AN EXPLORATION OF CLUSTERS AS TEACHER LEARNING COMMUNITIES FOR GRADE 12 GEOGRAPHY TEACHERS IN THE INLAND CIRCUIT

By

SANELE SIPHOSENKOSI SBONGISENI MYENDE

(208518807)

A Dissertation submitted in partial fulfillment of the requirement of the degree of

MASTER OF EDUCATION

TEACHER DEVELOPMENT STUDIES

SCHOOL OF EDUCATION

COLLEGE OF HUMANITIES

UNIVERSITY OF KWA-ZULU NATAL

PEITERMARITZBURG CAMPUS

NOVEMBER 2016

COLLEGE OF HUMANITIES

DECLARATION

I, **Sanele Siphosenkosi Sbongiseni Myende** declare that:

1. The research reported in this thesis (Strengthening and sustaining collaborations between schools and parents in rural contexts: A phenomenological approach), except where otherwise indicated, is my original work.
2. This thesis has not been submitted for any degree or examination at any other university.
3. This thesis does not contain other persons' data, pictures, graphs or other information, unless specifically acknowledged as being sourced from other persons.
4. This thesis does not contain other persons' writing unless specifically acknowledged as being sourced from other researchers. Where other written sources have been quoted, then.

a. Their words have been re-written but the general information attributed to them has been referenced.

b. Where their exact words have been used, their writing has been placed inside quotation marks and referenced.

5. This thesis does not contain text, graphics or tables copied and pasted from the Internet, unless specifically acknowledged and the source being detailed in the dissertation and in the references section.

15 December 2016

Signed:  Date: ……

SSS Myende

STATEMENT BY SUPERVISOR

This dissertation is submitted with my approval.

15 December 2016

…… ……..

PROF CAROL BERTRAM DATE

DEDICATION

This work is dedicated to my late father James “Shid’lamanzi” Myende. You have been a great father to me. I still live your words. My mother “MaMngadi”, Brothers and the Myende family at large for allowing me to be further my studies. This is just a beginning of my academic journey. A big thanks goes to everyone.

ACKNOWLEDGEMENTS

My sincerest gratitude goes to the following people:

1. God Almighty – this has been a long, challenging journey but you have been with me.

2. My Supervisor, Prof Carol. Bertram – for your constructive criticism, guidance. A very approachable person through all forms of contact and at any time. Thank you, Continue to enrich the minds of many.

3. To all the school principals, participants who gave me their time to conduct my interviews in schools under their jurisdiction, and the Geography supervisor Mrs Mbali Mweli for allowing me to visit your clusters.

4. To family brothers, thank you for your support and time to complete my studies.

5. Mconjwana High School, thank you for your support, assistance and guidance. I could never ask for better colleagues.

ABSTRACT

Since the advent of democracy in 1994, South Africa has undergone enormous changes in education system. With a change in education system, the curriculum is expected to change. This means that teachers as agents of teaching and learning need to adapt to the ever changing system. However, there has been great concern that teacher development has not been supportive of these changes. Therefore, more effective teacher development initiatives are required. The main objective of teacher development is to enhance classroom practice and to ensure better learning outcomes in South African schools. This study investigated teacher clusters as a new initiative for teacher development in South Africa. The main aim was to explore to what extent two Geography teacher clusters function as teacher learning communities. The study was located within the interpretative paradigm and a qualitative approach was adopted. Semi-structured interviews and observations were used. Five participants were interviewed and cluster meetings were observed twice. The study was based on one district and circuit in KwaZulu-Natal.

Findings show that two major activities take place in cluster meetings. Firstly, assessment is a major activity, which includes setting of question papers, moderation of scripts, discussing previous question paper standards and developing memoranda together. Secondly, content discussions are based on content knowledge of a subject. A range of researchers concur on the following features/ characteristics of professional learning communities: shared vision, values, and goals; collegiality and collaborative learning; supportive conditions; shared personal practice; a collective focus on student learning; shared trust amongst the teachers; and teacher driven and shared leadership. Clusters did not demonstrate all characteristics of teacher learning communities. Shared trust, shared vision, values and goal, shared personal practice, teacher driven and shared leadership were not present across clusters. However, collective focus on student learning and collaborative learning were identified as being present. Therefore, it is imperative for the Department of Basic Education to strengthen clusters to function as professional learning communities.

TABLE OF CONTENTS

CHAPTER ONE

INTRODUCTION AND BACKGROUND

1.1 INTRODUCTION

South Africa has undergone unprecedented transformation in education since the inauguration of the democratic dispensation. The system of education has become more complex, due to ongoing curriculum reform. Therefore, teacher development programmes have become more multifaceted. This study sought to understand and explore the functioning of teacher clusters. The purpose of the study is to explore in what ways clusters function as learning communities for Geography teachers. According to Chikoko (2007), clusters are groups of schools within the same geographical location with similar objectives to develop teachers and to improve the quality of education.

According to Chauraya (2013), a teacher learning community is defined as teachers learning in groups. Teacher learning communities are labeled using different terms, for example as ‘clusters’ (Ndlalane, 2006), ‘collaborative ways of learning’, (Brodie, 2013; Vescio et al., 2008), or ‘Communities of practice’ (Knight, 2002). The effectiveness of teacher development strategies has been of great concern in the past decades in the South African education system. However, the study was not based on the effectiveness of professional development. This study aimed at exploring Geography clusters as teacher learning communities. The Department of Basic Education and the Department of Higher Education and Training (2011) introduced and adopted a new policy for Professional Learning Communities. This policy emphasises the establishment of communities of learning. It states that teacher learning is more effective when it takes place within the collective community. The Department of Basic Education believes that the development of learning communities can make teacher professional development more effective and relevant.

The study is focused on Geography clusters, exploring the functioning of clusters as teacher learning communities. The purpose of the study is to *explore in what ways clusters function as learning communities for teachers*. The study focuses on Geography Grade 12 teachers, teaching in uMgungundlovu district, Inland circuit. This chapter presents the purpose, focus, rationale, background information, research question and objectives, brief literature review, conceptual frame work and methodology. The chapter concludes with an overview of the research study. The whole chapter acquaints readers more with what is expected of the study.

1.2 BACKGROUND

There have been a number of teacher development initiatives in South Africa, informal and formal. Teachers have been exposed to workshops, cluster meetings and to learning communities. However, there is little change in the standard and quality of education is South Africa. Guskey (2009) advocates that researchers need to understand that not all professional development practices work well in all conditions. Most of the professional development strategies lack logic and coherence: they are once-off programmes and do not include follow up monitoring (DBE, 2015). According to Mphahlele (2014,) clusters are networks of schools, where there is a mutual assistance between the teachers that belong to a particular group or cluster. The establishment of the Integrated Strategic Planning Framework of Teacher Education and Development in South Africa 2011-2025 (2011) has a medium-term goal which suggests the establishment of functioning professional learning communities in schools across South Africa. This will strengthen the quality of teacher development and professionalism in South Africa. The Department of Basic Education (DBE) introduced a Professional Learning Community policy in 2015 as a guideline for South African Schools. This policy aimed at encouraging teachers to form their communities and to share ideas based on their major subjects. The learning community is based on a vision that learning is more effective when it occurs with a group or community of professionals. This encourages collective and collaborative learning (Brodie, 2013). Collaborative learning suggests that learning takes place through collectivity and cooperation in the form of community.

Clusters are defined as structures of mutual support and cooperative learning towards teacher development (Mphahlele, 2014). Turkey (2004, cited in Mphahlele, 2014), posits that clusters are tools that can be used to promote learning and sharing amongst teachers in the same area, who desire to improve the content and pedagogical content knowledge of the subject. The structures of clusters usually consist of one cluster coordinator, one subject advisor and between five to seven schools. The cluster can select either a teacher centre or one school to be a cluster centre. The centre needs to be accessible to all schools. The study acknowledges that the concept 'cluster' is not new in a global context. It has been used in other African countries and has been successful (Mphahlele, 2014). In South Africa, clusters were introduced in 2005 in Mpumalanga. Mphahlele (2014) argues that the purpose of clusters has not been realized to the fullest. According to Dykstra and Kucita (2008), the main objective of cluster schools is to redress any imbalance in education by grouping schools that are located near each other into a cluster, mixing strong schools and disadvantaged schools. The objective of a cluster is networking of schools to reduce the imbalances between neighbouring schools. This can be done through sharing of material, ideas, skills and promoting curriculum activities.

1.3 FOCUS AND PURPOSE

Teacher learning in terms of being part of a teacher learning community is a new phenomenon in teacher development. The purpose of the study is to explore in what way clusters function as learning communities for teachers, as stated explicitly in the full description "*An exploration of clusters as teacher learning communities for Grade 12 Geography teachers in the Inland circuit"*. The rationale for conducting the research is to uncover the potential of teacher learning in clusters through teacher learning communities and to understand the nature of activities that take place in clusters as teacher development strategies. According to Mphahlele (2014), clusters are networks of schools, where there is mutual assistance between the teachers that belong to a particular group. Teachers in communities can exchange knowledge, skills, ideas, and practical daily experiences to assist one another. The study was located and limited to Geography teachers teaching Grade 12 at uMgungundlovu district, Inland circuit. The participants had taught Geography in different grades for a number of years.

1.4 RATIONALE

With the advent of clusters in South African education, there has been confusion and uncertainty. This was as a result of drastic changes in curriculum without proper consultation with all education stakeholders, teachers and unions (Graven, 2002). This has been aggravated by the continuous changes in curriculum: Curriculum 2005, National Curriculum Statement to Revised National Curriculum Statement policy and currently, Curriculum and Assessment Policy Statements. Transformations always come with severe challenges. The district managers (subject advisors) experienced severe challenges with the conceptualization of new jargon for each curriculum. As a result, the purpose of clusters has been misconceptualised and viewed narrowly as script moderation of learner portfolios (Mphahlele, 2014). I believe that the study will contribute towards enhancing the understanding of teacher development in clusters and teacher learning communities. I hope that the research will enlighten the curriculum planners about the potential of teacher learning communities through clusters.

There are some studies that have been conducted on teacher learning communities and clusters functioning in South Africa. Graven (2002) conducted a study using the 'communities of practice' theoretical framework, analyzing how teacher learning communities work. Maistry (2005), Jita and Mokhele (2014) and De Clercq and Phiri (2013), have done research based on the field of teacher learning in a community of practice and in clusters.

Jita and Mokhele (2014) conducted a study based on clusters. They explored teachers' perspectives, what makes up the progressive cluster and the professional development benefits for teachers in being cluster participants. Their study focused on two clusters. The results indicated that teachers benefit from clusters in different ways, through obtaining content and pedagogical knowledge. The study indicated that where teachers were not working in collaboration with cluster members, their classroom performances were not improved.

De Clercq and Phiri (2013), also conducted a study in Mpumalanga. The main aim of the study was to gain full insight based on understanding the context, the kind of learning in clusters and the nature of teacher clusters. This was a study based on seven neighbouring schools teaching

Geography in the same region. The study further looks at the understanding of school-based teacher development initiatives.

Maistry (2005) has also done research on teacher learning in a community of practice, based on teachers in an Economic and Management Science case study. This study hopes to contribute to understanding the new phenomena of clusters that have been recently introduced in South Africa. Therefore, the research study hopes to contribute to the body of research and towards knowledge about teacher learning communities and clusters in South Africa.

The intention to conduct this study originates from my previous experience serving as a teacher of Geography in two schools: a private and a public school. This exposed me to different clusters, communities of learning and learning experiences. According to Mphahlele (2014), people have misconceptualised the purpose of clustering, assuming that it is for script moderation. Teachers from my cluster seem to have erroneous perceptions about the objectives of clusters. Therefore, the study hopes to contribute to the understanding of clusters as TLCs. There are numerous clusters for Geographical Sciences at UMgungundlovu district; however, the Matric results show that there is little improvement in learner results. This provokes many unanswered questions about the conceptualisation of teacher development and cluster systems.

The quality of results in Geography Grade 12 has been deteriorating in the past 3 years. In the year 2013, it was 82%; however, in 2015 this had decreased to 67%. This has been of great concern to most teachers and other educational stakeholders. It is assumed that the use of clusters as learning communities will improve learner performance and enhance the quality of education (De Clercq and Phiri, 2013). The study hopes to contribute to the knowledge of policy initiators to improve teacher development strategies. The Department of Education may understand how the cluster can be used effectively to improve education in respective regions or districts and South Africa at large. There has been an increase in studies on teacher learning and professional development in the last decade. However, few studies have been conducted based on teacher clusters.

1.5 RESEARCH QUESTIONS

Based on the aims of this study, the following two research questions were formulated:

1. What is the nature of learning activities in Geography TLCs?
   With the first question, I wanted to explore the nature of learning activities that take place in Geography teacher learning communities.

2. To what extent do clusters for Geography teachers function as TLCs?
   With the understanding of Geography learning activities, the second question hopes to contribute to knowledge about Geography clusters. The interest is to understand whether clusters function as teacher learning communities. It also seeks to understand the purposes of clusters in relation to teacher learning communities. The existing literature on teacher learning communities will assist the researcher to answer the question.

Informed by the above research questions, these are the objectives of the study:

1. To explore the nature of learning activities in Geography TLCs.
2. To explore the extent to which clusters for Geography teachers function as TLCs .

1.6 LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK

The literature review will describe the concepts that are pertinent to this study. Different terms are used including professional learning communities, learning communities, professional development, networking, and teacher collaboration, communities of practice, social learning, situated learning and teacher learning community. However, the important phenomenon researched is teacher learning.

Fraser et al. (2007) define teacher learning as a process of self development, change and individual growth in the knowledge, skills and beliefs of the teacher. Teacher learning communities acknowledge the importance of moving away from the traditional way of teaching and learning. Learning communities encourage transition from “a tradition of isolation to a culture of collaboration” (Dufour, Dufour & Eaker, 2008. p. 27). The concept of learning communities is new to education; however, the philosophical underpinning of working together

has been in existence for centuries. Other scholars view learning communities as, 'Communities of practice' (Knight, 2002), 'discourse communities' (Putman and Borko, 2000), and 'Networking' (Mphahlele, 2014). All the mentioned concepts from different literatures are underpinned by similar objectives of sharing, working together to minimize teaching and learning obstacles.

The literature revealed that when teachers collaborate, they discuss and debate issues based of new knowledge, experiences and challenges of teaching and assessment strategies. Therefore, in teacher learning communities, teachers are exposed to new knowledge (Ndlalane, 2006). Above that, teachers in learning communities get the opportunity to discuss classroom practices. Ndlalane (2006) claims that TLCs can improve teachers' different knowledge domains, such as content knowledge (CK) and pedagogical content knowledge (PCK). The cluster system in South Africa was introduced to strengthen and improve the ineffective teacher development programmes. According to Ndlalane, (2006) clusters are given different names in the South African context; however, what prevails is the purpose that clusters were formed to promote teacher learning through collaboration and networking in communities. Clusters need to possess these characteristics, "engage in teamwork in their various structures and committees, share knowledge and skills, discuss the curriculum changes" (Aipinge 2007, p.112).

1.6.1 Learning communities

Teachers are no longer working in isolation to improve the results of learners and the quality of education. Teachers in their learning communities collaborate and network to uncover more strategies through the creation of a sharing environment and collective responsibility (Dufour et al., 2008). When teachers form a community (teacher learning community), the main effort is to share ideas, professional development or growth. Gordon (2008) notes that "knowledge is attained when people come together to exchange ideas, articulate their problems from their own perspectives, and construct meanings that make sense to them" (p. 324). Teachers who are willing to work together, collaboratively, with common goals can improve their results. What prevails in the literature on teacher learning communities, is that teachers meet monthly to share ideas based on their subject content and knowledge of teaching, similarly to learning

communities. The study has adopted a conceptual framework which is based on the characteristics of teacher learning communities, which will be used to analyse the data, in order to answer the question 'to what extent are the clusters functioning as teacher learning communities?' This is a suitable conceptual framework because it synthesizes the characteristics of teacher learning communities, and uses these to analyse the working of the geography clusters.

1.6.2 What are the characteristics of learning communities?

Researchers and scholars have identified characteristics for developing teacher learning communities and professional learning communities (Putnam and Borko, 2006; Dufour, Dufour & Eaker, 2008; Stoll et al., 2011; Hudson, 2015; Steyn, 2013). According to Putnam and Borko (2006), learning community members need to exhibit these values: identify common needs and purpose, see peers as colleagues, seek self and group actualization, recognize other groups as similar, reflect on past action, help and be helped and eventually celebrate accomplishment. Hord (1997, cited in Elbousty and Bratt, 2010) describe the characteristics of learning communities as follows: "1) supportive and shared leadership, in which teachers and administrators collaborate in decision making; 2) shared values and vision centering upon students' learning; 3) collective learning and application of learning, as teachers collaborate and learn from each other on a quotidian or daily basis; 4) supportive conditions, as the school environment plays a role in community development; 5) shared personal practice, as teachers discuss their teaching practices" (p. 15-17).

With the above characteristics, teacher learning communities and professional learning communities are viable means of teacher development, where working together in communities can be a norm. According to Mphahlele (2014), clustering has been used in the United States (US) and the United Kingdom (UK). Based on national and international literature, learning communities have improved the quality of teaching and learning through democratic sharing of teaching knowledge. Clusters allow teacher to collaborate, and this study aim to understand in what way do clusters function as teacher learning communities using characteristics of learning communities as a set of indicators.

1.7 DESIGN AND METHODOLOGY

The design and methodology involved qualitative research, which collected data through semi-structured interviews with the subject advisor, teachers and cluster co-ordinators, document analysis and observation of cluster meetings. The combination of methods helped to generate data and explore the perspectives of participants in the study.

1.7.1 Methodological approach

A qualitative approach was adopted for the study. This approach is guided by the ontological assumption which assumes that reality is subjective. Baxter and Jack (2008) suggest that the qualitative case study ensures that the phenomenon is explored in its own context. The researcher is a key in collecting data for the research and this ensures its trustworthiness and credibility (Creswell, 2007). This is further discussed in Chapter 3.

1.7.2 Design

A case study design was adopted. A case study is an in-depth study of one particular case, where the case may be a person or a group of people such as teachers (Creswell, 2007). In a case study the researcher aims to describe the thoughts and experiences of people in a particular situation (Cohen, Manion & Morrison, 2009). For this study, the case was two Geography teacher clusters, a multiple case. The purpose was to conduct a study based on teacher learning communities and clusters as a bounded case.

1.7.3 Sampling

The study adopts purposive sampling (Cohen et al. 2011). Participants were selected using convenience sampling. Convenience sampling involves choosing the nearest individuals to serve as participants in your research or study (Cohen, Manion & Morrison, 2011). The homogeneous participants who teach Geography in Grade 12 in the same district, UMgungundlovu (Pietermaritzburg) District were purposefully selected but from two different clusters. They are all qualified Geography teachers. The study involved five participants: one subject advisor, two

cluster co-coordinators and one teacher per cluster. Data generation in this case study was done through participant interviews and observations of cluster meetings. In this study five participants were interviewed, and two cluster meetings were observed.

1.8 OVERVIEW OF THE DISSERTATION

Chapter one presents an orientation and overview of the background of the study, demarcating the focus and purpose of the study, as well as the rationale for the study, the methodology design, and understanding of key concepts of the study, leading to a theoretical framework and ending with an overview of the chapter.

Chapter two presents the literature review and theoretical/conceptual framework of the study on teacher learning communities. In this chapter, I unpack critical concepts with regard to the study, scholarly debates on teacher development and learning communities.

Chapter three describes the research design of the study, an overview of the empirical study, the approach, research design and methodology, including sampling procedures, the allocation of participants, ethical issues/consideration and how rigour is obtained.

Chapter four discusses and analyses data collected, including interpretation of the research findings and results of the study.

Chapter five presents the results of the analysis of features of the teacher learning communities and how it relates to the findings of the study. A summary of findings, conclusions of the study and recommendations are included in this chapter.

1.9 CONCLUSION

Chapter one dealt with the introduction to and overview of this study, including a rationale for the study, the focus and purpose of the study and critical questions with related objectives. It provided a brief literature review and described the conceptual framework that underpins the study. In addition, it introduced the methodology, design of the study and sampling procedures. Chapter two will present a literature review, understanding the debates about teacher learning communities and clusters. In addition, it will further discuss in detail the conceptual framework underpinning the study.

CHAPTER TWO

LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK

2.1 INTRODUCTION

In this chapter, I discuss the relevant literature on understanding learning communities. I explore literature based on the research questions outlined in Chapter 1. The main purpose of this chapter is to describe studies that have been conducted on teacher learning communities. It further acquaints the readers of the thesis with the conceptual framework suitable for understanding teacher learning communities. To recap on my research question, the purpose of the study is to *explore in what ways clusters function as learning communities for teachers*. The phenomenon under study is teacher learning communities.

In generating data for a literature review, different dissertations, articles, books and scholars' empirical readings were consulted. Readings were all based on the research phenomenon, which is teacher learning in clusters, collaboration and networking as a model of formal teacher development. According to Jita and Mokhlele (2014), the concepts of teacher learning community and professional learning community have been used interchangeably to define teacher learning in the form of collaboration and collegiality. Therefore, this study will use the term teacher learning community (TLC) to define teachers working together with similar objectives.

My aim is to define learning in the field of teacher learning communities, the historical context of learning communities, key concepts, benefits of teacher learning communities, characteristics of teacher learning communities, teacher learning in clusters and related literature. This chapter further focuses on understanding the literature that explores the nature of teacher learning communities and clusters. The engagement with literature helped me to identify the conceptual framework useful in understanding teacher learning and professional learning communities. The conceptual framework assisted in data collection, discussion and analysis of the entire study.

2.2 THE CONCEPT OF LEARNING AND TEACHER LEARNING

Learning is defined differently by scholars. Kelly (2006) defines it as a process where one "moves towards expertise" (p. 514). Fraser et al. (2007) define teacher learning as a process of self development, change and individual growth of knowledge, skills and beliefs of the teacher. Definitions of learning are guided by a particular framework or theory of learning. "Learning is any process that in living organisms leads to permanent capacity change and which is not solely due to biological maturation or ageing" (Illeris, 2007.p. 3). What prevails in this definition is 'permanent change' to an individual. With this definition, the researcher assumes that through learning, an individual has to change over a period of time. Learning can take place in different ways: learning can be formal and informal (Kyndt, Gijbels, Grosemans & Donche, 2016).

Informal learning is often ignored when scholars write about learning. Kyndt et al. (2016) define formal learning as structured learning activities that need to be completed within a specific period, with well-planned goals and objectives to achieve. In contrast, informal learning has less or no proper planning and organization of learning activities, time of completion, objectives and support towards learning activities. This informal learning takes place without formal instruction and monitoring from the education stakeholders: it can take place in collaboration and in isolation (Kyndt et al., 2014).

Bakkenes, Vermut and Wubbels (2010) define teacher learning as a process whereby the teacher is involved in activities that modify knowledge. This definition emphasises that learning brings about change in knowledge and how an individual views the world; it is supported by Illeris' definition mentioned above. Bakkenes et al. (2010) suggest that there are three activities involved in teachers learning: interaction, reflection and thinking. They also view learning as informal, incidental learning. This informal learning can occur in the form of staffroom and corridor chat, incidental talk, or post-meeting teacher discussions. However, there was a need to unpack the concept of learning and, thus, I explore the nature of learning activities that occur in clusters. The study focuses on formal learning, which takes place in learning communities in the form of clusters. This is regarded as formal learning because it does not occur spontaneously: proper planning and organization need to take place for learning to be successful. Kyndt et al.

(2016) argue that informal learning will never be successful in isolation, which means that formal learning is paramount in teacher learning.

Teacher learning can be understood by engaging with theories of teacher learning. Kelly (2006) defined teacher learning as a process that should involve both a cognitive and social approach. The cognitivist approach to learning suggests that 'teacher expertise resides entirely in the individual mind' (Kelly, 2006, p. 506). This approach often underpins teacher development workshops, where teachers are expected to acquire knowledge which they should then apply in their classroom context. Bandura (1969) posits that learning is a cognitive process, which occurs in a social context with people communicating. According to Kelly (2006), the cognitive learning approach ignores teacher identity and assumes that knowledge is transferable and teaching can take place anywhere.

The social learning approach or perspective has a different understanding of learning to that of the cognitivists. The socio-cultural perspective advocates that knowledge does not reside within an individual: it is shared amongst the teachers. This suggests that in a professional learning community, each teacher has knowledge which needs to be distributed to other teachers. The socio-cultural approach also suggests that expertise is linked to a particular situation. For teachers, being associated with colleagues in a community, means that learning can take place other than in isolation. Teacher learning occurs in a social context, in groups, clusters, workshops and in school corridors.

Both teacher learning approaches are valued in the teacher learning process. They both acknowledge that teachers need to be active and productive in their knowledge acquisition. Full participation in social settings allows teachers to collaborate and share knowledge with teachers in their own normal school context. The socio-cultural learning theory matches with the model of teacher learning communities. The theory advocates collaborative, critical, reflective and inclusive expertises which are some of the characteristics outlined by different scholars.

2.3 HISTORICAL CONTEXT OF LEARNING COMMUNITIES AND KEY CONCEPTS

Learning has been defined above, but how teacher learning happens most effectively is contested. There is a growing focus in the literature that teacher learning should take place in teacher communities, thus, it is also important to understand community as a key concept in teacher learning community. The term 'community' has been used by scholars such as Wenger (1998). In his understanding of community, Wenger used three dimensions "mutual engagement, shared repertoire and joint enterprise" (Wenger, 1998). Mutual engagement refers to a relationship that encourages and sustains collegiality within the community members. Joint enterprise means the members of the community work together and they are all accountable to the community. Joint enterprise is defined by the participants in the very process of pursuing it and it creates relations of mutual accountability that become an integral part of the practice (Wenger, 1998, p.82). The third dimension is shared repertoire: this is about sharing resources within the community. This could be teaching tools, knowledge and strategies of teaching. Therefore, Wenger suggests that a group of people can be regarded as a community if they possess the above mentioned dimensions.

Learning communities or communities of learning can be viewed as a new concept. However, it has been used for a long time with different jargon. For instance, Dewey in his book Democracy and Education (1916) states that teachers need to reflect on their daily practices and that will contribute to their professional development and will benefit the whole school setting. For the reflection to take place, teachers were expected to be together, every individual teacher sharing their experiences and vision. This reflection had a community setting; however, it was not regarded as a teacher learning community. Furthermore, scholars like Lave and Wenger (1991) established the idea of 'situated learning' which emphasises that learning needs to be situated within a certain group or community and context. Recently, different scholars have adopted similar approaches to and theories of learning (Knight, 2002; Borko, 2004). This indicates that teacher learning communities is not a new concept: it has been used with different terms but similar notions about teacher learning in groups.

Teacher professional development is a priority in most countries across the world. Teacher development can be provided using different models, such as workshops, clusters, teacher learning communities, networks (Mphahlele, 2014) or collaboration (Brodie, 2013). Brodie (2013) argues that while collaboration is imperative for learning to occur, the crucial element is the content learned when teachers meet in their learning communities. However, some of these models have been criticized in the South African context for not being monitored thoroughly and for assuming that they will suit all teachers in different environments (DoE, 2015; Guskey, 2009).

Mphahlele (2014) argues that ineffective teacher development is as result of poor 'teacher networks'. In her study, she focused on clusters as a means of teacher development that can promote teacher networks. Teacher networking in cluster communities has been a focal point of research. Mphahlele (2014) defines teacher networking as the strategy of communication between teachers in a group, sharing knowledge and ideas for teacher development. The study argued that teacher networking in clusters can improve content knowledge and develop a teacher holistically. Similarly, Knight (2002) views learning as 'social' within the community of practice. The community of practice suggests that for a teacher to learn effectively, they need to share ideas in the form of community. This will strengthen their knowledge and promote professional development within the community. The Integrated Strategic Planning Framework of Teacher Education and Development in South Africa 2011-2025, defines Professional Learning Communities as "communities that provide the setting and necessary support for groups of classroom teachers, school managers and subject advisors to participate collectively in determining their own developmental trajectories, and to set up activities that will drive their development*"* (DBE & DHET, 2015, p.14). This policy suggests that learning is more effective if it takes place within the community. What prevails in the above-mentioned quote is that networking, professional learning communities, communities of practice, and teacher learning communities are related concepts that promote the notion that teacher learning happens most effectively through collaboration.

2.4 THE BENEFITS OF LEARNING COMMUNITIES

Being part of a learning community, one expects to benefit from knowledge to strengthen one's teaching ability and face daily teaching and learning challenges. According to Gordon (2008), knowledge is constructed and accomplished when individuals collaborate to share ideas or problems of different perceptions and come up with one meaning. According to Dodge and Kendall (2004), there are a number of benefits of participating in a learning community. They outline the benefits of being in a learning community as: 1. to discover the application of concepts in a subject; 2. to work together to address class challenges; 3. to mentor colleagues; 4. to observe experts in your field and across disciplines; and 5. to adapt to other members' points of view.

According to Caskey and Carpenter (2012), teachers within PLCs learn to share classroom practices in order to improve their own teaching. This allows teachers to be learners within the community. Teachers are committed to working collaboratively with the members, discussing issues related to classroom practices. Kelly (2006) insists that teacher learning involves the process of knowing-in-practice. This means developing knowledge in the process of teaching. This also relates to the second benefit of learning community mentioned above. Mkhwanazi (2014) argues that teachers often learn from one another: it assists them to improve their knowledge of teaching. Therefore, teacher discussions and working together will allow for the full participation of teachers. By participation in teacher learning communities their knowledge of teaching is strengthened.

The third benefit of learning community is mentoring colleagues (Dodge and Kendall, 2004). This means that as a member of a learning community, you can improve your expertise in your field of teaching. For example, new Geography teachers in a teacher learning community can meet experts who can assist with knowledge they can use to teach. Teachers learn more when reflecting on their experiences (Shulman and Shulman, 2004). When teachers from a learning community meet with the experts of different disciplines and reflect, they can learn more from their experiences. Mphahlela (2014) supports that in teacher development, teachers work well if

they are an integral part of teacher development activity. This allows them to reflect on their own experiences when they reflect on experiences others are having.

Being part of a community allows mutual relationship between the members. According to Dodge and Kendal (2004), the other benefit of being a learning community member is making friends with members of the community. According to Illeris (2007), learning can be influenced by the environment and by relationship and interaction within the learning environment. Therefore, a good mutual relationship between members of a community can stimulate learning. Mutual relationship can lead to another benefit of being a community member: adaptation to other members' points of view (Dodge and Kendall, 2004). To be in a community allows teachers to share their own skills and methods of teaching with colleagues. According to Professional Learning Community guidelines for South African schools (2015), Professional Learning Communities (PLC) have two major goals or objectives: to improve teacher practice and secondly, to improve learner achievement.

Based on the literature review, studies suggest that learning communities are beneficial to most teachers. They create mutual relationships, and a sharing and collegial environment that promotes learning. According to Weiser (2012), professional learning communities were introduced to help teachers to progress professionally, which will eventually improve learner achievement. Adey (2004) argues that professional development can only be judged by the quality of student achievements. Professional learning communities should eventually benefit and meet the needs of learners (Dufour et al., 2008). This emphasises that all learning communities should be professionally planned to meet the needs of particular community, more especially the needs of learners.

McLaughlin and Talbert (2006) mention three benefits of learning communities:
(a) to build and manage knowledge to improve practice. Any teacher development model is aimed at developing different types of knowledge. Therefore, teacher learning communities offer the opportunity for teachers to reflect on different kinds of knowledge and daily problems. Through reflection, they share different types of knowledge, content knowledge and content

pedagogical knowledge.

(b) to create shared language, vision and standards for practice. The main objective for most of the learning communities is to work together to improve the results of learners. Van Driel and Berry (2012) emphasize that professional development for teachers needs to be created through collaboration and collegiality. Collegiality and collaboration allow community members to share knowledge and language. Sharing of vision and knowledge encourages a collective responsibility for the success of learners (McLaughlin and Talbert, 2006). Learning communities enhance learner results and improve classroom practice (Blanton & Perez, 2011).

(c) to sustain school culture. Different schools are built on different cultures or ways of implementing things. Working as a community can create a sustainable unity among the members, with shared vision and values. This refers to a learning community created within the school.

2.5 CONCEPTUAL FRAMEWORK

2.5.1 CHARACTERISTICS OF TEACHER LEARNING COMMUNITIES

A conceptual framework is used to generate, analyse and interpret data of the research. Literature reveals that there are a number of characteristics that define teacher learning communities. In this study I have used these different characteristics to generate, analyse and interpret data. I adopted this conceptual framework because it allows the researcher to access an in-depth understanding of teacher learning communities and what identifies them. This also allows the researcher to explore which features of teacher learning communities are present in the working of the clusters. The concept of community emphasises the notion of working together, with reciprocal support. It further emphasises shared values and vision (Stoll, Bolam, McMahon, Wallace and Thomas, 2011). Van Driel and Berry (2012) insist that professional development of teachers needs to promote the idea of collaboration and collegiality. On the other hand, Caskey and Carpenter (2012) emphasize that professional learning communities need to promote teacher learning through reflecting on classroom practices. According to Patric, Jenlink and Jenlink (2008) a teacher learning community is demonstrated when teachers share views and discuss experiences, teaching methods and philosophy. This view emphasises that in teacher learning

communities we need to experience sharing and discussing issues of teaching and learning. It can occur formally and informally.

This is supported by different characteristics of learning communities. “Educators create an environment that fosters shared understanding, a sense of identity, high levels of involvement, mutual cooperation, collective responsibility, emotional support, and a strong sense of belonging as they work together to achieve what they cannot accomplish alone” (Dufour et al. 2008 , p. 20). Scholars have identified a range of characteristics of learning communities. Dufour et al. (2008) identify the following six characteristics for learning communities:

1. Shared mission, vision, values, and goals all focused on student learning. To be members of one community, you need to share similarities which identify you as members. Shared vision develops from one vision of improving student learning (Vanblaere and Devos, 2015).

2. A collaborative culture which promotes learning. To be in a community setting, encourages collaborative culture (working together).

3. Collective inquiry into best practice. This emphasises the sharing of ideas within the group of members.

4. Action orientation to teacher. Action orientated means the communities of learning are guided by certain tasks that they are expected to perform.

5. A commitment to continuous improvement. Caskey and Carpenter (2012) concur that the purposes of professional learning communities are to promote teacher learning and improve results or achievements of learners.

6. Results orientation. All learning communities are results orientated. This means they were introduced to meet and achieve certain results in the education system. Learning communities were introduced as a model of teacher development. Hilliard (2012) notes that regular collaboration improves teacher knowledge. All the above-mentioned characteristics link with one another in ensuring the success of students in a teacher learning community. Levine (2010)

suggests that a teacher community focuses on the social customs, practices and shared trust amongst the teachers.

McLaughlin and Talbert (2006) assert that most researchers agree that teachers learn best when they are involved in activities that: (a) are continuous rather than episodic. Most of the teacher developments in South Africa were criticized for being short and not monitored effectively and continuously, for example ,workshops (Mphahlele, 2014); (b) provide opportunities for teachers to collaborate inside and outside the school. In learning communities, teachers get a chance to collaborate with other teachers of different perspectives. Previously in South Africa most teacher development processes focused on individual development (Steyn, 2011). According to Hudson (2015) learning communities encourage collaborative teacher learning; (c) Allow teachers to reflect on what and how they learn. Easton (2012) asserts that learning can be better if teachers have an opportunity to organise themselves. Teachers need to have a say on what they should do and what should be done to them. This will allow teachers to be fully engaged in learning communities. Professional development models need to be "teacher-driven and promote ownership in learning" (DBE & DHET, 2011.). This emphasises that teacher learning community as a model of teacher development needs to be teacher-driven and teachers need to be responsible and accountable for their learning or development; (d) Help teachers develop understanding of knowledge they need to learn and of collective learning (Stoll, 2011). All the above-mentioned activities can only be implemented in learning communities. Therefore, creating teacher learning communities will ensure that the above activities are implemented effectively

Stoll (2011) notes the following characteristics of a functioning professional learning community: collaboration; collective responsibility; teacher-driven trust and relationships; group and individual learning .Vescio, Ross, and Adams (2008) suggest that learning communities need to engage more teachers as collaborative endeavours. This means teachers need to be fully involved in learning communities.

Collaboration has been used by different scholars to emphasise working together for similar purposes (Brodie, 2013; Vescio et al, 2008). Collaborative learning including peer observation,

coaching collaborative forms of research and inquiry and learning conversations – reinforces how learning within professional learning communities is not a solitary experience (Stoll, 2011, p.104). Cereseto (2015) states that collaboration encourages members to work independently to achieve one goal and to offer assistance to other members. The professional learning community members have a collective responsibility for their learners (Stoll, 2011, p 106). Vanblaere and Devos (2015) insist that a collective responsibility is important for shared decisions in a community. Collective responsibility means each member of the community is accountable for the actions of each member. McLaughlin and Talbert (2006) state that teacher learning communities have a collective responsibility for learners' success. Therefore, establishing a learning community ensures that all teachers in a community are accountable, rather than locating responsibility with one teacher. Another characteristic is trusting relationships (Stoll, 2011). Trust between the members is important to strengthen the value of community and encourage collective responsibility. Trust is needed for one member to accept knowledge from the other member. Therefore, each member needs to believe and trust the others to ensure that learning communities function effectively. The last characteristic is that group and individual learning is promoted (Stoll, 2011, p. 106). This aspect emphasises that learning needs to be both in groups and individuals. This means in a community of learning, members discuss, interpret and share knowledge. One learns as an individual and shares learning, therefore, teachers learn interdependently (Cereseto, 2015).

Steyn (2013) concurs with the above-mentioned scholars that learning communities are guided by the following characteristics as indicated in research literature: (a) shared vision for learning and responsibility; (b) a primary focus on teaching and learning; (c) uninterrupted improvement; (d) collective investigation of teaching practice; (e) reliance on reflection; (f) experimentation and dialogue in practice; (g) scheduled opportunities for collaboration; and (h) a genuine commitment to learning. These characteristics need to be present in clusters before they can be regarded as teacher learning communities.

Kruse, Louis & Bryk (1995) outline similar characteristics as Dufour. They assert that learning communities need to portray these qualities: (a) Shared values and norms. Teachers in a learning

community need to be guided by similar values to achieve one goal, i.e., to improve learners' results; (b) collaboration. This transpires when teachers share techniques and decisions and generate new ideas together to enhance community members' knowledge; (c) Reflective dialogue. This is a reflection in a conversation, discussing teaching and learning issues and experiences to improve future results. The reflective dialogue can only take place in a collaborative manner in a form of learning community. Successful teacher learning communities need to be school-based and focus on actual classroom data (Brodie, 2013); (d) Collective focus on student learning. Some professional development models are not designed to support collective learning. Collective focus on student learning is also supported by collective responsibility for learners (Stoll, 2011). This emphasises learning in the form of collegiality, in a community setting where there are shared vision and learning experiences.

Similarly, Huffman (2010) states the following characteristics of professional learning communities*:* shared leadership, values and vision; collective learning; shared practice and supportive conditions in relationships.

The characteristics mentioned above have similarities across different scholars. These similarities are tabulated in Table 1 below, followed by a synthesised set of characteristics which this study will use. Therefore, these characteristics conclude that for a cluster to be regarded as a teacher learning community it needs to portray these characteristics. Scholars have identified different number of characteristics identified with teacher learning communities, some seven and some nine as shown in Table 1 below.

TABLE 1: CHARACTERISTICS OF TEACHER LEARNING COMMUNITIES

Scholar	*Dufour, Dufour & Eaker, (2008).*	*Stoll, Bolam, Mcmahona , Wallance. & Thomas (2011).*	*Steyn (2013)*	*Huffman (2010)*
Characteristics of teacher learning	(a)shared mission, vision and values (b) collaborative culture of learning (c) collective inquiry into best practice and current reality (d) action orientation learning by doing; (e) commitment to unbroken improvement (f) Results orientated	(a) Collaborative learning (b) collective responsibility (c) Group and individual learning	(a) shared vision of learning (b) primary focus on teaching and learning (c) focus on continuous improvement (d) collective investigation (e) reliance on reflection (f) Experimenta-tion and dialogue in practice	(a) shared and supportive leadership (b) collective learning and application (c) shared practice (d) supportive conditions – relationships (e) supportive conditions – Structures

In summation, scholars have outlined a number of characteristics and the common characteristics of teacher learning communities are described by (Dufour, Dufour, & Eaker, 2008; Stoll et al, 2011; Steyn, 2013; and Huffman, 2010) as: (a) shared vision, values, and goals; (b) shared leadership; (c) collaborative learning; (d) supportive conditions; (e) shared personal practice; (f) collective focus on student learning; (g) collective inquiry; and (h) shared trust amongst the teachers. The characteristics are interwoven together, creating the learning community. Each characteristic plays an important role in ensuring the success of the teacher learning community. Therefore, for a cluster to be regarded as a teacher learning community, it needs to possess these characteristics. This set of characteristics will be an analysis tool for analysing the data collected.

2.6 TEACHER LEARNING THROUGH TEACHER CLUSTERS

The term "cluster" is a new concept in South African education. Giordano (2008) defines a cluster as a grouping of neighbour schools to form a cluster. Clusters represent a contemporary teacher development model (Jita and Mokhele, 2014). According to Nwagbara (2014), they serve two main purposes: to improve teaching by sharing expertise and to administer resources, through networking and the collaboration of teachers. The Cluster model encourages a bottom-up approach where teachers are given an opportunity to explore teaching and learning activities (Nwagbara, 2014). This is in contrast to the cascade model which is a top-down approach, normally in the form of workshops, where information is disseminated to teachers by a state official (Mothilal, 2011). This model has been judged as ineffective.

Giordano (2008) asserts that school clusters are aimed at providing networks for teachers to support one another in the form of collaboration. Pomuti (2008) claims that the goals of clusters are to encourage community participation, collaboration in teacher development and equitable resource distribution. Nwagbara (2014) concurs that cluster objectives are to achieve quality education by sharing and reflecting on teacher experiences, teacher support and the provision of school-based professional support as part of teacher development. Studies have been conducted in African countries (Ndlalane, 2006; Chikoko, 2008; Mokhele, 2013; Jita and Mokhele, 2014; Nwagbara, 2014 Mothilal, 2011) which concur that clusters are a successful model to enhance teacher learning and improve the quality of education in Africa. In South Africa, the concept was introduced in Mpumalanga province, by the Mpumalanga department of Education and lately has been introduced in KwaZulu-Natal. However, it is not conclusive that clusters as model of teacher development do in fact function as teacher learning communities.

Jita and Mokhele (2014) state that clusters enhance content knowledge and content pedagogical knowledge. It also benefits teachers to have an opportunity to collaborate, share and reflect on their experiences. Clusters are regarded as teacher learning communities or professional learning communities and teacher networks (Jita and Mokhele, 2014). This research study aims to understand in what ways clusters function as teacher learning communities. The literature review has shown that for a cluster to be regarded as a teacher learning community, teachers need to

exhibit the above discussed characteristics. The study seeks to understand the activities that take place in clusters, as a model of teacher development.

2.7 CONCLUSION

This literature review suggests that teacher development and learning is a complex system (Opfer and Pedder, 2011). In this chapter I have presented literature on teacher learning, and teacher learning communities. I have discussed the benefits and characteristics of learning communities and teacher learning through clusters. In conclusion I presented a conceptual framework based on literature reviewed on professional learning communities. In the next chapter, I will explain the research design and methodology adopted in the study.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.1 INTRODUCTION

The previous chapter presented the literature review and conceptual framework based on teacher learning communities. This chapter presents the research design and methodology. Bertram and Christian (2014) define methodology as the study of different methods through which knowledge is obtained and aims to present the work plan of the entire research. This chapter discusses the research methods and instruments, the research design, the research location and participants, the collection of data and analysing thereof, reliability and validity and, lastly, ethical issues regarding the entire study. The purpose of the study is to *explore in what ways clusters function as learning communities for teachers*. Therefore, the research methodology needs to complement the purpose of the study outlined in Chapter one.

3.2 RESEARCH PARADIGM

Choosing an appropriate paradigm is always a challenge to a novice researcher. There are numerous theoretical paradigms: positivist, constructivist, interpretive, critical and pragmatist paradigms (Mackenzie and Knipe, 2006). This study is situated within the interpretivist paradigm. The study is concerned with the interpretation of subjective experiences of individuals, who are Geography teachers in the Inland cluster. Cohen, Manion and Morrison (2012), state that the main aim of an interpretive paradigm is to understand how participants view and experience the world. Therefore, the adoption of an interpretive paradigm will open an opportunity for teachers to express themselves, their experiences and views based on their context. This paradigm will allow the researcher to gain an insight into teacher learning and the experiences of teachers in Geography clusters. Cohen, Manion and Morrison , (2011) note that in the interpretive research paradigm, individuals are observed, studied with their views, behaviours, and attitudes. According to Cohen, Manion and Morrison, (2012) the interpretivist paradigm uses certain methods to collect and generate data. This includes interviews,

observations, general conversations, notes and memos. Therefore, these methods have been used in data collection for this study, supported by the interpretivist paradigm.

3.3 RESEARCH DESIGN

The research design is defined as the entire plan for proper research study (Perry and Nichols, 2015). This study takes a qualitative approach, which is guided by the ontological assumption which assumes that reality is subjective or can be supported by individuals' viewpoints. In the qualitative approach, the researcher is a key in collecting data for the research and this ensures trustworthiness and credibility (Creswell, 2007). The intention of the study is to *explore in what ways clusters function as learning communities for teachers*, by observing the nature of activities that occur in learning communities and to understand the activities and the functioning of clusters,. Thus it was appropriate to adopt a qualitative approach for data collection and analysis.

To adopt a qualitative strategy, the following characteristics guided the researcher. Researchers concur that the qualitative strategy ensures that the phenomenon is explored in its own context (Baxter and Jack, 2008; Golafshani, 2003). With this the researcher got an opportunity to visit the cluster to observe the activities taking place. This enabled me to understand whether the clusters function as teacher learning communities. Creswell (2012) identifies major characteristics of qualitative research: to outline the purpose and research questions in a common and expansive way so as to encompass the variety of participants' experiences; to reduce the number of individuals to collect data from; to ensure that participants' opinions are obtained; and to explore the problem and a detailed understanding of the phenomenon. Therefore, to understand the activities that are implemented in clusters, all the above principles were considered to ensure the success of the study.

According to Creswell (2009), qualitative research is based on exploring and understanding an individual or group. The study attempted to explore teacher learning in their clusters. In clusters teachers convene as a group with the similar objective of strengthening their knowledge and improving the quality of education and practices in their schools (Jita and Mokhele, 2014). When teachers gather, social interaction can be manifested. While the study adopted a qualitative method, it used the multiple case study as a research style.

3.4. RESEARCH APPROACH (STYLE)

The study used a case study approach. A case study approach is described by Rule and John (2011, p.4) "as a systematic and in-depth investigation of a particular instance in its context in order to generate knowledge". Baxter and Jack (2008) assert that a case study is an in-depth study of one case. This could be an individual or a group of people, like students or teachers. This study focuses on two clusters in the Inland circuit case of study. The study intended to explore the activities that take place in clusters, how teachers learn and what they learn; before we conclude that clusters are operating as teacher learning communities.

Yin (2009) views the case study approach as an empirical inquiry (p.18). Rule and John (2015) state that the case study approach is often used in the human social science field of research. Yin (2003) notes that a case study design needs to be used in the case when: (a) the focus of the research or study attempts to answer "how" and "why" questions; (b) I cannot misuse the behaviour of research participants in the study; (c) and it is not clear how to differentiate between the phenomenon and the context of the study. Therefore, the first two critical questions on the study focus on the "how" part of the study. The researcher was not a participant in the case study, which allowed me not to interfere with the behaviour of the participants. In this study the researcher opted to use a case study design because I wanted to gain a deep and comprehensive understanding of teachers' activities taking place in clusters. This was intended to contribute to the description and analysis of teacher activities in the cluster. Being a case study, I visited the teachers at clusters in their natural setting and used interpretative enquiry through semi-structured interviews, document analysis and observation in the collection of data. This design allows researchers to be immersed in the study. Drawing on the above discussion on case study, it is an appropriate style to conduct a study focused on teacher learning in teacher learning communities.

3.5. DATA COLLECTION METHODS

Data was gathered throughout observations, individual interviews and field notes. With regard to field notes minutes, attendance registers of cluster meetings and material used for teacher learning was scrutinized. Prior to starting the actual study, the interview questions were piloted with two cluster teachers. Deciding on the pilot participants, the researcher considered the similar characteristics of actual participants, who were Geography teachers, teaching Grade 12. It is imperative to pilot the research tool to improve the validity of the study (Creswell, 2007). The findings of the pilot study were analysed. The findings assisted the researcher to review the question and the entire tool for research. The participants were narrowed down from seven to five participants. Therefore, the pilot was useful in ensuring that the objectives of the actual research were achieved.

3.5.1 Interviews

The study used qualitative interviews. According to Lauer (2006), an interview is a survey that is administered verbally, either individually or in groups (p.37). Interviews are a tool that is widely used by different scholars to generate data. Interviews allow the researcher to access participants' experiences, views and how they perceive the world. DiCicco-Bloom and Crabtree (2006) outline the different types of qualitative interviews which include structured, semi-structured and unstructured interviews. To generate data, the study adopted semi-structured interviews (Cohen *et al.* 2011; Leech, 2002; Creswell, 2012). The semi-structured interview often asks open ended questions and probes the responses. Semi-structured interviews permit the researcher to query and to ask further questions Semi-structured interviews provide a more relaxed and friendly environment in which to collect data (Robinson, 2009). Semi-structured interviews often use open-ended questions (McMillan & Schumacher, 2006). This allows the participants flexibility to provide alternative and detailed responses to the questions (Opie, 2004). The interviewees may feel more contented having a conversation with a researcher as opposed to filling out papers in a survey. Therefore, semi-structured interviews are viewed as valuable because they allow richer responses to the interviews. Semi-structured qualitative interviews are often conducted once per individual and take from 30 minutes to quite a few hours to be completed. The merit of the semi-structured qualitative interview is that it allows for dialogue between the interviewer

and interviewee. Therefore, it allows the researcher to delve into the researched issue and rich data can be generated. The researcher can communicate directly with the participants, gaining 'rapport' (Leech, 2002). Rapport means assuring people that you are listening. According to Leech (2002), this can be done through showing feeling and sincerity towards their responses.

The interview etiquette included a brief summary of the interview's intention and was written and addressed verbally to the participants. The interview questions were assembled to assist in answering the main two critical questions outlined in Chapter 1. The interview questions were significantly scrutinized and approved by the university supervisor. I conducted all interviews in a one-on-one situation. Some interviews were conducted in school after school hours, some in libraries and some in restaurants. Interviews were carried out to understand the teachers' perceptions of Geography clusters. Secondly, the interviews aimed to get to know the teachers' understanding of clusters and activities they are involved with. I collected their biographical data and data about their history as Geography teachers. In these interviews the teachers were asked about their professional qualifications and Geography teaching experience. The quality and nature of questioning is always a challenge.

Burton and Bartlett (2009) suggest that the order of the questions needs to be carefully looked at beforehand. I piloted the questions to ensure that they were relevant to the main research question. Body language has an impact in ensuring the success of a research interview. The use of appropriate facial expressions to motivate or empathise is necessary. Eventually, the setting and atmosphere need to be considered as important factors. Burton and Bartlett (2009) insist that it is the interviewer's responsibility to 'set up' and ensure that the environment is conducive for the interview. In the study the interviews were conducted in school education centre and libraries and were not conducted during school working hours. These are important issues that the researcher needs to consider before conducting research interviews.

However, semi-structured interviews have limitations. This form of interview allows for spontaneous questioning. Spontaneous questions sometimes make it difficult to give an answer because they require deep explanation. Wood (2011) suggests that spontaneous questions are

seen as unfair to the participants and can mislead the interviews. Consequently, the results of the study are less reliable. The semi-structured interview seldom asks very long questions. Long questions can lead to confusion for the respondent. The interviewer can sometimes unconsciously give clues to the interviewee; this can lead to getting unreliable responses from the respondent.

The interviews were recorded using an audio voice recorder. I transcribed the interviews which will be securely stored at the university for a period of five years. Transcripts were taken back to the participants to ensure the credibility of the study. Teachers confirmed their responses to avoid errors that could discredit the interviews. With the above discussion, the semi-structured interview is the most appropriate means of collecting data because it ensures the researcher is immersed with the participants.

3.5.2 Observation

In a qualitative approach, the researcher is a key participant in collecting data for the research and this ensures trustworthiness and credibility (Creswell, 2007). A direct communication can be done through interviews and observations. Observation is defined as a data collection technique which relies on direct observation of the participants in the study (Bless and Higson-Smith, 2000). The challenge with collecting data using observation is ensuring that your presence does not affect the behaviour of the participants in the setting. The study adopted non-participant observation, where the researcher is not a participant in the cluster, but stands aloof from the activities occurring in the research setting. I used observation to answer the research question about how the clusters function and the activities occurring in clusters. According to Lauer (2006), a good observation protocol needs to have clear guidelines on what needs to be observed. In this case, the observation was based on describing the activities in Geography clusters. Therefore, the observation schedule was designed indicating activities and periods of each activity. This helped the researcher to record each activity and the duration of activities in cluster meetings.

Burton and Bartlett (2009) suggest that observation can either be formal and overt or covert. In formal and overt observation, the observed are aware of the observer. In formal and covert, those being observed are unaware (Burton and Bartlett, 2009). The observer can be hidden within the crowd or use cameras to observe the situation. However, this can be unethical. The challenge with collecting data using observation is ensuring that your presence does not affect the behaviour of the participants in the setting. The study was based on formal and overt observation. The Department of Education, district and participants were informed and ethical clearance was offered.

It is imperative to consider the ethics of research when conducting observation (Burton and Bartlett, 2009). This indicates that before choosing observation the researcher needs to be aware of some sensitive situations. The research indicates that some adults feel uncomfortable if they are observed and this can result in a bad relationship with future researchers. Observations have limitations. When the participant is observed they sometimes perform better to impress the observer. This can also affect the credibility of the study. However, other scholars, like Kraus (2005), state that many researchers believe that to understand what is going on one needs to be immersed in it. Observation allowed the researcher to be part of the Geography cluster. This allowed the researcher to have full insight into teachers' activities in their respective clusters during the cluster meetings, the functioning and purpose of clusters, whether or not clusters can be used as learning communities for teachers and if they are used, in what ways?

Burton and Bartlett (2009) outline the following strengths and weaknesses of observation as a data collection method. The strengths of observation are that it is possible to see how people behave in their context; it allows the observer to generate detailed data within a short period; it allows the researcher to discover information from participants with weak verbal skills. The weaknesses of observation are that it is not easy to observe large or dispersed populations; some researchers find it difficult to observe and write concurrently; it is difficult for an observer not to intervene in the case where the observer is observing a familiar event. There are some ethical considerations for people being observed, therefore, the researcher needs to follow ethical issues before starting observation.

I made field notes during the observation. The observation was recorded on paper: I wrote down the important activities that occurred during the cluster meetings. Data collected during observations was recorded on observation schedules. All the observation schedules will be compiled and stored in safety for a maximum period of five years to ensure the "trustworthiness" of the study (Creswell, 2012). This information captured in observation was used to answer the main research question outlined in Chapter one. Therefore, observation is a suitable data collection method in qualitative research (Creswell, 2012). Together with the two mentioned methods, document analysis was also used to triangulate the methods and strengthen the trustworthiness of the study.

3.5.3 Researcher's field notes

The research also used field notes to capture the data in all cluster meetings. I generated field notes based on all activities that took place in the meetings. I made notes on each cluster meeting based on the main focus of the cluster meeting, the success of the meeting, teacher attendance at the cluster meetings and the level of participation of each teacher in the meeting as part of the Geography community. The field notes were made to collect data on issues regarding teacher behaviour in meetings and the expression and participation of all cluster members. The researcher collected data using field notes in all cluster meetings. The main aim of data collected through field notes was to complement the video recorded data collected.

3.6 SAMPLING PROCEDURE

This section explains the selection procedure of population and participants of the study. The study adopts purposive sampling. Cohen et al. (2011) state that in many cases purposive sampling is used as an appropriate method to focus on participants with in-depth knowledge based on the issue. I selected Grade 12 Geography teachers because they are experienced in issues of Geography cluster activities.

Two Geography clusters were selected for the study. The selection procedure of both clusters was driven by the needs of the research topic. Firstly, the research wanted to get a dual perspective of schools from rural and urban areas, to understand the functioning of resourced and under-resourced schools. Secondly, both clusters were expected to be on a boundary of the Inland Circuit. Clusters were selected because they both had teachers teaching Grade 12, experienced and inexperienced. They were both selected based on having qualified Geography teachers. Within the clusters, some schools belong to quintile 1 and 2 and some to quintile 4 and 5 schools (resourced and under-resourced). Both clusters were composed of teachers from between 6 to 8 schools. The pass percentage for the schools participating in the research was also considered: high performing, average performing and low performing schools. Cluster one had 8 schools, and Cluster Two had 6 schools. Clusters need to meet at least once or twice per term. Both clusters A and B should have cluster coordinators and subject advisors.

Participants (teachers) were selected using purposive sampling. In purposive sampling, researchers "hand-pick the cases to be included in the sample on the basis of their judgment of their typicality or possession of the particular characteristics being sought." (Cohen, Manion & Morrison, 2009, p.156). I selected participants based on their potential in answering the two critical research questions. Participants for this study were chosen using the following criteria: (a) they were qualified teachers who teach Geography in Grade 12; (b) they should be under UMgungundlovu (Pietermaritzburg) District, Inland circuit; (c) they have been attending clusters meetings for more than one year.

The study involved five (5) participants, namely, a subject advisor, the cluster co-coordinator from each cluster (2) and one teacher per cluster (2). Regarding the participants, the subject advisor will provide different insight to the co-coordinators and teachers about the activities in clusters.

The participants were protected through anonymity in interviews. A consent form was provided for all participants. The consent forms were distributed, signed, and collected from potential participants. The principals of the schools were also consulted and informed about the

participation of their teachers in the study and a consent form was signed. I discussed with the selected participants to schedule dates, times and venues for the interviews. Validity is defined as "the degree to which all of the evidence points to the intended interpretation" (Creswell, 2012, p. 159). Collecting data from five participants gave me an opportunity to analyse data from different participants' perspectives of clusters. Therefore, data was triangulated to ensure validity.

3.6.2 The research participants' biographical data

The participants were four Geography teachers from different schools, two of whom were cluster co-ordinators, and the subject advisor, all from one district. Initially, the data collection was planned to begin in January 2016 and end in November of the same year. However, there were some obstacles in data collection which prolonged the study. The five participants of the study were eager to participate until the end. Below I have presented a summary of five participants' biographical data. In the biographical data I have used pseudonyms (not actual names).

TABLE 2: BIOGRAPHICAL DATA FOR PARTICIPANTS

Pseudonym	Mandla (teacher)	Chetty (Cluster coordinator)	Sandiso (teacher)	Ayanda (Cluster coordinator) (HOD)	Zandile (Subject Advisor)
Qualification(s)	Dip.Ed	Dip.Ed	B.Ed	BSC, PGCE	Dip.Ed;B.Ed (Hons)
Major teaching subjects	Geography, Biology	Geography, English	Geography, English	Mathematics, Geography	Geography, Social Sciences
Years of teaching	10	15	5	8	20
Geography teaching experience in Grade 12 (years)	2	10	4	5	20
School quintile	1	4	2	4	
School type(rural/ urban)	Rural	Rural-urban fringe	Rural	Urban	
Geography class enrolled (Grade 12)	20	87	26	30	

Mandla is working in a rural school with a low enrolment. He holds a Diploma in Education, with majors in Geography, Biological Science and Social Sciences. He has been teaching for a decade, and has two years' experience in Grade 12. He is teaching Geography from Grades 10 to Grade 12.

Chetty holds a Diploma in Education with majors in Geography and English. She has 15 years of experience in teaching Geography and 10 years' experience teaching in Grade 12. She has been a cluster coordinator for English for the past 2 years. She is also now cluster coordinator for Geography. She worked as a subject head (Geography) from 2011 to 2014.

Sandiso holds a Bachelor of Education, majoring in English and Geography. She has five years' experience of teaching and four years' experience of teaching Geography. She has taught

Geography in two different provinces, in Gauteng and currently in KwaZulu-Natal. This has exposed her in two different cluster programmes in two provinces.

Ayanda holds a Bachelor of Science and Post-graduate Certificate in Education (PGCE), specializing in Geography and Mathematics, with 8 years of teaching experience. He is currently a Head of Department (HOD) in Humanities. This has developed his expertise as a Geography teacher.

Zandile holds a higher qualification than the other participants. She holds a Bachelor of Education Honours, she has 20 years' experience as a teacher and has 4 years working as a deputy principal. In 2012, she was promoted to be an acting subject advisor for Geography. In 2016 she got a permanent position as the subject advisor for Geography.

3.7 ETHICAL ISSUES

Ethics are defined as matters of principal compassion to the rights of others, and respect for human dignity (Cohen et al., 2007). This study complies with the procedures of the Department of Basic Education in South Africa. The University of KwaZulu-Natal ethical protocol in conducting research has been followed. The university gave consent and Department of Education issued the ethical approval letter for a researcher to proceed with the study. The study informed the participants about the instruments used to collect the data to ensure that they were all comfortable with the data collection methods. This assured that the integrity of participants was protected and they could participate voluntarily in the research. The responses were treated with confidentiality and were not tampered with. The study ensured that the participants were not exposed to unethical and unfriendly questions which may have been stressful and to procedures which may have been unpleasant. This ensured that all participants were ethically protected. After doing the transcription of interviews, transcripts from the interviews were returned to participants for assurance that the information had not been misrepresented.

In ensuring the proper channel for data collection was followed, I applied for ethical clearance from the Department of Basic Education of KwaZulu-Natal. It was approved with the protocol number (Ref.:2/4/8/605 *see appendix*). I also applied to the University of KwaZulu-Natal

research Ethics committee. Ethical clearance was approved and given by the University of KwaZulu - Natal ethics committee. After the identification of schools, proper meetings with the principals and the prospective educators and administrators were set up and participants were informed on time. The principals gave verbal agreements and signed the gatekeeper's letter to allow the Geography Grade 12 teachers to participate in the research. After discussion and meetings with the prospective participants, they agreed to take part in the study. They completed the Participant Consent letter (*attached in the appendix E*). Four teachers from different schools participated in the study. The Subject advisor was also invited to participate in the study, through proper meetings and written communication about the purpose of the study. An Informed Consent letter *(attached in the appendix B*) was issued and signed by the subject advisor as the fifth participant in the study.

The second ethical issue is the anonymity of the participants. I have used Inland circuit as a pseudonym. DiCicco-Bloom and Crabtree (2006) suggest that if some participants share secret information during the interview, the researcher needs to ensure that the data does not jeopardize the participant. The third issue is concerned with proper communication while conducting research. The study acquaints the reader about the main purpose of the research and what and how the data will be used. The fourth issue is concerned with the exploitation of participants. The researcher must never exploit an individual. The study ensured that the process of participation by the participant is outlined clearly; no remuneration is associated with participation in interviews.

In the process of data collection, all data from participants, including informed consent letters, interview schedules, observation notes, and the digital voice recorder data, was locked in a filing cabinet. Transcribed interviews and observation schedules in two devices were stored in my computer with password protection and a Universal Serial Bus (USB) drive was also kept in a locked cabinet. All transcribed data collected from the overall study will be kept in a safe, locked cabinet with the University of KwaZulu-Natal for the duration of five years. The results of the study will be shared with the university, Department of Basic Education and the other educational institutions.

3.7.1 Researcher's role

The role of the researcher was to generate and analyse data and draw conclusions on findings from the data. I am teaching Geography in Grade 10, therefore, I am not part of Grade 12 Geography teachers. However, some cluster meetings were conducted in the same venue but teachers were divided into their teaching grades. I am part of the cluster but not teaching Grade 12. Therefore, the results were not influenced by my position as a teacher. Being a teacher helps me to understand the responsibility of a teacher and gives me clear understanding of teacher development and the importance of teacher learning. I am also exposed to policies that deal with teacher learning and development.

3.8 TRUSTWORTHINESS

Christiansen *et al*. (2014) state that in qualitative research, trustworthiness needs to be considered effectively. Trustworthiness is a concern for all research. Validity is a traditional concept that has been used to critique the quality of the study, but trustworthiness is more useful for quantitative research (Holloway & Wheeler, 2002). Christiansen et al. (2014) argue that four issues need to be considered to guarantee the trustworthiness of the research. In this study, the researcher used transferability, credibility, dependability and conformability.

Transferability: Transferability is the extent to which the findings of the study can be conveyed beyond the limits of the project (Christiansen et al., 2014). In qualitative research the findings do not generalise, because generalising can influence the transferability of the study. Proper data needs to be generated to support the investigated phenomena (Petty, Oliver, Thomson, Graham, 2012).

Conformability: Conformability is "the potential for congruence between two or more independent people about the data's accuracy" (Elo et al., 2014. p. 2). The data was interpreted explicitly without the subjective influence of the researcher. The researcher was aware of subjectivity, since he is also teaching Geography on the same circuit, however not in Matric. The researcher used substantial evidence to support the findings from the research.

Dependability refers to the constancy of data over a period of time (Elo et al., 2014). To achieve dependability in a qualitative study is not always easy, however, not impossible. I explained the whole process and features of the research to participants. This will ensure that data from similar participants from the same context can replicate the data. All participants were informed about the study process, design and method of data collection. This will ensure the credibility and trustworthiness of the study. The findings were also discussed and interpreted accurately to validate the research.

Credibility: Credibility means that the findings show the reality and experiences of the participants (Christiansen et al., 2014). Petty, Thomson & Stew (2012) also define credibility as the process where the findings from the study can be trusted by the participants. I used different approaches to investigate and explore the phenomenon. The main aim was to collect reliable data that portrays a true reflection about the researched phenomenon, which is teacher learning. Different data collection methods were used: triangulation, interviews to allow the participant expression, and observation for the researcher to experience the context of the phenomenon. Therefore, all this will strengthen the credibility of the research.

Triangulation was achieved in the study as I interviewed and observed various participants: subject advisor, teachers and cluster co-coordinators. This strengthened the trustworthiness of the data and study. I was able to compare findings from different perspectives about similar phenomena.

3.9 CONCLUSION

This chapter provides detailed discussion on how the data was collected. These issues regarding the research were broadly discussed in relation to the researched topic: research design, research methods, data collection and analysis, population and sampling, trustworthiness, triangulation and ethical issues for the study were described. The presentation of data in Chapter four will respond to the two core research questions outlined in Chapter one by presenting the empirical findings of the data collected.

CHAPTER FOUR

PRESENTATION AND ANALYSIS OF RESEARCH FINDINGS

4.1 INTRODUCTION

McMillan and Schumacher (2001) suggest that qualitative data analysis is an inductive process of analyzing and categorizing data. Inductive reasoning begins with raw data where the researcher looks for particular patterns. In this chapter I presents, describe and analyse the data collected based on the activities that take place in cluster meetings, and teachers' perspectives as cluster participants. The data consists of observations of cluster meetings and recorded interviews with each participant who teaches Geography in Grade 12 and the subject advisor. Firstly, I present and describe data based on observations of two cluster meetings. Secondly, I present data based on interviews conducted with cluster participants. In analysing the data, I used seven characteristics of teacher learning communities as identified by scholars. The study focuses on *exploring in what ways clusters function as learning communities for teachers*.

4.2 RESEARCH QUESTIONS

The researcher wanted to answer two critical questions as outlined in Chapter one:

1. What is the nature of learning activities in Geography TLCs?

2. To what extent do clusters for Geography teachers function as TLCs?

According to Ndlovu (2016), clusters were initiated by the Department of Basic Education and were embraced as an imperative space for collective teacher learning. It is, therefore, through clusters that teachers form communities to share, discuss and reflect on their daily teaching experiences. I draw data from five participants: four teachers from different schools from Inland circuit in two clusters, Cluster A and Cluster B and one subject advisor. I interviewed four teachers and one subject advisor to ensure that I got different views with regard to the activities that take place in clusters. The data was collected through individual interviews and group cluster observation, which took place in 2 sessions. However, both clusters were combined in one venue and were observed simultaneously. This chapter presents the data in line with the

critical questions. The first sub-section focuses on understanding the learning activities that take place in teacher learning communities. The second question seeks to understand to what extent the teacher clusters function as teacher learning communities. The researcher will focus on each question whether it was answered properly in relation to the rationale and research topic. This will assist the researcher to conclude whether the clusters can be regarded as teacher learning communities or should not be regarded as teacher learning communities.

4. 3 THE DESCRIPTION OF CLUSTER MEETINGS OBSERVATION IN CLUSTER A AND CLUSTER B

The selection procedure of both clusters was driven by the needs of the research topic. Firstly, the research wanted to get perspectives from both rural and urban schools to understand the functioning of resourced and under-resourced schools. Secondly, both clusters were expected to be within the same Inland Circuit. Clusters were selected because they both included teachers teaching Grade 12, experienced and inexperienced, who were qualified Geography teachers. Within the clusters, some schools belong to quintile 1, 2 and some to quintile 4, 5 (resourced and under-resourced). Both clusters were composed of between 6 to 8 schools. Pass percentages for the schools participating in the research were also considered: high performing, average performing and weakly performing schools. Cluster A had 8 schools, and Cluster B had 6 schools. Clusters need to meet at least once or twice per term. Both Clusters A and B should have cluster coordinators and one subject advisor.

The Geography cluster meetings were conducted in the province of KwaZulu-Natal, in one district. The cluster is composed of schools from different areas, some from rural, urban and semi-urban areas. The circuit is composed of 10 clusters with 19 schools. Inside one big venue, schools were expected to form groups according to their clusters. Each cluster is composed of approximately 8 to 9 schools. Conducting an observation was done in one big venue of teachers from four clusters. However, I was mainly focusing on the two selected clusters. The two cluster teachers were observed closely to ensure that the data about the activities taking place between those clusters were reliable and trustworthy. The Geography Cluster A and B meeting was attended by 60 teachers, of whom 25 were Grade 12 teachers. The second cluster meeting was attended by 23 Grade 12 teachers. There are approximately 87 teachers, of whom 29 are teaching

Grade 12 Geography in a circuit. However, this number does change because some teachers move in and out of the circuit.

I observed two sessions of cluster meetings in different school terms. In 2016 all cluster meetings took place at the same time and venue. Clusters A and B used the same venue. Therefore, the observation took place concurrently of both Clusters A and B, as they were meeting together. However, within the venue each cluster was expected to form their own group, separate from other clusters. Most of the activities in clusters were initiated by the Department of Basic Education, through the subject advisor, cascading down to teachers. Subject advisors and cluster coordinators are responsible for monitoring the functioning of clusters. Teachers were allowed to add activities based on what had been planned by subject advisors.

4.3.1 Cluster meeting one

The first cluster meeting was conducted in the Teachers' Centre, with attendees from 23 secondary schools from one circuit. The workshop was conducted in the first term. This was a meeting of approximately 60 teachers, who are teaching from Grade 10 to Grade 12. This was the first meeting of the year, composed of schools situated closer to the Teachers' Centre but under the same circuit and district. The circuit is composed of schools from rural, township and semi-urban areas.

The meeting was scheduled to begin at 8:30 in the morning. However, teachers kept arriving until the actual meeting began at 9:00 in the morning. Some teachers had to travel 30 minutes to 1 hour to get to the Teachers' Centre. Teachers were seated according to their cluster groups with their cluster coordinators. Each cluster comprises approximately 6 to 8 schools, some with two teachers teaching Matric, depending to the nature of school. At the venue, teachers were divided according to their teaching grades. However, there were some teachers from schools with small enrollment who teach from Grade 10 to 12. The majority of those teachers decided to join Grade 12 groups.

The subject advisor welcomed teachers to the first cluster meeting. While the advisor explained the purpose of cluster meetings, activities and the responsibilities of each cluster, the cluster

coordinators were expected to distribute the material. The subject advisor asked the cluster coordinators to facilitate the discussion on the 2015 Matric final results. Teachers in their cluster groups discussed the decrease in the Matric pass percentage. They also discussed their concern about the standard of the final year examination in both Geography question papers. Teachers who participated in Matric marking were given 10 minutes to highlight challenges encountered in the marking centre. The high standard of the question papers required learners to write more than the stipulated duration of each question paper, therefore, they did not finish the paper on time. The discussions were based on content, assessment and teaching practice challenges. Teachers suggested that the content asked in some questions required more content knowledge beyond textbook understanding. The issue of teaching practice was also discussed. Some learners are struggling with the subject knowledge because teachers have challenges in teaching. Some do not have knowledge of proper methodology to deliver their subject content knowledge.

From 12 pm to 2 pm the third activity began. Two facilitators (cluster coordinators) with monitoring from the subject advisor were given blank A3 charts with markers. Each cluster was expected to discuss in a summary one Geography chapter. For example, one cluster was given the Geomorphology chapter. They were expected to unpack terms involved and discuss issues of drainage patterns and river profiles. The other cluster was discussing Climatology, where they discussed synoptic weather maps and tropical cyclones. The formation and stages of mid-latitude cyclones was amongst the content that was discussed and presented by clusters. Two hours was planned for content discussion activity. The first hour clusters were expected to engage in discussion as a group led by the cluster coordinator. In the second hour, each group was expected to choose one member to go forward and teach other colleagues based on the content covered by the chapter and suggest strategies to teach some sections of the chapter.

While discussing, the subject advisor moved around approaching each group. For example, each cluster led by a cluster coordinator was expected to discuss and answer questions based on the climatology chapter. Another cluster was expected to do a presentation for a period of 15 minutes. This was based on content taught to Grade 12 learners. The purpose of discussion was to strengthen the content knowledge of teachers of certain content chapters in Geography. While the clusters were presenting, teachers on the ground were expected to ask questions and have

input. Each cluster had to choose one or two representatives to deliver content to their colleagues that they had discussed. Teachers were actively engaging in discussion, asking questions based on the subject content and favourable approaches to teaching certain chapters.

The cluster meeting was adjourned at 3 pm. The subject advisor made a few announcements to the Matric teachers. She further explained the importance of teachers' presence in the cluster meetings. Some teachers wanted to leave before 3 pm, but the subject advisor refused permission. She consolidated the cluster meeting and outlined the important dates for the upcoming cluster meetings. She went on encouraging the presence of all teachers to arrive on time at the cluster meetings. One of the cluster coordinators (senior facilitator) closed the meeting by thanking teachers for their fruitful participation in cluster discussions. The cluster members departed. This was the end of day one activities. The table below is a summation of activities of the day.

Table 1: SUMMARY OF FIRST CLUSTER MEETING:

Time	**Type of activity**	**Initiator**	**No of teachers present**	**Teacher seating arrangement**
9 am – 9: 15	Subject Advisor explains the purpose of cluster meetings.	Department of Education (subject advisor)	23 schools (60 teachers from the circuit) 8 Grade 12 teachers from cluster one. 9 Grade 12 teachers from cluster two. The other teachers were for other grades.	6 to 8 schools per group (approximately10-15 teachers)
9:15 – 9: 45	Subject advisor welcomes teachers to the first meeting. Explains the purpose	Subject advisor	23 schools (60 teachers from the circuit) 8 Grade 12 teachers from cluster one. 9 Grade 12 teachers from cluster two. The other teachers	6 to 8 schools per group (approximately10-15 teachers)

			were for other grades.	
9:45 – 10 45	Assessment: Discussion of last year's Matric results and standard of question papers	The cluster coordinators led the session and discussions	23 schools (60 teachers from the circuit) 8 Grade 12 teachers from cluster one. 9 Grade 12 teachers from cluster two. The other teachers were for other grades.	6 to 8 schools per group (approximately10-15 teachers)
10:45 – 11: 30	Break	Break	Break	Break
11: 30 – 12: 30	Discussion of content	Cluster coordinators in the presence of subject advisor.	23 schools (60 teachers from the circuit) 8 Grade 12 teachers from cluster one. 9 Grade 12 teachers from cluster two.	6 to 8 schools per group (approximately10-15 teachers)
12: 30 – 13: 45	Content discussion	Subject advisor and coordinator: Teachers were supplied with A3 paper and were given a few content questions to discuss and come up with solutions.	23 schools (60 teachers from the circuit) 8 Grade 12 teachers from cluster one. 9 Grade 12 teachers from cluster two. The other teachers were for other grades.	Teachers discussed in groups of 4 and were expected to present their findings in groups.
13: 45 – 14: 30	Content presentation and discussion	Seniors teachers	23 schools (60 teachers from the circuit) 8 Grade 12 teachers from cluster one. 9 Grade 12 teachers in cluster two. The other teachers were for other grades.	Each teacher from the group had to present to all the participants in hall.

14:30 -14: 45	Teachers share experiences.	Cluster coordinators	23 schools (60 teachers from the circuit) 8 Grade 12 teachers from cluster one. 9 Grade 12 teachers from cluster two. The other teachers were for other grades.	Any teacher was expected to share his or her thoughts about their experiences in teaching Geography.
14:45 – 15:00	Summary and Closure. Announcements	Subject advisor	Subject advisor	The whole group

4.3.2 Cluster meeting two

The second cluster meeting was conducted in one of the schools in Pietermaritzburg. It took place in August 2016. It consisted of 35 secondary and high schools from the district, with 87 teachers present and 30 Grade 12 teachers. The meeting took place in one venue; however, schools were divided according to their clusters. Teachers were expected to arrive at 9h00 in the morning. The Geography subject advisor welcomed all the teachers, while the facilitators (cluster coordinators) were busy distributing the material for the meeting.

Two facilitators from two circuits were expected to run the whole meeting of the day. Both facilitators were cluster coordinators from their clusters. They have experience of 8 years or more teaching grade 12 and they are also part of the School Management Team (SMT). Before the cluster meeting, both facilitators were appointed to attend a content workshop in Durban to develop revision material for the whole province of KwaZulu-Natal in Geography. The register was rotated while teachers received the material. The attendance was 87 Geography teachers, teaching between Grades 10 to 12 from different clusters in the same circuit.

There were different activities that took place on the day. The two facilitators were introduced by the subject advisor. The first facilitator presented climatology and geomorphology material that was developed in Durban. Teachers were expected to listen to the facilitator and also discuss some of the questions that were in the revision material. The presentation took an hour and

teachers were given an opportunity to ask questions based on the content covered by the facilitators.

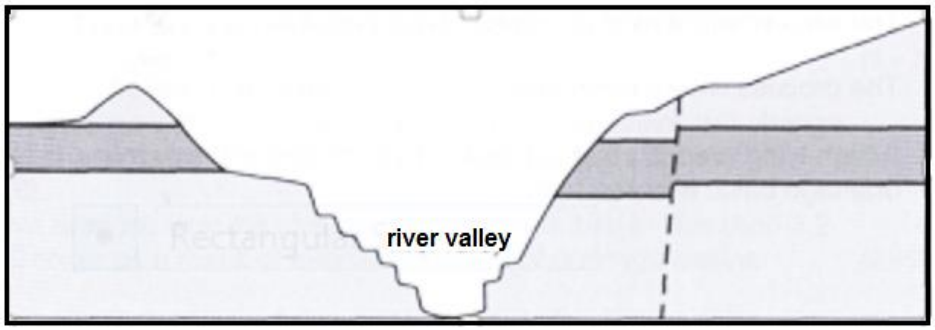
The second activity focused on discussing the September examination memorandum. Teachers discussed the question paper in their groups regarding what was expected from the students when they answered the exam. Each group was led by the cluster coordinator and the answers were discussed by the whole group of teachers that were present at the meeting. A cluster was composed of between 10 to 15 educators in a group. From the beginning teachers were reluctant to participate and give answers for the examination question paper. Teachers from excelling schools were comfortable in engaging in discussion and providing answers. The cluster coordinators and senior Geography teachers started to participate actively. The cluster teachers started to ask questions and for clarity. Clusters presented their answers from their group discussion. There were approximately 12 clusters present. The number of teachers per cluster varies, depending on the number of learners each school has. Schools with huge learner enrollment had more than two teachers teaching Grade 12 Geography. The presentation was done through power point.

The presentation was based on understanding the questioning for Grade 12 learners. The facilitators also continued clarifying some key concepts that each Grade 12 teacher should understand based on climatology. For example, they need to be able to define concepts such as aspect, berg winds and how they occur. Teachers were expected to attempt questions from the developed material. Example of questions: Explain how berg wind is formed; critically analyse the weather station on the synoptic weather map etc.

Example of an activity on a discussion based on Geomorphology:

1.6 Refer to **FIGURE 1.6** based on a **river profile** and answer the questions that follow.

FIGURE 1.6



1.6.1 What type of river profile is shown in **FIGURE 1.6**? (1 x 2) (2)

1.6.2 Name the shape of the river valley that can be seen in the illustrated river profile in **FIGURE 1.6**. (1 x 2) (2)

1.6.3 Name the dominant (main) type of erosion taking place in the river valley. (1 x 2) (2)

1.6.4 The river valley shows evidence of rejuvenation.

(a) What does river rejuvenation mean? (1 x 2) (2)

(b) Give **ONE** piece of evidence from **FIGURE 1.6** to support the statement that rejuvenation has occurred. (1 x 2) (2)

For the third activity, teachers in their cluster shared the challenges and experiences that they face in approaching and teaching different topics. At the beginning of the discussion, teachers were afraid to share their experiences about the content. They only shared classroom management problems. Later, one teacher talked about the challenges they have in their school in teaching Geographical Information Systems. This gave an opportunity to the majority of teachers to raise different concerns about approaching certain chapters. The majority of teachers raised concern with climatology. Climatology is more scientific compared to any chapter in Geography. However, the majority of teachers in Social Sciences did not do science at school.

The table below presents a summary of the activities that took place in the cluster meeting.

Table 2: SUMMARY OF SECOND CLUSTER MEETING:

Time	Type of activity	Initiator	No of teachers present	Teacher seating arrangement
9 am – 9: 15	Subject Advisor explains the purpose of cluster meetings.	Department of Education (subject advisor)	87 teachers (30 Grade 12 teachers)	6 to 8 schools per group
9:15 – 9: 45	Subject advisor hands out the whole year's documents/material, and explains the purpose of cluster meetings	Facilitators	87 teachers (30 Grade 12 teachers)	6 to 8 schools per group
9:45 – 10:45	Assessment: Discussion of question papers (viewing the standard, mark allocation, quality)	The cluster coordinators led the session and discussions	87 teachers (30 Grade 12 teachers)	6 to 8 schools per group
10:45 – 11:30	Break	Break	Break	Break
11:30 – 12:30	Moderation of task (checking the standard of question papers, rechecking and remarking learners' scripts)	Cluster coordinators in the presence of subject advisor.	87 teachers (30 Grade 12 teachers)	6 to 8 schools per group
12:30 – 13:45	Content discussion. Discussion of the revision material.		87 teachers (30 Grade 12 teachers)	Teachers discussed in groups of 4 and were expected to present their findings in groups.
13:45 – 14: 30	Memorandum discussion	Cluster coordinators (facilitators)	87 teachers	Each teacher from the group had to present to all participants in hall.
14:30 -14: 45	Teachers share experiences.	Cluster coordinators	87 teachers	Any teacher was expected to share his or her thoughts about their experiences

				in teaching Geography.
14:45 – 15:00	Summary and Closure	Subject advisor	87 teachers	In groups

4.4 THE NATURE OF LEARNING ACTIVITIES IN GEOGRAPHY TLCS

In this section, I will describe the actual activities that took place in the cluster meetings. The data shows that the following activities took place in the cluster meetings.

Assessment: Moderation of learners' tasks, setting of question papers, developing memoranda, mark allocation, developing learner revision material, discussion of examination results for 2015.

Content Discussions: Discussion of subject matter, content knowledge, doing class exercises to test understanding of the content.

Teachers' sharing experiences: This was an observed activity where teachers shared their experiences with regard to teaching Geography in different schools.

4.4.1 Assessment

The data from the interviews indicates that teachers come together in cluster meetings to discuss assessment activities. Teachers said that they discuss how to assess learners, discuss the quality of assessment and moderate the tasks. In the two meetings that were observed, the assessment activities pertained to a discussion about the Matric exam results from 2015. Sometimes they even allocate one teacher to organize the assessment for the whole cluster.

In response to the kinds of activities in the cluster,

Chetty explains:

> *We have plenty of activities. One, moderation of formal tasks, two, is team teaching, three is teacher development, four, share resources, example maps for paper 2 and information (knowledge, content) and five we solve problems that teachers face in their teaching practices and looking at questions from Grade 10 to 11, developing common question papers, we look more on setting papers, looking and cognitive levels…..Firstly*

we moderate, then we start the development. It is like a workshop: a subject advisor helps us to understand new concepts, teaching methods based on topics, how to ask questions then we do activities in groups in relation to our topics.

The above participant emphasis that there is an element of assessment in teacher clusters. Teacher come together to discuss issues of assessment, moderation and setting of question papers across the teachers and schools of the same cluster. Teachers also dwell on issues of discussing the content based on each topic. The issue of time has been a challenge in ensuring that the content is discussed fully.

Mandla emphasises:

We discuss the content more than the assessment part, compare the good level of assessment and poor assessment. This helps us to assess in a proper way, therefore, I can say we are learning. The discussion of assessment assists us in understanding how to come up with good assessment in class and during the exam. It teaches me a lot about the standard of question papers.

This participant concurs with Chetty that assessment including the discussion of previous papers has been the core activity for most of the clusters. However, this year there has been a discussion of content in the first meeting of clusters members in the present of subject advisor.

Sandiso explains:

We discuss issues of assessment, about setting papers because previously we used to set papers that are not matching kids' standard.….honestly, there quite a number of activities, the later one helped me with the assessment. I changed the way I set papers. So now I can say that the question paper has to be of good level to meet all requirements… therefore I can say the first meeting was helpful.

Zandile emphasizes:

The purpose of cluster groups, firstly, is to provide educators with development. Provide subject support. Secondly, ensure the standardization of School Based Assessment, so it's a process of standardizing to ensure that we are all on a same par/ level across the

district assessment. ….We have other activity also deal with the capacity building, which involves on how we mark in Geography because some teachers apply for marking and they are endorsed by the marking centre without proper knowledge of marking. I as a subject advisor I need to develop teachers. Especially when we talk about Bloom's taxonomy, one needs to be well versed.

All participants concur that assessment is a major activity that takes place in cluster meetings. Assessment involves activities like setting papers of good standard and moderating learner portfolios. Teachers meet every term, in some clusters forthrightly to discuss issues of learner's assessment. Teachers also locate a team to set examination and task on each grade. However, in some instances they discuss content issues and teaching experiences they encounter in their teaching environment. An example is the overcrowding in classes which hinders teachers from exercising their duties of teaching and learning. However, the activities that took place in clusters doesn't give us a full authority to regard them as teacher learning communities.

4.4.2 Content Discussions

Jita and Ndlalane (2009) and Jita and Mokhele (2012) have done extensive research on teacher clusters and they have discovered that there is little evidence that they serve as a good teacher development model. Brodie (2013) states that while collaboration is imperative for learning to occur, the crucial element is the content learned when teachers meet in their learning communities. Clusters are often viewed as a platform for moderation of learner assessment. However, the data collected through observation and interview shows that clusters were initiated for multiple purposes and included a range of activities.

According to **Zandile,** the subject advisor:

In clusters, we get together for content development, just a capacity development. Sometimes we cluster to develop the resources. So cluster is very diverse: we meet for different activities.

The participant continues to explain: *We also have content meeting in cluster to discuss/ unpack content itself, because we realized that there are new teachers. Sometimes they come from other subjects so they in need to revitalize the content*.

Chetty explains:

> *Firstly we moderate, then we start the development. It is like a workshop. A subject advisor helps us to understand new concepts, teaching methods based on topics, how to ask questions, then we do activities in groups in relations to our topics… there is one thing I don't like about cluster meetings: we discuss what we have already taught in class, some where it's not helpful, because we now expected to go back and rectify mistakes, I strongly believe that we suppose to meet before the beginning of each term and discuss what need to be covered next term.*

Mandla explains:

> *This year we discussed the content: we discussed some chapters based on Geography Paper 1. I find it helpful for the first time, because previous years we have never done it and I learnt a lot because I am new in Geography. The only challenge we discuss things that we have already gone through in class, only if the meeting takes place before every term, so that we discuss before we go to class. Again, the discussion of some content chapters because it developed my knowledge in the content as a new teacher in Geography Grade 12. I have been struggling with Paper 2 content but on discussion I have gained something.*

The above participants indicate that there are discussions on content, however they are discussed after they have covered those sections. This is not helpful to educators because new teachers need more content knowledge and strategies to engage in teaching and learning process.

Ayanda explains:

> *We learn more about assessment and the content. We plan how to organise good assessment, exams and tasks. We also discuss some content concepts and how can one discuss the same chapter. I remember in the first cluster meeting, our subject advisor alert us to focus more in climatology because in the past few years, learner performance was affected by those two topics. However, I can't say it's new content because I have been teaching Geography for long, I know most of the things but the challenge was how do I teach or pass the content to learners.*

The comments from participants show that in clusters there has been some transformation in the type of activities, as now there is time allocated for content discussion. However, the participants concur and emphasise that it only started this year. In the previous years, meetings focused more on moderation of formal assessment. In the observations of cluster meetings, teachers were working in groups in the first meeting designing A2 charts discussing content issues. Groups were discussing different chapters, based on climatology and geomorphology. After discussions, each group was expected to present the content summary based on that chapter or their topic. On their topics they also discussed the major problems and experiences in answering the questions. They also discussed the strategies to teach particular topics, teaching methods and approach. Above that, the document used for inviting teachers for cluster meetings were entitled 'Moderation and Content Workshop' as compared to last year's invitations which were entitled 'Moderation Workshop'. This emphasises a remarkable transformation in the focus of activities that take place in clusters

4.2.3 Teacher sharing experiences

Data from the research and observation indicates that teachers were sometimes sharing their experiences. Teachers in clusters talked about issues regarding their teaching challenges and daily teaching and learning experiences. I have also observed a good relationship between teachers: they were sharing issues based on their daily teaching and learning.

Chetty explains:

We talk too much about such issues, on how to deal with such problems. Recently we have progressed kids. These are learners that have been condoned to the next grade without meeting pass requirements. Sometimes we come with solution on what can help. We even suggest that teachers should recommend for those kids to go to further education training colleges for skills. We even discuss the standard of common papers. Especially in rural areas learners are struggling with language; we have a huge language barrier.

Therefore, I can conclude that teachers share their experiences in clusters. However, some of their experiences and challenges are beyond their control as teachers.

4.5 TO WHAT EXTENT DO CLUSTERS FOR GEOGRAPHY FUNCTION AS TEACHER LEARNING COMMUNITIES?

This subsection focuses on understanding to what extent the clusters for Geography teachers function as teacher learning communities. The data was generated from both interviews and participant observation of the cluster meetings. In understanding what defines teacher learning communities, I have used different features that identify teacher learning communities outlined in the literature review. Dufour, Dufour,& Eaker (2008), Stoll et al (2011), Hudson (2015), Steyn (2013), and Huffman (2010) outline numerous features to identify a teacher learning community: shared vision, values, and goals; collegiality and collaborative learning; supportive conditions; shared personal practice; collective focus on student learning; teacher-driven; shared leadership and shared trust amongst the teachers. To analyse data I have used the above-mentioned features as a conceptual framework. Scholars have indicated different number of teachers learning characteristics, some have seven, some have nine. However, the following seven characteristics were common across the scholars. Some scholars give different names of characteristics but they are described in similar way. These were used to analyse to what extent clusters can be regarded as teacher learning communities.

4.5.1 Collegiality

One element that prevailed in the research is sharing amongst the teachers within the clusters. Cluster coordinators play a pivotal role in ensuring the whole functioning of clusters through sharing of information, while subject advisors oversee the process. Senior teachers from excelling schools are given an opportunity to share information to develop their fellow cluster colleagues. The following discussions indicate how teachers learn through sharing in cluster meetings. Above that, they also share the resources of teaching, for example, maps, question papers etc.

Chetty explains**:**

> *Development has been more useful. For example, if I am good in climatology and other one can't teach it properly, then in clusters you can sit together and help the teacher, or even visit the teacher to help his or her learners. It doesn't end there. We share*

information together, for example CAPS: it's a new curriculum, therefore, if there are changes, we share information. First thing, when I went to cluster first time I thought it was moderation, but when I got there I discovered it's not about that. But we have to share resources and information; we discuss the new concepts, the assessment issues.

Mandla explains:

We share issues of challenges that we face in teaching subject but sometimes it's not helping us because no one comes with the solution. For example we struggle with the issue of teaching material, especially in teaching Paper 2. We always have a shortage of maps, we always have to borrow from other neighbouring schools. Sharing ideas makes the cluster more vibrant. As I have said things have changed: in previous years we used to spend an hour moderating scripts, now we benefit a lot in discussions of content, discuss the level of question papers, engage with other colleagues. We now even invite teachers to visit us in our schools to teach our kids in their spare time. We share information and resources we have.

Sandiso explains:

In cluster each one teaches one, so they have full contact, they share, plan together, venues, time, they convene, they keep abreast to help one another.

The element of sharing prevails in most of the teachers' responses as one of the main features of the cluster. The cluster participants say that they are willing to share resources, content and knowledge to assist one another. This is one of the imperative features of a learning community, where teachers are expected to share knowledge, resources and common values. Teachers do share information with regard to their professional practices. However, they don't have enough space and time to share challenges.

4.5.2 Collaborative Learning

Brodie (2013) emphasises that one of the characteristics of successful professional learning communities is collaboration between the educators. This emphasises that for a learning community to function effectively and efficiently, an element of collaboration needs to prevail. Data indicates that the element of collaboration between cluster members prevails. Dodge and Kendal (2004) insist that the benefit of being a learning community member is making friends with members of the community.

Chetty explains:

> *In our cluster, we always make sure that no school is left behind and fails Geography. We want to ensure that we help each other so that all kids under our cluster excel. If we have a new teacher in a subject, especially in Grade 12 we help them to understand how to manage the curriculum coverage. Usually new teachers, they struggling to cover their work on time because of the wide scope. … In my cluster if I remember very well it does happen. Sometimes I could ask other teachers to visit in my school to teach certain chapters. So in Geography we work together, share information as Geography teachers.*

Sandiso explains:

> *I think in clusters we are supposed to help each other, assist as teachers because we have challenges, therefore we suppose to help. Example, you find that I use old textbook but meeting colleagues can assist you in choosing the most suitable book in terms of material. Therefore we share resources, building a team work, able to invite people to assist you in your school.*

Ayanda explains:

> *To work as a group rather than individual, so they cooperate, so they know each other weaknesses, so in cluster each one teach one, so they have full contact, they share , plan together, venues, time, they convene, they keep abreast to help one another. Now they work as a buddy, so there is this buddy system between them, therefore they working very well.*

The above discussion by the participants emphasises that Cluster A and Cluster B encourage the culture of collaboration, working together to ensure and promote learning. In most of the discussions, the participants indicated that teachers need to share information, learn from one another (co-learning). Teachers in clusters get an opportunity to work together in discussing and solving problems in a group of teachers rather than being isolated in their schools.

Mphahlele (2014) views clusters as an innovative networking strategy for teacher learning, where teachers collaborate in groups. The common understanding with the above-mentioned scholars is that learning cannot be individualized, but it is a process of sharing knowledge in groups or communities. Therefore, teacher learning should be a collective and collegial effort, which is also anticipated in clusters as sites of teacher learning.

4.5.3 Shared Trust Amongst The Teachers.

Trust is always a concern when people are working together. It can either encourage or destroy people who work together. This is one of the critical features of teacher learning communities outlined by scholars (Stoll, Bolam, Mcmahona, Wallance and Thomas, 2011; Hudson, 2015; Steyn, 2013). The participants in this study indicated different views of trust.

Chetty explains:

> *Everyone assumes that he/she knows. Sometimes we discuss one concept for one hour, some teachers don't want to admit if they don't understand. The problem if teachers are struggling doesn't want to admit, but we have teachers that we trust. Above that subject advisor have some favoritism, and the division of cluster coordinators some teachers don't trust them. Teachers from poorly performing schools were not chosen to be cluster coordinators, that created mistrust to the teachers and they feel small. Sometimes they chose clusters coordinators just because of experience, not with good results*

Mandla explains**:**

> *As a new teacher in Geography Grade 12, I ask too many questions. And they respond confidently to me and I do trust them. I can say not completely, because others are*

competing. They sometimes not take others' advice, they only believe that subject advisors know all. Above that if your school is not doing well, they don't trust you and they hardly believe or trust your content knowledge and your voice is not respected.

Sandiso's views on trust:

One thing I have noticed, we rate each other based on school's performance. So the trust is not well, because we all have that element to trust a person because of performance. Therefore, people are always skeptical about listening to a person from a low performing school. I won't even borrow resources from the teacher from a low performing school, but we are learning from colleagues.

Ayanda explains:

The issue of trust I will say for me teachers they trust one another, but some don't trust themselves. I have seen that when they were given a slot to present based on each topic. For them they believe that teachers from the excelling schools need to take over. According to them they feel inferior that their schools are not excelling, it seems like they don't have enough information. But there is trust amongst us, that why we even invite one another, we also share the resources because we trust each other.

Regarding this feature of teacher learning communities, Mandla, Chetty and Sandiso emphasize that there is a strong mistrust between the cluster members, particularly a mistrust of teachers from low performing schools. However, Ayanda felt that the issue is rather that teachers do not have confidence in themselves. This can hinder the success and functioning of the cluster. When I observed the teachers in the cluster meeting, it was evident that the cluster members were only taking views of teachers from the excelling schools or from the subject advisor. Therefore, I can conclude that in the cluster there is no element of trust amongst all the members. However, they work together in the presence of the subject advisors.

4.5.4 Shared Personal Practice

When teachers debate content issues and their individual classroom experiences their knowledge-in-practice is constructed (Ndlalane, 2006). This could be knowledge based on the

functioning of schools, teaching strategies and methods of teaching that teachers share in cluster discussions. Working in a community requires sharing individual experiences and practices. This feature concerns how often teachers share their experiences of teaching practice among the cluster members to improve teaching and learning. According to most of the participants, this element has not been taken into consideration by cluster members.

Sandiso explains:

> *We just complain about learning problems without solution, blaming the institution, the Department of Education for giving more powers to kids.*

Mandla's views:

> *We do [share practices] but not a lot, we share issues of challenges that we face in teaching subject but sometimes it's not helping us because no one comes with the solution. For example, we struggle with the issue of teaching material, especially in teaching Paper 2, we always have a shortage of maps, we always have to borrow from other neighbouring schools.*

Chetty explains:

> *We talk too much about such issues, on how to deal with such problems. Recently we have progressed kids, these are learners that have condoned to the next grade without meeting pass requirements. Sometimes we come with solution on what can help. We even suggest that teachers should recommend for those kids to go to further education training colleges for skills. We even discuss the standard of common papers, especially in rural areas learners are struggling with language; we have a huge language barrier.*

Ayanda explains:

> *We do but not that much, we often talk about it with our friends, not an open discussion. I remember one case a teacher asked me what strategy I am using to teach and revision for my Grade 12. Therefore it was part of sharing the experiences but not to the whole group*

Data from the teachers indicates that teachers have less time to talk about their personal practices, and if they do it usually occurs informally between friends. During the observation of meetings, teachers discussed assessment and content issues. Therefore, I can conclude that clusters do not cover all aspects of teacher learning communities. Teachers often feel that sharing their practical experiences is futile because it is not going to have an impact on challenges they encounter in their respective schools.

4.5.5 Supportive Conditions

The conditions for teaching and learning need to be conducive to ensure a proper learning environment within the cluster. The conditions in clusters can either hinder or promote teacher learning. The observation data indicated that the environment was conducive for teachers to support one another. Teachers were given a chance to share their experiences and content knowledge in their groups without being influenced by the subject advisor's ideas. In discussions, each teacher was allowed to ask questions based on what was being discussed.

Zandile explains:

> *The cluster coordinators are responsible for facilitating and I as subject advisor, I monitor.*

She further explains:

> *I have seen great, great improvement, now in the way we [subject advisors] communicate with teachers, there is no gap. When I was a teacher, I used to see my subject advisor as somebody far away. With this activities of development made us closer. It brought us closer because we plan, when they have to do like moderation we use to cheat [when I was a teacher].*

This ensures that the environment is supportive and conducive for teacher learning. It allows the teacher to engage in clusters willingly, without being pushed. However, the clusters are formed as a mandate from the Department of Basic Education and cascade down to teachers.

4.5.6 Shared Vision, Values, And Goals

Shared mission, vision, values, and goals need to be demonstrated in professional learning communities. This feature emphasises that professional learning community members agree on the same vision, the values and goals that guides their community. To be members of one community, you need to share similarities, which identify you as members. Shared visions develop from one vision of student learning (Vanblaere and Devos, 2015). Shares values and goals will ensure that all community members behave in an acceptable manner, in line with the objectives of the school or the learning community. When asked if the cluster members shared a common vision, Chetty responded:

> *No. people have different vision, when it comes to clusters. Some see as way out from their schools to do their own things.*

In a similar vein, Sandiso said:

> *I don't think so, many don't like cluster meetings they think it's a time off from their school. But this year in CAPS teachers have changed the way they do things, for example, when we discuss things they look more interesting because they gain some content then before.*

The above two participants concur that most of the cluster members do not share the same vision of cluster meetings. It sometimes results in making them reluctant to attend the cluster meeting. Some come and leave early because they were not aware of the goals and values of convening cluster meetings.

4.5.7 Teacher-driven

Teacher-driven means teachers need to initiate and organize cluster meetings by themselves. The ISPFTED (2011, p. 14) points out that professional learning communities need to be established by districts, provinces, teacher organizations and teachers. However, it is not always the case. According to data collected, the cluster meetings are organized by the Department of Basic Education. The schools are given specific dates where teachers are expected to attend cluster meetings. The subject advisor is responsible for the convening of all meetings and

planning towards what needs to be discussed or activities of the day. Zandile, the subject advisor, notes that:

> *The Department of Education initiates the meeting because this is cascaded from the national Department of Education. For the whole activity to take place as a subject advisor I need to be there to ensure that it all goes well.*

This emphasises that the subject advisor believes that within the clusters, teachers get an opportunity to socialize and interact with the environment to improve teaching and learning in their schools. With the social interaction they learn through sharing information. However, these cluster meetings are not professional learning communities that are initiated by teachers to address what they perceive to be their professional development needs.

4.7 CONCLUSION

This chapter dealt with the detailed analysis of findings and presented observation data generated from the two clusters with five participants. Data was organized according to the two above-mentioned critical questions and the conceptual framework arose from characteristics of learning communities. The data generated provides a clear picture about the activities taking place in the cluster meetings. The cluster meetings do not reflect all the features of teacher learning communities. However, there has been a great transformation. Clusters are no longer mainly for moderating learners' portfolios: there are numerous other activities. Nonetheless, the element of assessment and content discussion are major activities in all clusters. Participants have shed light on the activities taking place in clusters. In the fifth chapter I present a discussion of the data and recommendations for future research.

CHAPTER FIVE

DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.1 INTRODUCTION

In the previous chapter, findings from empirical data were presented and analysed. Chapter 5 summarises the whole study, draws conclusions from the findings and presents recommendations and limitations of the empirical study.

5.2 Overview of the study

The study explored Geography clusters, exploring the functioning of clusters as teacher learning communities. The purpose of the study was to *explore in what ways clusters function as learning communities for Geography teachers.* In Chapter 1 I introduced the study, its purpose and background. I argue that there have been plenty of teacher development programmes but they seem not to be effective in developing a teacher. I outlined the research problem which drove the research to see the importance of exploring the functioning of clusters. The literature indicated that there has been inadequate work done in clusters to develop teachers. According to ISPFTED (2011) the districts and teachers themselves have to play a major role in ensuring their development and planning of activities for their collective development.

Chapter 2 presented the literature by South African and international scholars. However, it is said that very few scholars have done research on teacher learning and clusters since it is a new concept. Scholars like Brodie, Steyn, Mphahlela and Jita & Mokhele have conducted research in the South African context. I have also presented views from international scholars, like Stoll, Wenger and Borko. I, therefore, conceptualise teacher learning communities through synthesizing the different characteristics that have been identified by various scholars. These characteristics were used to analyse the data.

In Chapter three, I presented and described the methodology of the study. I described qualitative research and the interpretative paradigm as the location of the study. I presented a case study design as an appropriate way to uncover new information about the investigated phenomena. I outlined the number of participants, namely, four teachers and one subject advisor. I also described the data generation methods which were interviews and observations. In Chapter four, I presented the analysed data. I used the characteristics of teacher learning communities to analyse the data. The following are the key findings: There has been a transformation in cluster activities because teachers are able to discuss content knowledge, as well as assessment issues. It is clear that the issue of assessment has been a priority in all cluster meetings that have been observed. With regard to the data analyses and discussion, the following conclusions have emerged.

5.3 SUMMARY OF FINDINGS

This section will summarise and discuss the conclusions that have been reached in order to answer the two critical questions that have been outlined in the first chapter.

1. What is the nature of learning activities in Geography TLCs?
2. To what extent do clusters for Geography teachers function as TLCs?

CRQ 1: What is the nature of learning activities in Geography TLCs?

The first section aimed at answering the first question, which was based on the nature of learning activities that take place in Geography teacher learning communities. According to Mphahlela (2014) clusters are only utilized for learner portfolio "moderation". However, the data showed that this was not the case for the Geography cluster under study. The interviews and observations of the participants outlined different activities that take place in Geography clusters. All five participants concurred that assessment was a key activity. With regard to assessment, teachers were given different question papers to analyse whether they were of a good standard to assess learners. Teachers were also given activities from previous question papers to discuss based on the content that was expected to answer the questions. Secondly, regarding moderation, each teacher was expected to bring 10 percent of their scripts from the previous term to be moderated by the cluster coordinators. In moderation, the moderator is expected to comment on marking

skill, i.e., whether learners were awarded proper results and whether they met the quality stipulated by the examination board. Thirdly, with regard to content discussions, teachers in their groups were each given a topic based on content matter from the textbook. Teachers were expected to discuss what was required by the topic and how the content could be delivered to the learners to ensure that they understood. However, amongst the three activities, content discussions were dedicated more time. Teachers emphasise that there has been a change from the activities that they had been doing in the previous years in clusters. This is demonstrated by the time given to each activity and the level of participation from teachers. Teachers acknowledge that they are now spending the whole day in the cluster meetings, and they even get an opportunity to discuss matters concerning their teaching practices. They are able to share information with their colleagues. The participants also indicated that previously they were attending clusters to moderate tasks only and there were no content discussions. Participants also indicated that clusters were previously not allocated a whole day for teachers to attend.

The poor Grade 12 results produced by schools in the province of KwaZulu-Natal, Department of Education, in 2015 had an impact on ensuring that the subject advisors were more vigilant in ensuring the functioning of the clusters and activities taking place in clusters. Participants emphasised that they have developed a sense of working together and collaborative learning in clusters. According to Jita and Mokhele (2014), continuing Professional Development needs to be sustained. The study indicates that the role of the subject advisor is to ensure that clusters function effectively and efficiently and that clusters are sustainable as a teacher development entity. Observation of both cluster meetings showed that the subject advisor was present as an overseer to ensure that activities were executed effectively. However, the subject advisor was not responsible for facilitating the activities. The cluster coordinators were expected to facilitate activities.

CRQ 2: To what extent do clusters for Geography teachers function as TLCs?

The second critical question aimed to understand to what extent clusters function as teacher learning communities. The characteristics of teacher learning communities from various scholars were synthesized as the most common across all scholars: (a) shared vision, values, and goals;

(b) shared leadership; (c) supportive conditions; (d) shared personal practice; (e) collective inquiry; (f) shared trust amongst the teachers; and (g) teacher-driven or centered. The data collected shows that the Geography clusters do not reflect all the characteristics of professional learning communities. The data indicated that clusters are initiated by the Department of Basic Education and not by teachers responding to their own professional development needs. It cascades down to the provinces and districts. Therefore, teachers are not fully involved in the planning and organisation of clusters.

Secondly, the element of trust appeared to be a major challenge for the majority of teachers in clusters. This stems from the criteria used to elect the cluster coordinator which is based on the merit and results of his or her school. Some participants appeared reluctant to participate freely in cluster meetings and the teachers expected to see the cluster coordinators as vocal and presenting to their colleagues. The element of sharing resources has been mentioned by the participants as a practice that reflects a good relationship between cluster members. However, that has not strengthened trust between all the members of a cluster.

Thirdly, collaborative learning did not fully occur for all cluster members. In cluster meetings, some members did not freely share their content knowledge with their colleagues. Teachers from underperforming schools were not comfortable to work with and share information with their cluster colleagues.

Fourthly, the sharing of teaching experiences occurred. However, teacher experiences were not based on the experiences of teaching the content but teachers discussed the problems that they encounter in their daily teaching. These are experiences like an unfriendly teaching environment, insufficient teaching material and unruly learners. Teachers shared issues about learner discipline in their Geography sessions in schools. These are common problems across the schools and curriculum; they are not only relevant to Geography clusters.

The fifth characteristic of teacher learning communities is shared vision, values, and goals. To ensure a successful community, one needs to share the most important traits of the same vision,

values and goals. Dufour (2008) affirms that, "when schools are organized to support the collaborative culture of a professional learning community, classroom teachers continue to have tremendous latitude" (p. 59). Participants said that teachers in the clusters do not share the same vision and goals. Therefore, one cannot regard them as teacher learning communities.

The sixth characteristic is supportive conditions for learning. This is based on proper working conditions that enhance the opportunity of learning within the community. This means that teachers within the cluster have a favourable and conducive environment for teacher learning. The observation data indicated that not all clusters and teachers are fully supported to improve their knowledge.

Dufour et al. (2008) view professional learning communities as teachers that are committed to work jointly in ongoing processes of collective inquiry. Collective inquiry emphasises collegial effort between teachers. This ensures strong support between teachers in the same circuit or district. Some teachers in the clusters were not comfortable to share their knowledge and experiences. The culture of isolation was demonstrated in cluster meetings. Some teachers were not willing to work while others appeared scared to voice their ideas in a community. However, the main aim of a professional learning community is to create a sharing environment.

In conclusion, the analysis of the data shows that I cannot conclude that the Geography clusters reflect all the characteristics and, thus, they cannot be regarded as teacher learning communities. However, there are some positive characteristics: teachers are now engaging with subject content and assessment issues through collaborative learning. Teachers are able to share knowledge with their colleagues. However, not all teachers were freely comfortable to share their experiences. Regarding the characteristic of being a supportive learning community, clusters have demonstrated a supportive environment where teachers are willing to share material and information to support one another. Clusters have also demonstrated a collaborative learning environment. Without all the characteristics, the clusters cannot become a professional learning community in which teachers share knowledge with the unanimous purpose of strengthening what learners need.

5.4 LIMITATIONS OF THE STUDY

The study was conducted over a short period. This could have impacted on the results of the data collected, as I only observed two cluster meetings. It was conducted on a select sample of teachers from one district in a province; therefore, we cannot generalize the results across the province or country. My position as a teacher teaching Geography in the same district might have impacted on participants' willingness to respond freely and trustingly. However, from the beginning of the study, I explained my position both as a teacher and a researcher to ensure that the study was more reliable. While conducting the study, some of the participants responded in the vernacular language. This has not impacted negatively on the results because all transcripts were returned to the participants for proof reading.

5.5 RECOMMENDATIONS

This section focuses on recommendations based on the two critical questions that have been explored in the study. Based on the findings of the study, I recommend that further research on teacher learning communities should focus on a larger scale and explore and compare clusters from different provinces to get insights from a wider view. Further research can also explore different subjects because this study focuses on Geography. This study was based on activities taking place in clusters. I recommend that further studies focus on the impact of clusters on teacher learning or development.

With regard to findings on critical question one, I recommend that the clusters need to have stipulated activities that need to be covered by the cluster in a specific period. Teachers need to be fully informed of what is expected from their clusters. Most of the participants appeared not to understand the objectives of engaging in clusters. They often assumed that clusters were established for script moderation, just putting a tick on top of the first marker's tick. The second critical question, with the objective to uncover whether clusters can be viewed as teacher learning communities, indicated that they showed some of the characteristics but not all of them.

5.6 CONCLUSION

This study was conducted with the objective of understanding what activities take place in clusters and to be able to draw a conclusion as to whether they can be regarded as teacher

learning communities. The study took on a qualitative case study design. The semi-structured interviews and observations were used to generate data. The study discovered that the clusters cannot be regarded as teacher learning communities because they do not show all the characteristics of teacher learning communities. For example, they are not teacher-driven but cascade down from the Department of Basic Education. However, there were some characteristics that were present, namely, collaborative learning, supportive conditions and sharing. Of seven characteristics of teacher learning communities outlined by scholars, only three were present. Therefore, it difficult to conclude that clusters function fully as teacher learning communities.

REFERENCES:

Adey, P., Hewitt, G., Hewitt, J. and Landao, N. (2004). *The professional development of teachers: practice and theory*. Dordrecht: Kluwer Academic Publishers.

Aipinge, L. P. (2007). *Cluster centre principals' perceptions of the implementation of the school cluster system in Namibia*. Unpublished master's thesis. Grahamstown: Rhodes University.

Bakkenes,I., Vermut, J.D. & Wubbels, T. (2010). Teacher learning in the context of educational innovation: learning activities and learning outcomes of experienced teacher. *Learning and instruction, 20(2),* 533 – 548.

Baxter, P., & Jack, S. (2008).Qualitative Case Study Methodology: Study Design and Implementation for Novice Researchers. *The Qualitative Report, 13*(4), 544-559

Bandura, A. (1969). Social learning Theory of identificatory process. In David A.Goslin, (ed), *Handbook of socialization theory and research*. Rand McNally.

Bertram, C. & Christiansen, I. (2014). *Understanding Research*: *An introduction to Reading Research*. Pretoria: Van Schaik.

Burton, D. & Bartlett, S. (2009). *Key Issues for Education Research*. India: SAGE.

Brodie, K. (2013).The Power of professional learning communities. *Education as change, 17*(1), 5-18.

Blanton, L. P., & Perez, Y. (2011). Exploring the relationship between special education teachers and professional learning communities: Implications of research for administrators. *Journal of Special Education Leadership, 24(1),* 6–16.

Borko, H. (2004). Professional development and teacher learning: Mapping the terrain. *Educational Researcher, 33*(8), 3-15.

Brodie, K. (2013).The Power of professional learning communities. *Education as change, 17*(1), 5-18.

Caskey, M. M., & Carpenter, J. (2012). Organizational models for teacher learning. *Middle School Journal, 43*(5), 52–62.

Cereseto, A. (2015). *What and how teachers learn in professional learning communities?: South African case study*. Unpublished PhD dissertation, University of Witwatersrand, Johannesburg.

Chauraya, M. (2013). *Mathematics Teacher Change and Identity in a Professional Learning Community.* Unpublished PhD thesis. Johannesburg: University of Witwatersrand.

Chikoko, V. (2007).The school cluster system as an innovation: Perceptions of Zimbabwean teachers and school heads. *Africa Education Review, 4(1),* 116-165.

Chikoko, V., & Aipinge, L. (2009). The school cluster system as an educational reform: Evidence from Namibia and Zimbabwe. *Southern African Review of Education, 15*(1), 25-43.

Clandinin, D.J & Connelly, F.M. (2000). *Narrative inquiry*: *experience and story in qualitative research*. San Francisco: Jossey Bass Publishers.

Cohen, L., Manion, L. & Morrison, K. (2007). *Research Methods In Education* (5th ed.). London: Routledge.

Cohen, L., Manion, L. & Morrison, K. (2009). *Research Methods In Education* (6th ed.). London: Routledge.

Cohen, L., Manion, L., & Morrison, K. (2011). *Research Methods in Education* (7th Ed). London: Routledge.

Cohen, L., Manion, L., & Morrison, K. (2012). *Research Methods in Education* (8th Ed.). London: Routledge.

Connelly, F.M., & Clandinin, D.J. (1990). Stories of experience and narrative inquiry. *Education Researcher*, *19*(5), 2-14.

Creswell, J. W. 2007. *Qualitative Inquiry Research Design: Choosing among five approaches*. (2nd Ed) United Kingdom: SAGE.

Creswell, J. W. (2009). *Research Design: Qualitative, Quantitative, and Mixed methods approach* (3rd Ed.). Los Angeles, CA: SAGE.

Creswell, J.W. (2012). *Educational Research*: *Planning, conducting and evaluating quantitative and qualitative research*. (4th Ed) University of Nebraska-Lincoln.

De Clercq, F & Phiri, R. (2013). The Challenges of school-based teacher development initiatives in South Africa and the potential of cluster teaching. *Pespectives in Education*. *31*(1) 77-86.

Department of Basic Education and Department of Higher and Training. (2011). *Executive summary and chapter 6. Teachers' development needs*. The Integrated Strategic Planning Framework of teacher Education and Development in South Africa. 2011-2025. Technical Report. Pretoria.

Department of Basic Education (DBE). (2015).*Professional Learning Communities*: *A guidelines for South African Schools*. South Africa. Pretoria.

Dewey, J. (1916). *Democracy and education.* New York: Macmillan.

DiCicco-Bloom, D. & Crabtree, B. F. (2006). Making sense of qualitative research: The qualitative research interview. *Medical Education, 40*(1), 314–321.

Dodge , L. and Kendall, M.E. (2004). Learning Communities: *College Teaching, 52 (4),* 150-155.

Dykstra, A.H & Kucita, P. (2008). *School Based Management Through cluster Schools*: A Case Study from Cambodia.

Dufour, R., Dufour, R., & Eaker, R. (2008). *Revisiting professional learning communities at work: New insights for improving schools.* Bloomington, IL: Solution Tree Press.

Easton, L. B. (2012). Principles of design energize learning communities: Practical tips put the emphasis on learning. *Journal of Staff Development, 33*(4), 49–54.

Elbousty, M. Y., & Bratt, K. (2010). Continuous inquiry meets continued critique: The professional learning community in practice and the resistance of (un)willing participants. *Academic Leadership: The Online Journal, 8*(2). Retrieved from http://files.eric.ed.gov/fulltext/ED510036.pdf

Elo.S., Kääriäinen, M., Kanste, O., Pölkki, T., Utriainen, K., & Kyngäs, H. (2014). Qualitative Content Analysis: A Focus on Trustworthiness, *American Educational Research Journal* 1-10.

Fraser, C., Kennedy, A., Reid,L.& McKinney, S. (2007). Teachers' continuing profession development: contested concepts, understandings and models. *Journal of in-service Education, 33*(2), 153-169

Garet, S. Porter, C. Desimone,L. Birman,F and Yoon,K.(2001).What Makes Professional Development Effective? Results from a National Sample of Teachers: *American Educational Research Journal, 38* (4), 915 -945

Giordano, E. A. (2008). School clusters and teacher resource centers. Retrieved 28

Graven, M. (2002). *An investigation of mathematics teachers learning in relation to preparation or curriculum change.* Unpublished PhD thesis. University of the Witwatersrand. Johannesburg.

Gordon, M. (2008). Between constructivism and connectedness. *Journal of Teacher Education, 59*(4), 322–331.

Golafshani, N. (2003). Understanding Reliability and Validity in Qualitative Research. *The Qualitative Report, 8*(4), 597-607.

Guskey, T.R (2009).Closing the Knowledge gap on effective professional development. *Educational Horizons, 23* (2), 224-233.

Guba, E. G., & Lincoln, Y. S. (1994). Competing paradigms in qualitative research. *Handbook of qualitative research, 32(2),* 163-194.

Hilliard, A. T. (2012). Practices and value of a professional learning community in higher

education. *Contemporary Issues in Education Research, 5*(2), 71–73

Holloway, I., & Wheeler, S. (2002). *Qualitative Research in Nursing* (2nd Ed). Oxford: Blackwell.

Hudson, G. (2015). *The Effectiveness of Professional Learning Communities as Perceived by Elementary School Teachers*. Unpublished PhD dissertation**,** Walden University.

Huffman, J. (2010). *Re-culturing schools as professional learning communities*. Lanham, MD: Scarecrow Education.

Illeris, K. (2003). Towards a contemporary and comprehensive theory of learning. *International Journal of Lifelong Education*, 22, 396-406.

Illeris, K. (2004). Transformative Learning in the Perspective of a Comprehensive Learning Theory: *Journal of Transformative Education*. *2 (2),* 79-89.

Illeris, K. (2007). *How we learn: learning and non learning in school and beyond*. London New York: Routledge.

Jita, L.C. & Ndlalane, T.C. (2009). Teacher clusters in South Africa: Opportunities and constraints for teacher development and change. *Perspectives in Education, 27*(1), 58-68.

Jita, L.C. & Mokhele, M.L. (2012). Institutionalizing teacher clusters in South Africa: Dilemmas and contradictions. *Perspectives in Education, 30*(2), 1-11.

Jita, L.C. & Mokhele, M. (2014). When teacher clusters work: Selected experiences of South African teachers with the cluster approach to professional development. *South African Journal of Education, 34(2),* 1-15.

Kelly, P. (2006). What is teacher learning? A socio-cultural perspective. *Oxford Review of Education, 32 (4*), 505 – 519.

Knight, P.(2002). A systemic approach to professional development: *learning as practice. Teaching and Teacher Education, 18,* 229-241

Kruse, S. D., Louis, K. S., & Bryk, A. (1995). An emerging framework for analyzing school based professional community. In K. S. Louis & S. D. Kruse (Eds.), *Professionalism and Community: Perspectives on Reforming Urban Schools*, 23–42.

Krauss, S.E. (2005). *Research Paradigms and Meaning making*: *A Primer*. Universiti Putra, Selangor, Malaysia.

Kyndt, E., Govaerts, N., Verbeek, E., & Dochy, F. (2014). Development and validation of a questionnaire on informal workplace learning outcomes: A study among socio-educational care workers. *British Journal of Social Work, 44*(2), 391–2410.

Kyndt, E., Gijbels, D., Grosemans,I., & Donche,V. (2016). Teachers' Everyday Professional Development: Mapping Informal Learning Activities, Antecedents, and Learning Outcomes. *Review of Educational Research. 66*(6), 1–40.

Lauer, P.A. (2006). *An Education Research Primer. How to Understand, Evaluate, and Use It*. United State of America: Jossey-Bass

Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation. Learning in doing.* Cambridge: Cambridge University Press.

Leech, B.L. (2002) Techniques for Semi structured Interviews: *Political Science and Politics*. *35(4).* 665-668.

Leeferink,H., Koopman,M. , Beijaard,D., & Ketelaar, E. (2015). Unravelling the Complexity of Student Teachers' Learning in and From the Workplace. *American Association of Colleges for Teacher Education*, *66*(4), 334–348.

Levine, T. (2010). Tools for the Study and Design of Collaborative Teacher Learning: The Affordances of Different Conceptions of Teacher Community and Activity Theory. *Teacher Education Quarterly*, *37*(1), 109-130.

Mackenzie, N.and Knipe, S. (2006). Research Dilemmas: Paradigms, methods and methodology. *Issues in Educational Research, 16*(2), 193 -205.

Maistry, S.M. (2005). *Teacher learning in a Community of practice: A case study of teachers of economic and management sciences*. Unpublished PhD Dissertation. University of KwaZulu- Natal, Durban.

McLaughlin, M.W. & Talbert, J.E. (2006). *Building School Based Teacher learning communities: Professional Strategies to improve student achievement*. New York: Teachers College Press.

McMillan, J., & Schumacher, S. (2001). *Research in Education: A Conceptual Introduction. (5th ed.).* USA: Longman.

McMillan, J. H., & Schumacher, S. (2006). *Research in Education Evidence-based Inquiry*. New York: Pearson Education.

Mkhwanazi , S. (2014)**.** Crossing the Past Political Boundary: Teacher Professional Learning in a South African Reform Context. *Mediterranean Journal of Social Sciences 5*(10), 425-432.

Mokhele, M. (2013). Empowering Teachers: An Alternative Model for Professional Development in South Africa. *Kamla-Raj research journal*. *34(1),* 73-81

Mothilal, P. (2011) A *Narrative Inquiry: An Exploration of teacher learning through clustering*. Unpublished M.Ed. University of KwaZulu Natal. South Africa, Durban.

Mphahlele, L.K. (2014). *School cluster systems: an innovative network for teacher development*. Unpublished Med Dissertation, Tshwane University of Technology, Pretoria.

Ndlalane, T.C. (2006). *Teacher clusters or networks as opportunities for learning about science content and pedagogical content knowledge*. Unpublished PhD Dissertation. Faculty of Natural and Agricultural science. University of Pretoria.

Ndlovu, S.E. (2016). *Teachers' understanding and experiences of curriculum change-related professional development*. Unpublished M.Ed dissertation, University of KwaZulu-Natal, Durban.

Nwagbara, A.C .(2014). The Effectiveness of Teachers and Schools Cluster Model of Primary School Mathematics Teachers Professional Development in Cross River State, Nigeria. *Asia Pacific Journal of Education, 1(3),* 12-19.

Opfer, D. V., & Pedder, D. (2011). Conceptualizing teaching and professional learning. *Review of Educational Research, 81*(3), 376-407.

Opie, C. (2004). *Doing educational research: A Guide to First Time Researchers*. London: SAGE

Perry, F.L & Nichols, J.D (2015). *Understanding Research in Education*: Becoming a Discerning Consumer. New York and London: Routledge Taylor &Francis.

Petty, N., Thomson, O. & Stew, G. (2012). Ready for a paradigm shift? Part 2: Introducing qualitative research methodologies and methods. *Manual Therapy, 17* (1), *378 – 384.*

Pomuti, H. N. (2008). *An analysis of the relationship between cluster-based school management and improving teaching in Namibian schools.* Unpublished Doctoral Thesis, University of Pretoria, Pretoria.

Poortman, C.L; Illeris, K. and Nieuwenhuis,L. (2011). Apprenticeship: from learning theory to practice. *Journal of Vocational Education and Training*. *63*(3), 267–287.

Putnam, R., & Borko, H. (2000). What do new views of knowledge and thinking have to say about research on teacher learning? *Educational Researcher, 29*(1), 4-15.

Putnam, J., & Burke, J. (2006). *Organizing and Managing Classroom Learning Communities*. Boston: McGraw-Hill.

Robert, D. & Shenhav,S. (2014). Fundamental Assumptions in Narrative Analysis: Mapping the Field. *The Qualitative 19*(22), 1-17.

Robinson, A. (2009). *A study on the experiences of patients when training for Home-haemodialysis.* Unpublished research report, Massey University.

Rule, P., & John, V. (2011). *Your Guide to Case Study Research*. Pretoria: Van Schaik Publishers.

Rule, P., & John, V. (2015). *A necessary Dialogue: Theory in Case Study Research*. South Africa: SAGE.

Shulman , L. & Shulman , H. (2004). How and what teachers learn: a shifting perspective. *Journal of Curriculum Studies, 36*(2), 257-271.

Shulman, L. (2004). *Professional Development: Learning from experience* In *The wisdom of practice. Essays on teaching, learning and learning to teach*. San Francisco: Jossey-Bass.

Smith, C.P. (2000). Content analysis and narrative analysis. In H.T. Reis & C.M. Judd (Eds), *Handbook of research methods in social and personality psychology* (pp. 313-335). New York: Cambridge University Press.

Smith, K. (2003). So, what about the professional development of teacher educators? *European Journal of Teacher Education, 26*(2), 201-215.

Steyn, G.M. (2011). Implementing continuing professional teacher development: policy and practice. *Acta Academica*, *43(1),* 211–233.

Steyn, G.M (2013. Building Professional Learning Communities to Enhance Continuing Professional Development in South African Schools. *Kamla-Raj research Journal. 15(3*), 277-289.

Stoll, L., Bolam, R., Mcmahona, A., Wallance, M. & Thomas, S. (2011). Professional Learning Communities: A Review Of The Literature: *Journal of Educational Change*, *7*. 221–258

Van Blaere, B. & Devos, G. (2015). *Exploring the link between experienced teachers' learning outcomes and individual and professional learning community characteristics: School Effectiveness and School Improvement*; Unpublished PhD Dissertation, Ghent University, Ghent, Belgium.

Van Driel, J. H. & Berry, A. (2012). Teacher professional development focusing on pedagogical content knowledge. *Educational Researcher, 41*(1), 26–28.

Vescio, V., Ross, D. & Adams, A. (2008). A review of research on the impact of professional learning communities on teaching practice and student learning. *Teaching and Teacher Education, 24,* 80-91.

Vygotsky, L. S. (1986). *Thought and Language*. Cambridge, MA: MIT Press.

Wang, C. C and Geale, S. K. (2015). The power of story: Narrative inquiry as a methodology in nursing research. *Cowan University Australia,*20, 1 9 5 - 1 9 8.

Wenger, E. (1998). *Communities of pracitce: Learning, meaning, and identity*. Cambridge, MA: Cambridge University Press.

Weiser, B. (2012). Collegiality and better science teaching. *Science and Children, 49*(5), 52–55.

Wood, M. (2011). *The Interview Method is a Conversation with a purpose*. Publisher Massey University.

Yin, R.K. (1994). *Case Study Research: Design and Methods*. London: SAGE.

Yin, R. K. (2003). *Case study research: Design and methods* (3rd Ed.). Thousand Oaks, CA: Sage.

Yin, R. K. (2009). *Case Study Research*. (4th Ed). Los Angeles, CA: Sage.

APPENDICES

APPENDIX A: Letter to the school principals

School of Education
College of Humanities
University of KwaZulu-Natal
Pietermaritzburg Campus

The Principal

Dear Sir/ Madam

Request to conduct a research at your school

I am Sanele Myende, (208518807) a student pursuing Master in Education, teacher Development at the University of KwaZulu- Natal, Pietermaritzburg Campus. I am currently conducting a research project tilted "An exploration of clusters as teacher learning communities for Grade 12 Geography teachers in the Vulindlela/Sweetwaters circuit". Clusters are new phenomena of teacher development in South Africa. The aim of the project is to get the full understand of in what way do cluster function as teacher learning communities.

I humbly request your permission to conduct the study with Grade 12 Geography teacher(s) employed at your institution. The study will take place in 2016. Your school has been identified as most valuable source for the study. The study requires the teacher participation at the interviews. The interview will take place not during the teaching period; therefore the study will not infringe or interfere with the process of teaching and learning

The identity of participants will be protected; interviewee's will use pseudo names to ensure the integrity and confidentiality. Participant will not be remunerated and they have a right to withdraw from participating on a study. Data collected will be stored in a locked cabinet of the supervisor at the University of Kwa Zulu Natal. Further details and clarification can be directed

to the supervisor Dr Carol Bertram, BertramC@ukzn.ac.za, Cell; 0844079827 and you can contact the researcher on 0810442232, email sanelemyende@ymail.com

I thank the opportunity, with the hope that my request will meet your approval and help me to strengthen our education quality through teacher development strategies.

Yours faithfully

_____

S. Myende (Mr)

Researcher

I …….(full names of participant) hereby confirm that I understand the content of this document and the nature of the research project, and consent to participating in this research project.I understand that I am at liberty to withdraw from the project at any time should I so desire.

Participant signature**:** _____

APPENDIX B: Letter to the participants

School of education

College of Humanities

University of Kwa-Zulu Natal

Pietermaritzburg Campus

Dear Participant

INFORMED CONSENT LETTER

I am Sanele SS Myende, 208518807, a student pursuing Master in Education with the University of Kwa-Zulu- Natal, Pietermaritzburg in Human and Social Sciences

I am interested in conducting a study based on "clusters as learning communities in Vulindlela/Sweetwaters Circuit in UMgungundlovu District". The study aimed at understanding the nature of activities and functioning of teacher clusters in the above-mentioned circuit. The participants of this study were identified in two clusters. These were taken into consideration; participants need to be a teacher teaching Geography in Grade 12 and Geography Subject Advisors under UMgungundlovu district, Vulindlela/Sweetwaters Circuit within two clusters. The identified participants will be required to engage on the interviews and observation during the cluster meetings. This will take place in year 2016 between January and June.

The data will be collected on the semi structured interviews and observations, using data audio recordings and in writing. It will be transcribed by the interviewer and kept securely for a period of five year, under the supervision of the University of KwaZulu Natal. Being a participant on this study it's voluntary and the participant can withdraw at any stage, for any reason. Confidentiality is guaranteed as your inputs will not be attributed to you in person Participation to the study is purely for academic purposes only, and there are no financial benefits

My contact details: Email; sanelemyende@ymail.com. Cell: 0810442232. My supervisor Dr Carol Bertram: email; BertramC@ukzn.ac.za, Cell; 0844079827. Ethics committee: UKZN Humanities and Social Sciences Research Ethics Administrator:P. Mohun HSSREC Research Office,Tel: 031 260 4557 E-mail: mohunp@ukzn.ac.zaEmail: HSSREC@ukzn.ac.za.

If you are willing to be interviewed, please indicate (by ticking as applicable) whether or YES or NOT to allow the interview to be recorded by the following equipment:

	Yes	**No**
Audio equipment		
Photographic equipment		
Video equipment		

Thank you for your contribution to this research.

Regards

Myende.S

DECLARATION

I…… (full names of participant) hereby confirm that I understand the contents of this document and the nature of the research project, and I consent to participating in the research project.

I understand that I am at liberty to withdraw from the project at any time, should I so desire.

SIGNATURE OF PARTICIPANT DATE

…… ……

APPENDIX C: INTERVIEW SCHEDULE

INTERVIEW SCHEDULE FOR GRADE 12 GEOGRAPHY TEACHERS

SECTION A: BIOGRAPHICAL AND EDUCATIONAL DATA

1. What is your gender?

MALE	FEMALE

2. How many years of experience as a teacher?

3. How long have you been teaching Geography?

4. What is your present position?

PRINCIPAL	
SUB.ADVISOR	
HOD	
CLUSTER CO-ORDINATOR	
TEACHER	

5. Do you belong to cluster systems at school?

6. Why did you choose to teach Geography in out of all subjects?

7. What do you like about teaching Geography and why?

What is the nature of learning activities in Geography TLCs?

9. Tell me more about the activities that takes place in cluster meetings.
10. What do you do/ have you been doing in a typical cluster meeting?
11. Which of these activities do you find most useful? Why is that?
12. What do you learn from the activities? Any new content knowledge, knowledge of assessment, knowledge of the curriculum?
13. What activities in cluster that help your to develop your content knowledge and promote teacher development
14. What, if anything, have you been doing differently in your class as a result of what you have learned in the clusters? Have you used the material/skills obtained through the clusters in your classes for teaching? Explain.

To what extent do clusters for Geography teachers function as TLCs

11. What is the purpose of cluster?
12. To what extent do the issues of trust influence cluster functioning?
13. To what extent do you talk about your classroom experiences on cluster meetings?
14. How do you make sure that cluster promote student and teacher continuous learning?
15. To what extent do clusters promote reflective culture among teacher?
16. To what extent do cluster promote collective inquiry?
17. How do cluster promote share vision and goals?

APPENDIX D: ObservationSchedule

Observation schedule: Cluster name: ----------

Observation date: ----------

Topic for discussion: ----------

Number of teachers present: (get an attendance register)

Duration (time)	**Activity/task (focus)**	**People in charge**

Summary on the overall activities of the day:

_____

_____

_____

APPENDIX E: Ethical clearance : University of KwaZulu-Natal

UNIVERSITY OF KWAZULU-NATAL
INYUVESI YAKWAZULU-NATALI

1 February 2016

Mr Sanele SS Myende 208518807
School of Education
Pietermaritzburg Campus

Dear Mr Myende

Protocol reference number: HSS/1859/015M
Project title: An exploration of clusters as teacher learning communities for Grade 12 Geography teachers in the Vulindlela circuit

Full Approval – Expedited Application

In response to your application received 17 December 2015, the Humanities & Social Sciences Research Ethics Committee has considered the abovementioned application and the protocol has been granted **FULL APPROVAL.**

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment /modification prior to its implementation. In case you have further queries, please quote the above reference number.

PLEASE NOTE: Research data should be securely stored in the discipline/department for a period of 5 years.

The ethical clearance certificate is only valid for a period of 3 years from the date of issue. Thereafter Recertification must be applied for on an annual basis.

I take this opportunity of wishing you everything of the best with your study.

Yours faithfully

.....
Dr Shenuka Singh (Chair)
Humanitities & Social Scinces Research Ethics Committee

/pm

Cc Supervisor: Dr Carol Bertram
Cc Academic Leader Research: Professor P Morojele
Cc School Administrator: Ms T Khumalo

Humanities & Social Sciences Research Ethics Committee
Dr Shenuka Singh (Chair)
Westville Campus, Govan Mbeki Building
Postal Address: Private Bag X54001, Durban 4000
Telephone: +27 (0) 31 260 3587/8350/4557 **Facsimile:** +27 (0) 31 260 4609 **Email:** ximbap@ukzn.ac.za / snymanm@ukzn.ac.za / mohunp@ukzn.ac.za
Website: www.ukzn.ac.za

APPENDIX F: Ethical clearance : KwaZulu-Natal Department of Education

education

Department:
Education
PROVINCE OF KWAZULU-NATAL

Enquiries: Nomangisi Ngubane Tel: 033 392 1004 Ref.:2/4/8/605

Mr SSS Myende
PO Box 10805
UMZINTO
4200

Dear Mr Myende

PERMISSION TO CONDUCT RESEARCH IN THE KZN DoE INSTITUTIONS

Your application to conduct research entitled: **"AN EXPLORATION OF CLUSTERS AS TEACHER LEARNING COMMUNITIES FOR GRADE 12 GEOGRAPHY TEACHERS IN THE VULINDLELA / SWEETWATER'S CIRCUIT",** in the KwaZulu-Natal Department of Education Institutions has been approved. The conditions of the approval are as follows:

1. The researcher will make all the arrangements concerning the research and interviews.
2. The researcher must ensure that Educator and learning programmes are not interrupted.
3. Interviews are not conducted during the time of writing examinations in schools.
4. Learners, Educators, Schools and Institutions are not identifiable in any way from the results of the research.
5. A copy of this letter is submitted to District Managers, Principals and Heads of Institutions where the intended research and interviews are to be conducted.
6. The period of investigation is limited to the period from 13 January 2016 to 31 January 2017.
7. Your research and interviews will be limited to the schools you have proposed and approved by the Head of Department. Please note that Principals, Educators, Departmental Officials and Learners are under no obligation to participate or assist you in your investigation.
8. Should you wish to extend the period of your survey at the school(s), please contact Miss Connie Kehologile at the contact numbers below.
9. Upon completion of the research, a brief summary of the findings, recommendations or a full report / dissertation / thesis must be submitted to the research office of the Department. Please address it to The Office of the HOD, Private Bag X9137, Pietermaritzburg, 3200.
10. Please note that your research and interviews will be limited to schools and institutions in KwaZulu-Natal Department of Education.

UMgungundlovu District

Nkosinathi S.P. Sishi, PhD
Head of Department: Education
Date: 10 December 2015

KWAZULU-NATAL DEPARTMENT OF EDUCATION

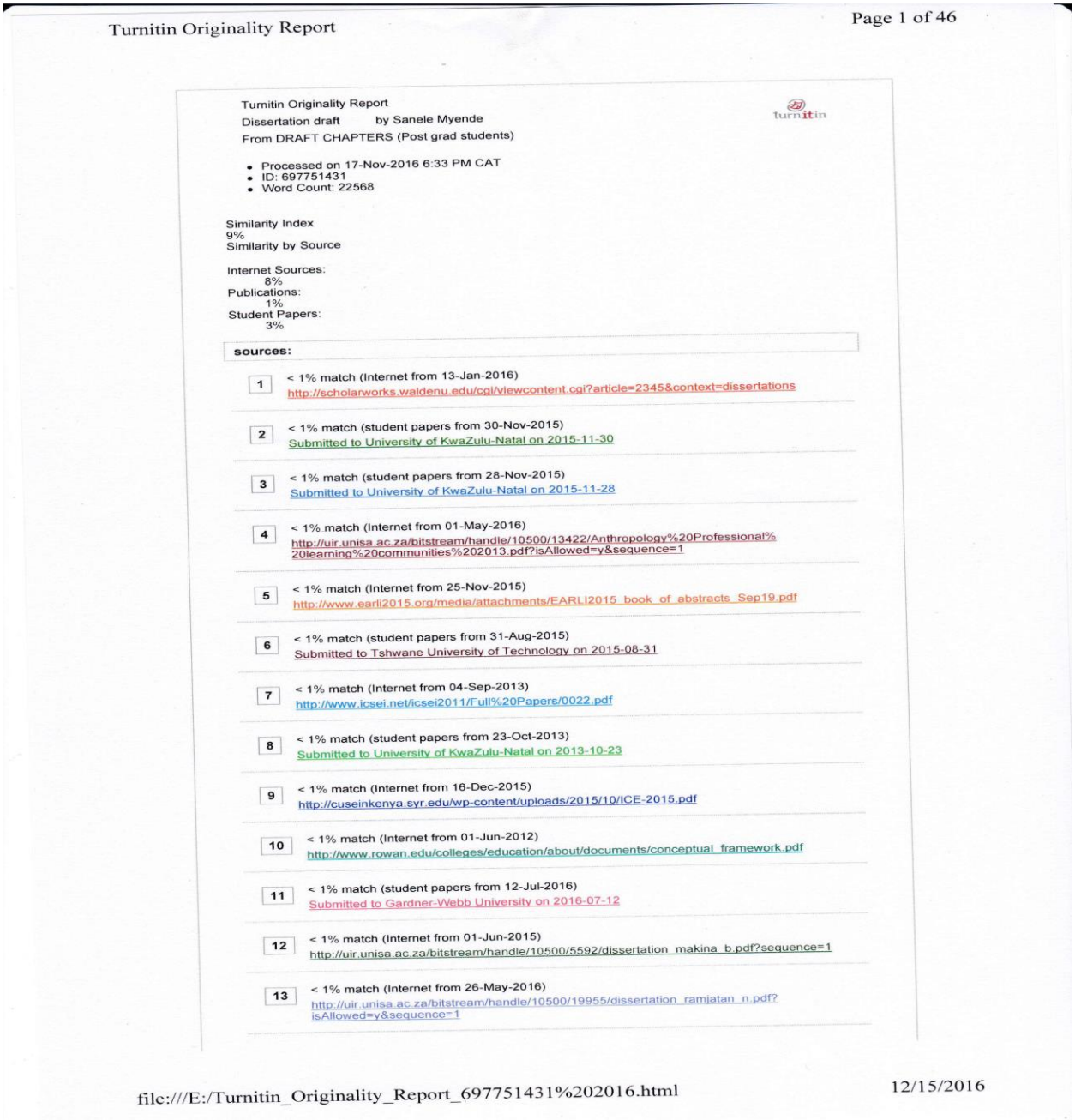
POSTAL: Private Bag X 9137, Pietermaritzburg, 3200, KwaZulu-Natal, Republic of South Africa
PHYSICAL: 247 Burger Street, Anton Lembede House, Pietermaritzburg, 3201. Tel. 033 392 1004
EMAIL ADDRESS: kehologile.connie@kzndoe.gov.za / Nomangisi.Ngubane@kzndoe.gov.za
CALL CENTRE: 0860 596 363; Fax: 033 392 1203 WEBSITE: WWW.kzneducation.gov.za

APPENDIX G: Language Editor Certificate

This work was edited by accredited language editor: Bambi Ogram

Signature _____ Date: 18/12/2016

APPENDIX H: Turnitin Certificate



Turnitin Originality Report

Page 1 of 46

Turnitin Originality Report
Dissertation draft by Sanele Myende
From DRAFT CHAPTERS (Post grad students)

- Processed on 17-Nov-2016 6:33 PM CAT
- ID: 697751431
- Word Count: 22568

Similarity Index
9%
Similarity by Source

Internet Sources:
8%
Publications:
1%
Student Papers:
3%

sources:

1 < 1% match (Internet from 13-Jan-2016)
http://scholarworks.waldenu.edu/cgi/viewcontent.cgi?article=2345&context=dissertations

2 < 1% match (student papers from 30-Nov-2015)
Submitted to University of KwaZulu-Natal on 2015-11-30

3 < 1% match (student papers from 28-Nov-2015)
Submitted to University of KwaZulu-Natal on 2015-11-28

4 < 1% match (Internet from 01-May-2016)
http://uir.unisa.ac.za/bitstream/handle/10500/13422/Anthropology%20Professional%20learning%20communities%202013.pdf?isAllowed=y&sequence=1

5 < 1% match (Internet from 25-Nov-2015)
http://www.earli2015.org/media/attachments/EARLI2015_book_of_abstracts_Sep19.pdf

6 < 1% match (student papers from 31-Aug-2015)
Submitted to Tshwane University of Technology on 2015-08-31

7 < 1% match (Internet from 04-Sep-2013)
http://www.icsei.net/icsei2011/Full%20Papers/0022.pdf

8 < 1% match (student papers from 23-Oct-2013)
Submitted to University of KwaZulu-Natal on 2013-10-23

9 < 1% match (Internet from 16-Dec-2015)
http://cuseinkenya.syr.edu/wp-content/uploads/2015/10/ICE-2015.pdf

10 < 1% match (Internet from 01-Jun-2012)
http://www.rowan.edu/colleges/education/about/documents/conceptual_framework.pdf

11 < 1% match (student papers from 12-Jul-2016)
Submitted to Gardner-Webb University on 2016-07-12

12 < 1% match (Internet from 01-Jun-2015)
http://uir.unisa.ac.za/bitstream/handle/10500/5592/dissertation_makina_b.pdf?sequence=1

13 < 1% match (Internet from 26-May-2016)
http://uir.unisa.ac.za/bitstream/handle/10500/19955/dissertation_ramjatan_n.pdf?isAllowed=y&sequence=1

file:///E:/Turnitin_Originality_Report_697751431%202016.html

12/15/2016