The HoD is the one dealing with disgruntled parents and who calls for meetings with the parents and teacher, sometimes even the pupil as well, to discuss the situation and to find a solution going forward.

The participants from School A mentioned the importance of checking pupils' books, checking teachers' files, moderating and setting assessments, as well as conducting class visits. This was not mentioned by the participants of School B who instead mentioned the importance of communicating with the parent body with regard to the developments within the mathematics department. The participants at School B might find this quite relevant to the current situation seeing that they recently made several big changes including the introduction of a new mathematics programme, no homework or marks, and various other initiatives previously mentioned. The HoD at School B also refers to the organising of guest speakers to address the parent body

and the teachers in order to provide a better understanding of the idea behind all these recent changes.

It is clear that both schools have vastly different perceptions when it comes to the administrative duties of a HoD, with School A being more traditional in their approach compared to School B and their alternative approach.

5.2.3 Curriculum development duties

As previously mentioned, both schools realise that it is important to constantly develop curriculum that will enhance the quality of education offered, but unfortunately have polar opposite views about the practices of the HoD when it comes to the curriculum development duties of a HoD.

The principal and the HoD at School A believe that it is important to look at new trends and methodologies and to incorporate it into the current curriculum in order to attempt to improve teaching practice. Even though they state the importance thereof, there is no mention or evidence of it happening at their school. The deputy principal, who is head of academics and who has the most influence on the teaching at the school, does not even make mention of curriculum development or the role of the HoD with regard to this. The HoD is not encouraged to research new trend or methodologies nor is he given the freedom to experiment with new ideas or approaches.

School B has encouraged the HoD to research new approaches and methodologies and have provided the HoD with the freedom to attempt these in the classroom. This is evident in their no homework policy, no marks policy and the introduction of the mathematics programme which is quite different to what they have done in the past. With these policies that have been adopted, there has been a need to develop alternative assessments and reporting procedures. The HoD was expected to

collaborate with other HoDs within the school as well as from other schools to try and develop assessments that could align with the no marks policy. They also had to develop a new reporting system that would be provide a clear description of the pupil's progress without the use of a percentage.

Once again, we see how the practices of the HoD at School A revolve around the supervisory role which he has been assigned, whereas the practices of the HoD at School B revolve around the innovative leadership role which she has been assigned.

5.2.4 Teacher development duties

School A and School B have similar views on the importance of teacher professional development, but their interpretation thereof is vastly different. School A and School B have dedicated teacher professional development days but what these entails is completely different to one another. School A uses this time to allow the deputy principal the opportunity to sit with the HoD and teachers to focus on the setting of assessments, checking reports and marks together, assisting with book checks, and looking at different approaches to teaching. Their professional development days are very administratively driven and sees the deputy principal almost coaching the HoD and staff in how she would do these duties. The HoD has almost no input in these days and is expected to see this as a learning opportunity for himself. He is not expected to arrange anything on this day as everything is done by the deputy principal.

In stark contrast, the HoD at School B is expected to not only attend certain teacher professional development days arranged by senior managers but to also arrange many of these days themselves and to organise guest speakers to address the teachers to assist in keeping them abreast with the latest developments in mathematics education and improving their own practice.

The participants at School A refer mention that the HoD and teachers are encouraged to go to cluster meetings as well as roadshows presented by the GDE. They also sometimes attend training organised by the IEB, NAPTOSA or ISASA. Many of these roadshows are a waste of time according to the participants. It is evident that, although School A does encourage its HoD and staff to attend these external professional development events, the HoD has almost no input in the selection of which events to attend and no real effort is made to find appropriate conferences or workshops that is specifically aimed to benefit the HoD or the teachers in the department or address specific areas of concern within the teaching corps.

School B also attends cluster meetings but the HoD is tasked with identifying and sending teachers to conferences and workshops that will address specific topics that will enhance the practices of the teachers. School B demonstrates a good understanding of the difference between internal and external professional development and places huge emphasis on the HoD as innovative leader, whereas School A's understanding of external professional development is somewhat skewed and there is almost no role for the HoD to fulfil when it comes to teacher professional development.

5.2.5 Challenges experienced

The only difference between the two case studies in the challenges which they experience is the buy in from staff. The HoD at School B mentions that it is often difficult to get the staff to buy into an idea or to change their approach which they are familiar with. School A did not mention this but as previously stated, there isn't much change happening with regard to alternative teaching approaches.

The HoD at School A mentioned that a challenge for him is conflict management. He says that he and other HoDs are reluctant to do class visits because there is always conflict that goes with it. Teachers feel threatened when the HoD sits in on a lesson and they tend to be very defensive when the HoD provides constructive criticism. None of the participants at School B made any mention of this.

5.2.6 Support structures

The participants at both schools agreed that usually the first port of call for the HoD is the deputy principal, however, the HoD at School A unexpectedly mentioned that he has found that the HoDs turn to one another for assistance before they approach the deputy principal. This was not reported by the participants from School B, instead they mentioned that they often rely on their colleagues within their own school, as well as from other schools, to assist them in finding solutions to difficulties which they are experiencing. School A, on the contrary, did not mention any collaboration initiatives with other schools.

5.3 Findings

Through the cross-case analysis, it is clear that there are many similar practices which both HoDs do, however, these are a superficial set of activities when we look at it in the greater scheme of things and in the overall practices of the HoDs. Instead, it is what is revealed in the differences in the practices of each HoD where we identify the real noteworthy findings. We see that the HoD at School A is tasked with fulfilling a monitoring and bureaucratic role and that he is not expected to drive any new innovations. He himself is closely monitored and he is tasked with supervising the teachers, ensuring that they are keeping up with their administrative duties and that they are not falling behind the set schedule. This approach to the practices expected of the HoD can be attributed to the current situation in which School A finds itself,

where they have recently appointed a new management team who are attempting to rebuild the school's image and improve its reputation as well as the academic standard that is being delivered.

The HoD at School B on the other hand, is tasked with monitoring teaching but primarily driving innovation within the school's mathematics department. She is given the freedom to research new trends and methodologies and to incorporate this into the teaching. On top of this she is responsible for the professional development of the teachers within her department. School B already has a good reputation of delivering academic excellence which allows the HoD to build upon that and provides her more freedom to explore new methodologies.

We find that the practices of the two HoDs are determined by the organisational culture of the institution as well as by the current state of affairs at the institution and its history. It is also clear that senior management has a major influence on the practices of the HoDs because they have a mandate which they are working towards fulfilling which in turn filters through to middle management who are expected to help achieve this.

It can therefore be concluded that there is not only one set of practices for mathematics HoDs, instead there are many. Two vastly different practices of HoDs were encountered in the two case studies above, which leads us to believe that there are many more out there and that there is still much to be learned about this topic.

Chapter 6: Conclusion

The researcher set out to determine what the practices of a mathematics head of department, in an independent primary school, are perceived to be. Two schools were selected based on their proximity to the researcher and their willingness to participate in the study. The researcher had difficulty finding documents that describe the practices of primary school mathematics HoDs and decided to conduct research to get a better perspective on this topic.

At the beginning of the research, the researcher embarked on a literature review which indicated that there were indeed few studies done on this particular topic, especially within South Africa, and that most research studies focused on the senior managers and their practices instead of the middle managers or HoDs. Most of the research was also done in other countries and the research which was conducted in South Africa, usually took place within government schools and not independent schools.

Some of the international research reported that there were certain common practices that were found to be associated with the duties of a HoD (Bennett, 1995; Fletcher and Bell, 1999; Adey, 2000; Harris, 2000; Busher 2005). These included but were not limited to managing and guiding teaching and learning; monitoring and developing teacher practices; managing and distributing resources; evaluating learner performance and introducing interventions if needed; and keeping up with new research and trends in their subjects and relaying it to teachers. Hammersley and Fletcher (2002) classify the practices into four key task areas. These are strategic direction and development of the subject; teaching and learning; leading and managing staff; and the efficient and effective deployment of staff and resources. These classifications are quite broad and very general and they do not describe in

detail the actual practices that take place under the term of “monitoring and developing teachers” or “evaluating learner performance and introducing interventions”, for example. These mentioned practices could be broken down into specific practices that could vastly differ between schools or from one HoD to another.

From the two case studies it was clear that much of the practices of the HoDs within the two schools participating in the study did generally correspond with the broad topics provided by the research discussed in the literature review. What the researcher found was that by having two case studies it provided a more detailed insight into the practices of the HoDs in their specific school environments. This provided a better understanding of why they are employing these specific practices or why they may not be employing these specific practices. The research from this study shows two very different roles of HoDs which influences their practices. In School A the practices of the HoD suggests that the HoD is seen to be fulfilling a supervisory role and that his duties are purely set around managing predictability and certainty, hence the HoD takes on a monitoring and bureaucratic role. In School B the practices of the HoD suggests that the HoD is fulfilling the role of an innovative leader and that her practices revolve around maintaining order and stability, but primarily to drive innovation and improvement in the quality of education delivered by the school.

The researcher expected to find a certain set of practices for mathematics HoDs in independent primary schools. Instead, what emerged from the research indicates that there is not one set of practices of a HoD and that it cannot be assumed that all HoDs incorporate the same practices. What we do see is that the practices of the HoD depend on the institution and on the role that is inadvertently assigned to the HoD based on the current situation in which the institution finds itself in. The vision, mission

and the culture of the institution, as well as the approach by senior management, will play a major role in what the practices of the HoD at that institution will be.

The contribution to the literature made by the researcher with this research report is that, although there are similarities between the practices of mathematics HoDs within the two case studies and the current literature available, the real substance is actually in the differences encountered. This report sheds light on two very different practices of mathematics HoDs in independent primary schools and leads us to deduce that there are many more seeing that we encountered two vastly different practices in two case studies. It also leads us to conclude that arguing that there are set practices for HoDs is incorrect. Instead it is the school context that will determine the practices of HoDs. This finding adds a new dimension to the conceptual framework incorporated by the researcher, namely, that school context and culture will have an effect on the practices of the HoDs at that particular school.

Current research on the practices of primary school mathematics HoDs might be able to provide us with a general overview of some of the major practices but, in order for us to gain a better and more specific understanding of the practices of a HoD, it is important for more large scale case studies to be done which will allow us to gain insight into the culture of the institutions which will provide the context behind the roles and practices of the HoDs at that institution. With this we might gain a better understanding of what practices could and should be employed by HoDs, based on the culture of the institution in which they find themselves, to improve the quality of education provided by that specific institution.

References

Adey, K. (2000). Professional Development Priorities: The views of middle managers in secondary schools. *Educational Management and Administration*, 28(4), 419–431.

Barber, M. & Mourshed, M. (2007). *How the World's Best-Performing School Systems Come Out on Top.* London: McKinsey & Company. Available at http://www.mckinsey.com/locations/UK_Ireland/~/media/Reports/UKI/Education_report.ashx

Barriball, K. and While, A. (1994). Collecting data using a semi-structured interview: a discussion paper, *Journal of Advanced Nursing*, 19 (2), 328-335.

Bennett, N. (1995). *Managing professional teachers: Middle management in primary and secondary schools*. London: Paul Chapman.

Bennett, N., Newton, W., Wise, C., Woods, P. A., & Economou, A. (2003). *The Role and Purpose of Middle Leaders in Schools*, Nottingham, National College for School Leadership

Bennett, N., Woods, P., Wise, C., & Newton, W. (2007). Understanding of middle leadership in secondary schools: A review of empirical research. School Leadership and Management, 27(5), 453–470.

Blandford, S. (1997). *Middle management in schools: How to harmonise managing and teaching for an effective school.* London: Pitman Publishing.

Bowen, A. G. (2009). Document analysis as a qualitative research method. *Qualitative Research Journal*, 9 (2), 27-40.

Brown, M., & Rutherford, D. (1998). Changing roles and raising standards: New challenges for heads of department. *School Leadership and Management*, 18(1), 75–88.

Burrows, D. (2004). *Tidying the cupboard? The role of subject leaders in primary schools.* Nottingham: National College for School Leadership.

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

Bush, T. (2011), Theories of Educational Leadership and Management: Fourth Edition, London, Sage.

Bush, T., Duku, N., Kiggundu, E., Kola, S., Msila, V., & Moorosi, P. (2009). *The Zenex ACE: School Leadership Research: Final Report*. Pretoria: Department of Education.

Bush, T. (2011). Theories of Educational Leadership and Management: Fourth Edition, London, Sage.

Busher, H. & Harris, A. (1999). Leadership of school subject areas: tensions and dimensions of managing in the middle, *School Leadership and Management*, 19(3).

Busher, H. (2005). Being a middle leader: Exploring professional identities. *School Leadership and Management*, 25(2), 137–153.

Cardno, C. (1995). Middle management development: Fostering leadership at the interface between teaching and managing. *New Zealand Principal*, *10*(3), 16-18.

Chetty, P. (2007). The role and professional development needs of middle managers in New Zealand secondary schools. Unpublished thesis submitted in partial fulfilment of the degree of Master of Educational Management, Unitec New Zealand, New Zealand.

Cohen, L., Manion, L. and Morrison, K. (2000). *Research Methods in Education*. 5th Edition, Routledge Falmer: London.

Creswell, W.J. (2007). *Educational research: planning, conducting, and evaluating quantitative and qualitative research* (3rd edition). Boston: Pearson, Merrill Prentice Hall.

Denzin, N. and Lincoln, Y. (2000). Handbook of Qualitative Research. London: Sage Publication Inc.

Earley, P. (1998). Middle management: The key to organisational success? In D. Middlewood & J. Lumby (Eds.), *Strategic management in schools and colleges*. London: Paul Chapman Publishing Ltd.

Etikan, I., Musa, S.A., Alkassim, R.S. (2016). Comparison of Convenience Sampling and Purposive Sampling. *American Journal of Theoretical and Applied Statistics.* Vol. 5, No. 1, 1-4.

Fleisch, B. (2008). *Primary education in crisis: Why South African schoolchildren underachieve in reading and mathematics*. Cape Town: Juta & Co.

Fleming, P., & Amesbury, M. (2001). The art of middle management in primary schools. Lonodon: David Fulton Publishers.Fullan, M. (2001). Leading in a culture of change. San Francisco: Jossey Bass.

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.

Fullan, M. (2001). Leading in a culture of change. San Francisco: Jossey Bass.

Hammersley-Fletcher, L. (2002). Becoming a subject leader: What's in a name? Subject leadership in english primary schools*. School Leadership and Management,* 22(4), 407–420.

Hammersley-Fletcher, L., & Kirkham, G. (2005). *Distribution, collaboration and collegiality: Issues for primary middle leaders.* Paper presented at the British educational research association annual conference, University of Glamorgan.

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

Harris, A., I. Jamieson, and J. Russ. 1995. "A Study of 'Effective' Departments in Secondary Schools." *School Organisation,* 15. (3): 283–299.

Harris, A., Busher, H. & Wise, C. (2000). *Effective Subject Leadership: final report to the Teacher Training Agency*. London: Teacher Training Agency.

Jansen, J. (2012). The tragedy of SA's maths education: If we don't stop the free fall in education democracy will implode. *Moneyweb*. Retrieved from https://www.moneyweb.co.za/archive/the-tragedy-of-sas-maths-education/

Kawulich, B. (2005). Participant Observation as a Data Collection Method. *Forum: Qualitative Social Research*, *6*(2), Art. 43, http://nbn-resolving.de/urn:nbn:de:0114-fqs0502430.

Koh, H., Gurr, D., Drysdale, L., & Ang, L. (2011). How school leaders perceive the leadership role of middle leaders in Singapore primary schools?. *Asia Pacific Education Review*, *12*(4), 609-620.

Luck, L., Jackson, D., & Usher, K. (2006). Case study: a bridge across the paradigms. *Nursing Inquiry*, 13, 103-109.

Maxwell, J. A. (1996). Validity: How might you be wrong? Ch. 6 in *Qualitative Research Design*. Thousand Oaks, CA: Sage.

Mcmillan, J., & Schumacher, S. (2014). *Research in education: evidence based enquiry*, (7th ed.). Harlow: Pearson.

Mercer, D., & Ri, L. (2006). Closing the gap: The role of head of department in Chinese secondary schools. *Educational Management Administration and Leadership*, 34(1), 105–120.

Mullis, I. V. S., Martin, M. O., Foy, P., & Hooper, M. (2016). *TIMSS 2015 International Results in Mathematics.* Retrieved from Boston College, TIMSS & PIRLS International Study Center website: http://timssandpirls.bc.edu/timss2015/international-results/

Ravitch, S. & Riggan, M. (2012). *Reason & rigor; How conceptual frameworks guide research*. Thousand Oaks: SAGE.

Republic of South Africa. (1998). Employment of Educators Act. Pretoria. Government Printers.

Saldana, J. (2013). The coding manual for qualitative researchers. London: Sage.

Sammons, P., Thomas, S., & Mortimore, P. (1997). *Forging links: Effective schools and effective departments*. London: Paul Chapman Publishing Limited.

Sammons, P. Sylva, K. Melhuish, E., Siraj-Blatchford, I, Taggart, B. Barreau, S, Grabbe, Y. (2008). Effective Pre-School and Primary Education 1-11 Project (EPPE 3-110: The Influence of School and Teaching Quality on Children's

Progress in Primary School, Research Report DCSF-RR028. London: Institute of Education, University of London.

Appendix A



Interview Schedule: Mathematics HoD

Thank you for agreeing to talk to me today. I am researching what educators perceive the practices of mathematics HoDs to be. I would like to include your input in my research. I will use the information you provide to compile a comprehensive report which will indicate the findings from my research.

I have a few questions to ask you, but please understand that you are more than welcome to opt out of the research study at any point in time. You will remain anonymous and a pseudonym will be used should there be any reference made to our conversation. Should I ask a question that you do not wish to answer, then simply say “next question”, and I will move on. I will be using a recorder so that I am able to have more of a discussion with you rather than having to take notes. All recordings will be destroyed after I have transcribed / written down our conversation. Are you be willing to sign the interview and audio-recording consent forms?

Interview questions

1. What is your position here at the school and how long have you been in this position?

2. How long have you been involved with mathematics teaching?

3. What do you think are the roles and responsibilities of mathematics HoDs in primary schools?

4. What perspectives do you hold about the practices of mathematics HoDs?

5. What challenges do you think are faced by mathematics HoDs?

6. What improvements do you believe can be made to enhance the practices of mathematics HoDs?

Conclusion

7. Do you have any questions or comments for me?

8. Would you like to return to any of your comments and elaborate, explain or withdraw them?

9. Is there anything else that you would like to say about the perceived practices of mathematics HoDs?

Thank you for your time and your input. I really appreciate it.

Appendix B

Interview Schedule: Deputy Principal

Thank you for agreeing to talk to me today. I am researching what educators perceive the practices of mathematics HoDs to be. I would like to include your input in my research. I will use the information you provide to compile a comprehensive report which will indicate the findings from my research.

I have a few questions to ask you, but please understand that you are more than welcome to opt out of the research study at any point in time. You will remain anonymous and a pseudonym will be used should there be any reference made to our conversation. Should I ask a question that you do not wish to answer, then simply say "next question", and I will move on. I will be using a recorder so that I am able to have more of a discussion with you rather than having to take notes. All recordings will be destroyed after I have transcribed / written down our conversation. Are you be willing to sign the interview and audio-recording consent forms?

Interview questions

1. What is your position here at the school and how long have you been in this position?

2. What experience do you have with regards to the teaching of mathematics?

3. What do you think are the roles and responsibilities of mathematics HoDs in primary schools?

4. What perspectives do you hold about the practices of mathematics HoDs?

5. What challenges do you think are faced by mathematics HoDs?

6. What improvements do you believe can be made to enhance the practices of mathematics HoDs?

Conclusion

7. Do you have any questions or comments for me?

8. Would you like to return to any of your comments and elaborate, explain or withdraw them?

9. Is there anything else that you would like to say about the perceived practices of mathematics HoDs?

Thank you for your time and your input. I really appreciate it.

Appendix C

Interview Schedule: Principal

Thank you for agreeing to talk to me today. I am researching what educators perceive the practices of mathematics HoDs to be. I would like to include your input in my research. I will use the information you provide to compile a comprehensive report which will indicate the findings from my research.

I have a few questions to ask you, but please understand that you are more than welcome to opt out of the research study at any point in time. You will remain anonymous and a pseudonym will be used should there be any reference made to our conversation. Should I ask a question that you do not wish to answer, then simply say "next question", and I will move on. I will be using a recorder so that I am able to have more of a discussion with you rather than having to take notes. All recordings will be destroyed after I have transcribed / written down our conversation. Are you be willing to sign the interview and audio-recording consent forms?

Interview questions

1. What is your position here at the school and how long have you been in this position?

2. What experience do you have with regards to the teaching of mathematics?

3. What do you think are the roles and responsibilities of mathematics HoDs in primary schools?

4. What perspectives do you hold about the practices of mathematics HoDs?

5. What challenges do you think are faced by mathematics HoDs?

6. What improvements do you believe can be made to enhance the practices of mathematics HoDs?

Conclusion

7. Do you have any questions or comments for me?

8. Would you like to return to any of your comments and elaborate, explain or withdraw them?

9. Is there anything else that you would like to say about the perceived practices of mathematics HoDs?

Thank you for your time and your input. I really appreciate it.

Appendix D

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

Wits School of Education

27 St Andrews Road, Parktown, Johannesburg, 2193 • Private Bag 3, Wits 2050, South Africa

Tel: +27 11 717-3221 • Fax: +27 11 717-3009 • E-mail: enquiries@educ.wits.ac.za • Website: www.wits.ac.za

Date:

Student Number: 1791412

Protocol Number: 2018ECE008M

Dear Brian Slabbert

Application for Ethics Clearance: Master of Education

Thank you very much for your ethics application. The Ethics Committee in Education of the Faculty of Humanities, acting on behalf of the Senate, has considered your application for ethics clearance for your proposal entitled:

Perceived practices of primary school Mathematics HoD's

The committee recently met and I am pleased to inform you that **clearance was granted**. Please use the above protocol number in all correspondence to the relevant research parties (schools, parents, learners etc.) and include it in your research report or project on the title page.

The Protocol Number above should be submitted to the Graduate Studies in Education Committee upon submission of your final research report.

All the best with your research project.

Yours sincerely,

M Mabetha

Wits School of Education

011 717-3416

cc Supervisor - Prof. Brahm Fleisch