University of
Zululand

PROFESSIONAL DEVELOPMENT OF TEACHERS FOR PROMOTING TEACHING
AND LEARNING IN RURAL PRIMARY SCHOOLS OF TSHINANE CIRCUIT

BY

MUTHIVHI MASHUDU JULIA

SUBMITTED IN ACCORDANCE WITH THE REQUIREMENTS FOR THE

MASTER'S DEGREE IN EDUCATION

AT THE UNIVERSITY OF ZULULAND

SUPERVISOR: PROF. A.P. KUTAME

CO-SUPERVISOR: DR M.C. DUBE

DECLARATION

I, Muthivhi Mashudu Julia declare that this dissertation "Professional development of teachers for promoting teaching and learning in rural primary schools of Tshinane Circuit" is my own work and that all sources used have been indicated and acknowledged by means of complete references. This dissertation is original and has never been submitted before for any degree.

Signed by:……………………………on the ….of…………………..2019.

DEDICATION

This research document is dedicated to:

My husband Mr Muthivhi Leonard, my son Mpho, my daughters Livhuwani, Mulanga, Itumeleng and my grandchildren for the support and contribution they gave throughout my study.

My spiritual father, Dr V.W. Madzinge for his encouraging messages and prayers.

Above all, my God, for I can do all things through Christ who strengthens me.

ACKNOWLEDGEMENTS

I would like to express my deepest feelings of appreciation to the following people:

My supervisor, Prof. A.P. Kutame, for his outstanding support, tireless guidance, patience and helpful suggestions throughout the entire dissertation. He became the most valuable assistance throughout this study.

My co-supervisor, Dr Dube M.C. who never stopped encouraging and believing in me.

My mentor, Dr Mbulaheni VM. who helped me tirelessly during the process of preparing this document.

Dr Mulaudzi I. C., Mrs Daswa T.C. and Mrs Tshikukuvhe L. for encouraging me to continue with this study.

My study group from Limpopo for support and constructive criticism throughout this study.

My Circuit Manager, Mrs Mulaudzi, principals and teachers of Tshinane Circuit for their co-operation.

My principal, Mr Nwashe M.J. and my colleagues from Tshitereke Primary School for their encouragement and unwavering assistance.

My husband, Mr Muthivhi Leonard for his support, encouragement and trust throughout the study.

My son, Mpho, my daughters Livhuwani, Mulanga, Itumeleng and my grandchildren for their support.

Above all, I give thanks to the almighty God who gave me the strength, courage, good health and wisdom to accomplish this.

ABSTRACT

Conditions in rural schools regarding learner academic performance are still categorized as below the expected level of performance based on national and international standards. Learners and teachers continue to underperform as evidenced by poor results in schools. The aim of this study was to investigate the extent to which teachers are professionally developed to promote teaching and learning in rural primary schools. The study was conducted through mixed methods approach. Simple random sampling was used to select teachers from twenty-four public primary schools. Purposive sampling procedure was followed to select participants who were interviewed face-to-face. Results showed that teachers find that teacher's professional development programmes are too demanding. The training of teachers who are at work should be conducted during school holidays to avoid disruption of classes. The study concludes that if teachers are well developed, teaching and learning would be effective. The study recommends that the department should organise workshops for teachers in rural areas and train them taking into consideration the conditions in the rural areas.

KEYWORDS

Professional development; teachers; promoting; teaching and learning; rural primary schools

Contents

CHAPTER 1

ORIENTATION TO THE STUDY

1.1   INTRODUCTION

Education is a never-ending process. It does not stop after obtaining a degree and starting a career, so more attention must be paid to teachers' professional development. This study investigates professional development of teachers for promoting teaching and learning in rural primary schools of Tshinane Circuit. In this chapter, I present the background of this study, followed by the statement of the problem, aim and objectives of the study, research questions, research design and methodology, ethical considerations and significance of this study, organisation of chapters and theoretical framework of this study.

Currently, poor learner academic performance is a major problem in South African public schools. A considerable number of primary schools in the Vhembe District are performing poorly. The Department of Basic Education (DBE) is developing intervention strategies to address this challenge. However, the interventions and turn around strategies have not been sustainable (Mbulaheni, 2015). Teachers have undergone some in-service training to equip themselves, but this has been inadequate for promotion of teaching and learning in primary schools. Due to lack of capacity in provinces, in most schools to implement major changes as proposed, the government scaled down its plans to implement the new curriculum to Grade 1 from the outset (Badugela, 2012).

1.2   BACKGROUND OF THE STUDY

According to Legari (2004), vast disparities existed between Blacks and Whites pertaining to access educational opportunities, before 1994. The extent of exclusion of Blacks was great in the learning and teaching of some subjects, including Mathematics and Science (Department of Education 2001). To this day, conditions in most black rural schools are still the same. One of the reasons is that the pace of educational development in South Africa is not as fast as most people expect. Due to effects of apartheid, teachers were not trained enough for quality teaching and learning. Engineering of educational policies along the lines of ethnicity and language within 'homelands' was preceded by poorly managed authorities tasked for providing education for disempowerment (Naidoo, 1997).

In order for educators to fulfil their roles effectively, they needed to have the required knowledge and skills based on their roles as per the Norms and Standards for educators (DoE 1996). These roles were (1) learning mediator, (2) interpreter and designer of learning programs and materials, (3) administrator and manager, (4) scholar, researcher and lifelong learner, (5) community, citizenship and pastoral role, (6) assessor and (7) learning phase specialist. Therefore, if teachers were not well equipped, it is most likely that they were going to face several challenges in their classes (Killen, 2007).

Since 1994, the Department of Education has developed policies and legislation such as the South African Schools Act no.84 of 1996, Curriculum 2005 and whole School Evaluation aimed at transforming the education system. The emphasis of these polices and legislations is on achieving equitable access to education, encouraging the involvement of different stakeholders (especially learners and parents) in the running of school (Potgieter, Visser, Van der Bank, Mothata, Squelch, 1997) and Mathonzi (2011). While polices have changed, and much has been done, the general pass rate for grade 12 learners in rural areas, for example, has remained low, especially in Mathematics and Science (DoE, 2001).

According to Muremela (2014), the induction of novice educators has not received the priority it deserves in the Limpopo Province and many induction programs also failed to guide and help beginner educators in their transition to the profession. Teachers seem to have been poorly trained to cope with changes in the education system for them to promote quality of teaching and learning. Allie (2014) states that training and development available to principals during the apartheid era was inadequate; head teachers were often appointed to the role without any preparation, having to rely on common sense and character. This had a negative impact on the culture of teaching and learning in the majority of South African schools.

According to Sinyosi (2015), the quality of education in South Africa has increasingly come under scrutiny for various reasons. For example, learners' performance in some subjects, including Mathematics and Science, did not seem to improve and were thus areas of concern in the quest to improve the quality of teaching and learning. Learners who wanted to pursue careers such as civil engineering, medicine and other qualifications where Mathematics was a pre-requisite, found it difficult to follow these careers.

The transition from apartheid to democracy involved massive changes to the education system of South Africa. Fullan (1991) states that thousands of workshops and conferences led to no significant change in practice when the teachers returned to their classrooms. Leu (2004) adds that professional development of teachers has been neglected in many developing countries. According to Hlalele (2012), there is no "one size fits all" approach to policy and its implementation because the realities faced by people in rural areas cannot always be addressed by policy made elsewhere and for everyone. Excellence in teaching and learning in rural contexts remains a challenge.

Ntapo (2009) indicates that the educational service provided by a community depends on the quality of its teachers. Ntapo further indicates that professional development is important to improve teachers' skills, knowledge and attitudes for quality teaching and learning.

1.3   PROBLEM STATEMENT

South Africa has undergone numerous changes especially in the education system, since the end of Apartheid in 1994. The OBE methodology was introduced in 1997. OBE, as expressed in Curriculum 2005, was planned to ensure that the process and content of education are emphasized by "mapping" the learning process from the outcomes. Its aim was to ensure that all learners are able to achieve to their maximum ability and are equipped for lifelong learning in the then new democratic society of South Africa, irrespective of where they are in society. Rural schools were marginalized during the apartheid era, a situation that has presently not changed. Conditions in these rural schools and learner performance are still categorized as below the expected level of performance based on national and international standards. Learners and teachers continue to underperform as evidenced by poor results in schools. While there are efforts by the department to improve teachers' teaching skills, presently, there is no scientific evidence on ways of developing teachers for promoting teaching and learning in rural schools. Furthermore, there is dearth of literature regarding the development of primary school teachers to cope with situations in rural contexts. Therefore, the question this study asks is: How are teachers professionally developed for them to promote teaching and learning in rural primary schools?

1.4   AIM AND OBJECTIVES OF THE STUDY

The aim of this study is to investigate professional development of teachers for promoting teaching and learning in rural primary schools of Tshinane Circuit.

1.5   OBJECTIVES

The study was guided by the following research objectives:

- To explore how professional development of teachers in rural primary schools is affecting the promotion of teaching and learning;
- To assess critical aspects of professional development of teachers in rural primary schools taking into account the contextual factors for them to promote teaching and learning.
- To investigate how primary school teachers can be developed to cope with teaching and learning realities in rural contexts.

1.6   RESEARCH QUESTIONS

This study was guided by the following research questions:
- How is professional development of teachers in rural primary schools affecting the promotion of teaching and learning?
- What are the critical aspects of professional development of teachers in rural primary schools taking into account the contextual factors for them to promote teaching and learning?
- How can primary school teachers be developed to cope with teaching and learning realities in rural contexts?

1.7   RESEARCH DESIGN

Research design refers to the detailed plan of how research will be conducted. It provides a plan for assembling, organizing and integrating data (De Vos, Strydom, Fouche '& Delport 2011). It also provides the framework for collecting the data to investigate the research topic.

The research design of this study was based on the pragmatic research paradigm. The study followed the mixed method (quantitative and qualitative) research approach. The design was adapted in order to acquire a complete understanding of

professional development of teachers for promoting teaching and learning in rural primary schools.

1.7.1 Quantitative research design

Stage 1 of the study applied quantitative survey questionnaires in order to obtain a large quantity of data from a large population. A survey questionnaire was administered to a sample of principals and teachers to establish professional development of teachers for promoting teaching and learning in rural primary schools.

1.7.2 Qualitative research design

Stage 2 of this study used qualitative research through face-face interviews in order to obtain a deeper understating of professional development of teachers for promoting teaching and learning in rural primary schools.

1.7.3 Research methodology

The following sub-section provides methodology on how I conducted my study during two different stages of the study.

- **Population of the study**

The population in this study were teachers and principals from the rural primary schools of Tshinane circuit under Vhembe District of Limpopo province in South Africa. In the Tshinane circuit, there are a total of 200 teachers and 24 principals in the 24 public primary schools.

The populations in this study were teachers and principals from the rural primary schools of Tshinane circuit under Vhembe District. Only teachers and principals from public schools formed the target population of this study.

1.8. RESEARCH METHODOLOGY

In this sub-section, the methodology used during the first stage of the study is presented. The quantitative research methodology will be presented first followed by the qualitative methodology. These are presented in the section that follows:

1.8.1 Quantitative methodology

The quantitative methodology followed in this study is briefly presented and discussed in full in Chapter 3.

1.8.1.1 Sampling procedure

Payne (2004) refers to sampling as the process of selecting a sub-set of people or social phenomenon to the studies from a large universe to which they belong. During the quantitative stage of the study, simple random sampling was applied to select a total of 150 teachers and principals from the 24 public rural primary schools in the Tshinane circuit. Random sampling allows anyone in the population to have an equal chance of being selected in the study, thus minimising biasness of the study findings (Babbie & Mutton, 2009). In this study, I requested a list of teachers and principals from each school in order to have a composite list from which the sample was selected.

1.8.1.2 Instruments

In the first stage of this study, I administered self-constructed and pre-tested survey questionnaires. Questionnaire consisted of three sections. Section A contained four close-ended items which required demographic data from the respondents. Section B of the survey questionnaire sourced responses on effects of professional development in rural areas and had 20 close-ended items. Section C of the survey questionnaire contained critical aspects of development for rural teachers with 10 close-ended items. Detailed discussion of the instrument is given in Chapter 3.

1.8.1.3 Data collection procedure

In consultation with the District manager, Circuit manager and principals of twenty-four primary schools of Tshinane circuit, a total of 150 survey questionnaires were distributed and received after two weeks. The details and procedures followed in the collection process are presented in Chapter 3 of this study.

1.8.1.4 Data analysis

I captured the results through the statistical package for social Sciences (SPSS) from where analyses of attached schools were collected. Frequency percentages were established and the confidence levels of the results obtained.

1.8.2 Qualitative research methodologies

In this sub-section, the methodology used during the second qualitative face-to face interview stage of the study is discussed.

Sampling procedure

A sample for this stage of the study was drawn from twenty four primary schools where this study was undertaken. A purposive sampling technique was applied to select the most experienced teachers, novice teachers and principals. These participants were interviewed through a face-to-face interview.

Instruments

Semi-structured and unstructured interview questions were used. The questions were outlined as follows: Section D was about development of teachers for rural schools. Objective 1 had two questions, Objective 2 had three questions and objective 3 also had three questions.

I asked eight questions guided by the following main research questions:

1. How can professional development of teachers in rural primary schools affect the promotion of teaching and learning?
2. What are the critical aspects of professional development of teachers in rural primary schools taking into account the contextual factors for them to promote teaching and learning?
3. How can primary school teachers be developed to cope with teaching and learning realities in rural contexts?

Data collection procedure

A face-to-face in-depth interview was utilized for experienced teachers, novice teachers and principals in English in order to get a deeper understanding on professional development of teachers in rural primary schools. A Samsung Galaxy 7 cellular phone was used to record all the information without video recording during interviews. During the process, an interview schedule was used as a guide finalizes the whole procedure for producing a report.

Data analysis

In this study, data was transcribed and presented within themes that arose from the first quantitative stage of the study. Themes that arose from the texts were presented in support of the interpretations of stage 1 and are documented in Chapter 4.

1.9   DELIMITATION OF THE STUDY

This study was delimited to primary schools in the Tshinane Circuit of Vhembe District in the Limpopo Province. I identified Tshinane Circuit as one of the areas which contains most rural communities. I purposefully selected the schools because these have the most experienced teachers, novice teachers and principals.

1.10   ETHICAL AND SAFETY ISSUES

Ethics is defined as the branch of philosophy dealing with values that relates to human conduct, with respect to the rightness or wrongness of specific actions, and to the goodness or badness of the motives and ends actions (Chandler & Plano, 1998).

I wrote letters to obtain permission from provincial department of education, district office, circuit office and schools. I informed the participants about the overall purpose of the investigations and that they are free to participate or withdraw from the study. Data was kept confidential and anonymous.

1.11   SIGNIFICANCE OF THE STUDY

The study was projected in adding up the contemporary and relevant knowledge in the existing methods on understanding the perceptions of teachers about their training and development for future scholars. The findings of the study will be shared

with schools where data will have been collected. They will be made available in the form of a dissertation placed in the community library together with recommendations; these will hopefully reach the National Department of Basic Education for consideration.

1.12 ORGANISATION OF THE RESEARCH CHAPTERS

The data of this study was organised into five chapters. Each of the chapters dealt with specific aspect of investigation; however, some aspects are interrelated. Chapter 1 presents the background of this study, followed by the statement of the problem, aim and objectives of the study, research questions, research design and methodology and ethical considerations and significance of this study, organisation of chapters and theoretical framework of this study.

Chapter 2: Literature review on professional development of teachers

Related literature relevant to professional development of teachers for promoting teaching and learning in rural primary schools is presented in this chapter. This chapter was concerned with the theoretical framework that has informed the phenomenon under study on professional development of teachers. A literature review on professional development of teachers for promoting teaching and learning in rural primary schools of Tshinane Circuit is presented later in this chapter. Professional development of teachers for promoting teaching and learning in rural primary schools are outlined in this chapter.

Chapter 3 Research design and Methodology

This chapter provides details with regards to methodology applied to investigate professional development of teachers for promoting teaching and learning in rural primary schools of Tshinane Circuit. Quantitative and qualitative research paradigms are discussed in this chapter. Data collection strategies, description of research

plan's instruments, ethical considerations, recording and transcribing of data are also provided in this section.

Chapter 4 Presentation, analysis and interpretation

In this chapter, presentation, analysis, and interpretation of both data obtained from the first stage of quantitative and second stage of qualitative of the study is made. Data is presented the form of tables followed by discussions of interpretations. The chapter concludes with the provision of a summary of the main ideas discussed in sections.

Chapter 5 Synthesis, findings, recommendations and conclusion

In this chapter, documented synthesis and discussions of findings, recommendations contribution to the body of knowledge is done. A summary of the main findings from both quantitative approach and qualitative approach of the study is also presented.

1.13. SUMMARY

In this chapter, an introduction of the study was presented. The problem of the research project was provided and explained. The aims of the research are clearly specified to indicate what the study aimed to achieve with the establishment of participative study on professional development of teachers for promoting teaching and learning in rural primary schools. The aims were followed by research questions. The research design and methodology were explicitly stated so that the reader is clear of all the procedures to be followed through the process, of the study, and finally the plan of the study was provided. The introduction of the study provided in this chapter serves as a point of departure for the presentation of literature in the next chapter.

CHAPTER 2

LITERATURE REVIEW

2.1   INTRODUCTION

Chapter 1 presented the introduction and background to this study. This chapter presents a literature review on professional development of teachers for promoting teaching and learning in rural primary schools of Tshinane Circuit. It also presents the theoretical framework and literature on how researchers provide insight into the teaching strategies used by primary school teachers in under-resourced rural areas. This encompasses their ways of dealing with different under-resourced environments, including teachers as human resources in the field of teaching. This was guided by the following research objectives:

- To explore how professional development of teachers in rural primary schools is affecting the promotion of teaching and learning;
- To assess critical aspects of professional development of teachers in rural primary schools taking into account the contextual factors for them to promote teaching and learning.
- To investigate how primary school teachers can be developed to cope with teaching and learning realities in rural contexts.

2.2   THEORATICAL FRAMEWORK

A theoretical framework is a set of terms and relationships within which the problem is formulated and solved. It is a description of the major variables operating within the arena of the problem to be pursued together with the researcher's overarching view of how the variables interact to produce a more powerful or comprehensive model of relevant phenomena that has not been available for shedding light on the problem. Eisenhart (1991) defines a theoretical framework as a structure that guides research by relying on a formal theory, constructed by using an established, coherent explanation of certain phenomena and relationships.

This study was guided by the Teacher Driven Theory as postulated by Colbert, Brown, Choi and Thomas (2008). Colbert et al. (2008) postulate that effective professional development that appears the most in literature are methods that help teachers to deeply understand academic content and the ways students learn. Professional learning of schools should be based on improvement of learners, teachers' and leaders' development (Timperley, Wilson, Barrar & Fung, 2007). There can be no "one size fits all" approach to effective teacher professional development. Differences in communities and contexts, school administrators, teachers, and learners uniquely affect professional development processes and can strongly influence the characteristics that contribute to professional development's effectiveness (Guskey, 2003).

There are a number of collaborative models that demonstrate effective professional development and create a culture of inquiry (Zeichner, 2003; Bonner, 2006; Colbert et al. 2008). A culture of inquiry supports the use of data to evidence success, identify strengths and weaknesses and measure progress toward goals. Cultures of inquiry can provide teachers with opportunities to dialogue about learning as learning relates to lesson planning, learner achievement and their class activities (Garmston, 2005; Bonner, 2006). Cultures of inquiry are characteristic of effective professional development because teachers have the opportunity to give and receive feedback about learning amongst their colleagues (Danielson, 2005).

Teacher driven professional development theory purports that there are three core features significant for teacher professional development activities: focus on content knowledge, active learning, and coherence with other learning activities (Garet, Porter, Desimone, Birman & Yoon, 2001). The implications of conducting professional development within the realm of the first one suggest that traditional structural features of professional development (second), such as workshops, seminars, and so on should be supplanted by new models such as mentoring, peer observation and coaching, networking and collaborative work.

When teachers collaborate, there is an increase in their academic content knowledge and increased direct communication about student performance (Badugela, 2012). Improving teacher quality depends on improving professional development, and improving professional development depends on creating meaningful learning experiences for teachers in the environments they find themselves. Building professional learning communities among teachers, which encourage the assumption of leadership roles and continuously assess the teachers, has been supported by an increasing number of studies that identify the importance of collaboration as a key characteristic of effective professional development. Several studies that investigated the role of collaboration in professional development found that collaborative activities amongst teachers were an effective method of professional development to improve teacher efficacy (Holloway, 2003; Zeichner, 2003). Collaboration should include groups within the same community, the same school, same grade, or department so that teachers can work together in a focused environment while dealing with issues of common interest. Collaboration should take into consideration the contextual and environmental factors for teacher development to succeed.

Guskey (1995) concurs that to have the greatest impact, professional development must be designed, implemented, and evaluated to meet the needs of particular teachers in particular settings. The Teacher-driven development theory proposes that professional development should respond to teacher's self-identified needs and interests in order to support individual and organizational improvements (King & Newmann, 2000). King and Newmann (2000) further indicate that professional development is more meaningful to teachers when they exercise ownership of its content context and process. Bonner (2006) agrees that teachers should be provided with the autonomy to exercise professional judgment about their professional needs so that they can have ability to choose the problem and identify the best solution to the problem.

The current study was based on the Teacher Driven Theory on which teachers' development disciplines are the pillars used to develop teachers across the country.

The theory behind these teachers' development programs assisted in establishing gaps in teachers' development at the Tshinane circuit.

2.3   PROFESSIONAL DEVELOPMENT OF TEACHERS IN RURAL PRIMARY SCHOOLS   IS AFFECTING THE PROMOTION OF TEACHING AND LEARNING

South Africa is facing both teacher quantity and quality issues (Truter, 2015). The shortage of high quality and highly qualified teachers is a challenge facing education system in rural areas. White teachers plan to leave the country to teach abroad, and about half of new teachers have recently considered leaving the profession (OECD 2013, 68). Human resource serves as one of the most vital parties in the driving of any process, including the education system (Legari, 2004). Reference is made to Physical Science teachers because they serve as the actual human resource factor. Swell and Buirski–Burger (1998) affirmed that the role played by resources includes better qualified teachers. Roles played by communities in the process of educating the learners in schools are also critical because teachers cannot be expected to know everything. The low level of output due to differing aspects (including the society as one aspect) has a direct impact on the capacity of the system to produce qualified educators who are relevant and can promote teaching and learning (Department of Education, 2001).

This section presents literature reviewed on professional development of teachers in rural primary schools, which is affecting the promotion of teaching and learning. This discussion is guided by sub-headings informed by the objectives of this study.

2.4   TEACHER PROFESSIONAL DEVELOPMENT IN RURAL SCHOOLS

Schools and administrators have difficulties in finding qualified teachers who are appropriate and prepared to work in rural schools and communities, and who are willing to keep jobs in rural areas (Adedeji & Olanrewaju, 2011). Mukeredzi (2013) suggests that if teacher learning and professional development are to be supported

in rural schools, particularly in South Africa, then schools' support should be built into structures that continuously and purposefully bring teachers together to enhance their professional development as determined by the context.

Conditions in rural contexts require specialized training and development of teachers to cope with situations for them to promote the quality of teaching and learning. Kedzior (2004) adds that research on learning and effective teacher development discovered that today's teacher development is not designed to develop the teacher expertise needed to bring about improved student learning. Therefore, teachers trained would not optimally promote the quality of teaching and learning particularly in rural areas. Furthermore, Guskey (2003) states that differences in communities of school administrators, teachers and students strongly influence characteristics that contribute to professional development's effectiveness. Therefore, professional development must be designed to meet the needs of particular teachers in a particular setting.

The Association for Supervision and Curriculum Development (2003) indicates that professional development should be continuous and include follow-up and support for further learning. The post-1994 democratic government in South Africa has paid less attention to rural education (Masinire, Maringe & Nkambule, 2014). Masinire et al., 2014) added that specific needs of rural schools have been given low priority in terms of both policy and the level of governance that prevail in rural areas. While quality teachers are the cornerstone for sustainable education and rural development, rural areas experience both quantitative and qualitative teacher shortages, and the majority of South African learners are condemned to substandard education (DoE, 2005).

Letsatsi (2010) states that the key purpose of teacher professional development is about empowering teachers to enhance their efficiency in their teaching while developing them in their professional career cycle as a whole. Geldenhys, Lizette and Oosthuizen (2015) concur with Letsatsi (2010) on the different forms of teacher

professional development programmes in South Africa such as workshops, conferences, consultation and peer appraisal. Geldenhys et al. (2015) suggest that the form of teacher professional development should be continuous throughout the year. This form of practice will be assisting teachers on the evaluation and monitoring or the effectiveness of the training and development programmes.

Teachers need extensive learning opportunities in order to meet the current education challenges (Ogbonnaya, 2007). Louks- Horsley Hewson, Love and Stiles (1998) confirm that practicing teachers can receive professional development through their interactions with other teachers by being taught by other teachers during meetings of professional associations and through numerous workshops and presentations. Ogbonnaya (2007) indicates that professional development rooted in the subject matter and focused on the students' learning can have a significant impact on students' achievement. This type of development enables teachers to have an in-depth understanding of content of particular learning areas to help students to grasp everything being taught by the teacher. Mastering the subject matter also helps the teacher to develop certain skills that can assist in dealing with different types of learners with regard to their level of intelligence.

Rural spaces have abundant cultural and indigenous knowledge systems that have to find space in educational discourses and teacher educational programmes (Moletsane, 2012). This suggests that the teachers in those areas need specialized training to cope with conditions in the rural areas. Atchoarena and Gasperini (2002) add that education and training are considered two of the most powerful strategies for rural development whereas Seroto (2004) believes that those are the most neglected aspects of rural development by the governments and the donor community.

The movement of well-educated or skilled members of rural areas who move to urban areas confronts rural schools, rural graduates as well as rural development and sustainability, and this has led to the current notion of rural education not being

aligned with rural development (Corbett, 2007). Corbett further indicates that teacher education development programmes should include training in the core courses about education for rural development. Masinire, Maringe and Nkambule (2014) add that in South Africa, learning and teaching challenges in rural schools are tied to the sustainability of rural education and rural communed.

These studies suggest that the notion of poor culture of teaching and learning in rural schools is caused by a lack of teachers' content knowledge (Masinire et al., 2014). The studies do not, however, indicate how these conditions can be improved. There is no mention of how such lack of teacher professional development affects teaching and learning.

2.4.1 The effects of teacher professional development on student learning

The programs that focus on subject matter knowledge and on student learning of particular subject-matter are likely to have positive effects on student learning (Kennedy, 1998). When teachers meet during these workshops, they share experiences. These programmes have the greatest effect on students' basic skills, reasoning and problem-solving performance because of these collaborations. Furthermore, Carpenter, Fennema, Franke and Levi (2001) indicate that when teachers collaborate, they learn from their mistakes and share successful strategies. Birman, Desimore, Garet, Porter and Yoon (2001) confirm that incorporating active learning in professional development increases knowledge and skills and changes teachers' classroom practices. These changes would have a positive effect on teaching and learning.

Effective use of collaboration to improve teaching and learning has been found to be successful. Successful classroom practice is underpinned by professional collaboration because teachers and leaders plan together and discuss instructional learning (Tshikululu, 2016). Furthermore, Tshikululu indicates that by so doing, professional development is shared. Tshikululu indicates further that teamwork and

getting stakeholders together is a useful strategy to improve teaching and learning. In addition, collaboration is not yet a practiced culture in schools; teachers remain vulnerable and fail to meet the requirements for effective teaching (Botha, 2015). Botha further indicates that collaboration and information-sharing enables teachers to improve teaching and learning and a collaborative work environment enables teachers and school leaders to engage with each other to improve teaching practice (Schmoker 2004; Harris & Hopkins, 2008; Botha, 2015).

Teacher improvement can be attained by frequent discussions and activities centred on teaching practice. Collaboration provides an opportunity to create professional learning communities that share and learn together. Botha concludes that lack of professional development for school leaders and teachers can be a hindrance to the improvement of learner performance.

2.4.2 Teachers' perceptions on their professional development

Professional development improves student learning and makes effective teaching to be practical, thus giving new knowledge and encouraging participation through sharing ideas (Mohan, Lingam & Chand, 2017). Smith and Gillespie (2007) state that productivity of teachers comes from pre-service training and continuous professional development. Teachers develop better content knowledge and become more confident in their practice through participation in professional development programme (Harris, Cale & Musson, 2011).

Mohan (2016) found that rural teachers are more in need of professional development relating to student learning and teaching, community partnership, school culture and how to manage with minimum teaching resources. Teachers think that novice teachers have different professional development priorities when compared to experienced teachers. Professional development of teachers should address their specific needs so that the experience becomes more meaningful. Teachers' professional development experience should allow them to keep up with

the changes taking place in the education system; it ensures that their teaching practice remains relevant to their students' needs (Aminudin, 2012). Teachers think that these professional development activities should be planned to determine needs of novice, experienced, rural and urban teachers (Mohan et al., 2017).

2.4.3 Teacher's recruitment and qualifications

By contrast, schools in rural areas face major problems in attracting and retaining adequately qualified and experienced teachers duly trained to teach in these areas. Qualified and more experienced teachers are concentrated in urban schools, which tend to be overstaffed. Teachers should take a leading role in developing strong university-school-department of education partnerships to create university awareness of the realities in rural schools. Azano and Steward (2016) agree that recruitment and retention of highly qualified teachers is one of the challenges faced by rural communities.

Collins (1999) adds that recruiting teachers to rural areas needs more emphasis on the benefits of teaching and benefits of small schools in rural areas. There should be financial incentives, providing land for homes in exchange for time commitment (Osterholm, Horn & Johnson 2006). Additionally, Osterholm et al. (2006) emphasize the sense of community, peace and quiet of rural community with lower crime rates, less stress, increased personal connections both in the school and community as a recruitment strategy. McLean and Saqlain (2017) add that a loan forgiveness program for a contractual commitment to stay in a rural community could be more enticing to current pre-service teachers.

Considerable issues should be considered when recruiting teachers for rural schools; these include training needs for rural schools and recruitment of teachers trained to meet these specific contextual needs. Moreover, in recruiting teachers for rural schools, it has been recommended that candidates be recruited from the regions where schools are situated, with the hope that personality history and family connections may entice them to return to teach in their home area after certification

(Craig, Kraft & Plessis, 1998). They should be provided with incentives to return to teach in rural schools, if not in their own communities.

Heeralal (2014) suggests that schools should target candidates with rural background or those who have personal characteristics that predispose them to live in rural areas, in order to attract good quality teachers. Students that have a rural background should be encouraged to consider returning to their rural home communities once they qualify. The presumption is that those individuals have family roots in these rural areas and can be willing to return and remain in these rural settings.

Collins (1999) found that once qualified teachers have been recruited to teach in rural areas, the challenge is to retain them in those schools. The degree to which a rural teacher becomes involved in community, educational and cultural programs influence their decision to remain at a rural school. Therefore, retention requires a co-ordinated school community effort that assists the new rural teacher to overcome feelings of isolation, acquire a sense of community security and develop professional competence. These studies suggest that teachers who teach in rural schools should receive specialized training for them to cope with conditions prevailing there. Collins (1999) further argues that a teacher with emotional support and good mentoring can also assist in increasing retention rates significantly. Institutions should consider developing teachers and put in place appropriate monitoring strategies to ensure learner success in rural areas.

Unqualified and under-qualified teachers bring a negative impact in the performance of rural learners (Mitchell De Lange, Balfour & Islam, 2011; Majongwe, 2013). It is very rare these days to find unqualified teachers, but there are these government grant holders who have been granted scholarships by the Department of Education to train as teachers. Even though they are given four years of training, it seems as if they are not trained enough. They seem inexperienced and find themselves

struggling with teaching learners and not knowing how to handle them in a classroom situation.

Under-qualified teachers are those that may have both academic and professional teaching qualifications, but their qualifications can be viewed as inadequate at a given point due to curriculum or policy changes. Most African countries embark on massification of educational provision across all levels. On the other hand, this is creating severe teacher demand that exceeds supply (Kapfunde, Wolhuter, Lemmer and de Wet, 2007). Mukeredzi (2009) observes that governments recruit professionally unqualified and under-qualified teachers into the teaching profession to address teacher shortages in Mathematics and Science. Mukeredzi indicates further that these are university graduates, practicing as experienced teachers whereas they are professionally unqualified.

Chikoko (2006) agrees that recruitment of professionally unqualified and under-qualified teachers into teaching to address teacher shortage particularly in rural schools has become an international strategy. Conditions in rural areas are varied and different from those in other areas and need special attention. Kruijer (2010) in Togo discovered that students taught by qualified teachers perform better than those who are taught by unqualified teachers.

Majongwe (2013) in Zimbabwe adds that rural schools, mainly staffed with professional unqualified teachers, performed badly in 2011 and 2012 whereas from South Africa, Mitchell, de Lange, Balfour and Islam (2011) confirm that rural children receive poorer education due to many unqualified teachers and other complexities in rural schools. Despite recruitment of unqualified teachers, the deployment of teachers across African countries is neither efficient nor equitable (Heeralal, 2014). Heeralal states that the primary reason why teachers leave rural areas is isolation-social, cultural and professional.

Anderson, Horton and Orwick (2004) suggest that teacher training schools should prepare pre-service teachers with the knowledge of rural people and their culture. However, when teachers leave a school, they take all the cultural and organizational knowledge they have gained with them and destroy any pedagogic partnerships previously established with other teachers (McLean & Saqlain 2017). Although teachers are recruited and professionally developed in rural schools, it is not easy to retain them.

2.5   FACTORS AFFECTING TEACHER PROFESSIONAL DEVELOPMENT

Teacher professional development is a sum total of formal and informal learning experiences throughout one's career from pre-service teacher education to retirement (Linnemanstons & Jordan, (2017). Professional development helps teachers to gain the skills necessary to enhance their teaching methods. Comprehensive and well-executed professional development programs are necessary to assist and support teachers throughout placed-based education process (University Maryland Survey Research Centre, 2000; Linnemanstons & Jordan, 2017). Linnemanstons and Jordan (2017) indicate further that training provided curriculum development support and interaction with a variety of education and interpretive professionals. These professional development programs are often measured based on the impact they have on the teacher participants and should therefore be contextualised (Meichtry & Smith, 2007).

2.5.1 Teachers' continuing professional development

The importance of continuing professional development for teachers is to improve their teaching practice. Van Veen, Zwart and Meirink (2012) believe that integrating new knowledge, learning together with colleagues and being fully involved in meaningful discussion is very helpful in developing continuing professional development programmes. Opfer and Pedder (2011) further indicate that professional development activities must build on teachers' own knowledge and beliefs, perceived problems and classroom practices.

Vermunt and Endedijk (2011) discovered that teachers' learning processes within the context of a continuing professional development may vary considerably. Therefore, it must be taken into consideration that teachers learn differently and have different learning needs when conducting a continuing professional development programme. Teachers in rural areas have different needs compared to those in urban areas and therefore have different training needs.

Furthermore, Ingvarson, Meiers and Beavis (2005) illustrate that the role of the trainer is to give feedback tailored to the concerns, practices and learning characteristics of each individual teacher and in different contexts. According to Lekome (2006), the idea of developing a new appraisal system as a component of Integrated Quality Management System (IQMS) is to improve the quality of education in South African Schools. Lekome further indicates that this idea was developed to address the competency and incompetency of teachers. The purpose of Developmental Appraisal System (DAS) is to evaluate the strength and weakness of individual teachers and draw up developmental programmes (Rambuda, 2006).

Teachers from different contexts would need to be evaluated and trained based on their needs. Rambuda (2006) confirms that it is imperative that teachers conceptualise developmental appraisal as a tool for self-empowerment, advancement, accountability and improvement of staff performance (Gallie, 2006; Hammonds, 2002). Some teachers perceived developmental appraisal as non-developmental and biased (Kolobe, 2017). Kolobe adds that a monetary reward is a source of conflict and senior staff detests being evaluated by junior staff. Therefore, evaluators should strive to add any new ideas about how the developmental appraisal can be done to empower teachers.

2.5.2 Teacher professional development in ICT

Alexander (1999) indicates that information and communication technology (ICT) is increasingly becoming part of everyday lives and a major aspect of organizational

life. Alexander highlights the powerful impact ICT can have on the teaching and learning process. Teachers need mastery of and access to information and communication technology to manage the learning of their students through teacher training and professional development (Nyambane and Nzuki 2014). According to Pachler (1999), teacher training and development is a critical success factor in deploying ICT in education. Furthermore, Alexander (1999) concurs with Pachler (1999) on the fact that on-going teacher support and training is critical to the successful utilization and integration of ICT in education. Alexander (1999) views on-going teacher development activities as highly effective compared to once-off training activities.

Professional development refers to skills and knowledge attained for both personal development and career advancement. Professional development encompasses all types of facilitated learning opportunities, ranging from college degrees to formal coursework, conferences and informal learning opportunities situated in practice (Amadi, 2010). Amadi indicates that through teacher professional development, teachers learn new teaching strategies to improve the quality of instruction. This allows them to make changes in the way they teach their students and incorporating innovative teaching methods in the classroom. It teaches them how to work with a variety of learning styles since not all students learn the same way. Amadi further indicates that it also helps teachers change their day-to-day teaching methods, thus encouraging them to accept new methods based on accurate education research.

Additionally, Ikram (2017) adds that teachers are trained to use learning media in their nursery classrooms in rural areas of Pakistan. He points out teachers' frustration and motivation towards learning technology in those areas. Furthermore, Tatum and Morote (2007) agree with Ikram (2017) that teachers face more challenges to incorporate media technologies into instruction that include technical support and professional training. Ikram further indicates that lack of funds and technology training was the biggest frustration for teachers. He also states that it provided an opportunity for teachers to replace their traditional teaching methodologies such as lecture into more interactive and student engaged activities.

26

The issue of teachers' professional development has become necessary because of the introduction of the use of computers in teaching and learning processes in Science classrooms (Ogunkola & Olatoye, 2008). Kadijevick (2002) suggests that teachers should develop knowledge and skills in learning technologies to be able to use the tools, resources, processes, systems and to be able to retrieve, assess and evaluate information from various media.

Yushau (2003) adds that teachers need to be competent to use Information and Communication Technology (ICT) in order to make use of ICT as a tool of teaching. A competent Science teacher will use the knowledge, skills and information to assist learners in solving problems and constructing new knowledge in diverse learning environments. However, these conditions do not exist in marginalized rural schools. Dawadi and Shakya (2016) and Rana (2018) confirm that it is not easy to equip rural schools with ICT. There are major challenges such as lack of skilled workforce, unreliable and costly internet facilities, low level of ICT literacy in rural communities, high hills and mountains, lack of hydropower in the countryside, lower power solar energy and lack of security for ICT infrastructure.

Rana (2018) suggests equipping rural primary schools with computer lab and ICT training for teachers as significant initiatives to change traditional pedagogies to modern teaching and learning strategies. Rana further suggests that government training programmes should align with ICT training to transform teachers' traditional teaching strategies to modern learning methods so that teachers could explore the potential of digital technologies. Additionally, Ogunkola and Olatoye (2008) recommend that it is necessary to make regular seminars and workshops available for Science teachers in order to improve their computer skills. Ogunkola and Olatoye further recommend that Science teachers should be motivated to own their computers for the purpose of improvement in using computer for educational purposes. These studies are, however, silent on how teachers in rural areas where such facilities are not available, can be skilled or even developed.

2.6   TEACHER PREPARATION FOR QUALITY TEACHING AND LEARNING

Teachers must have a firm grasp of the subject matter that the National Curriculum requires, an understanding of how children learn, and the ability to deploy a wide range of teaching skills (Alexander, Rose & Woodhead, 1992). Alexander, Rose and Woodhead (1992) indicate further that every primary school, regardless of size, needs access to subject knowledge in all nine National Curriculum subjects. This expertise needs to inform curriculum planning and teaching based on context. Since these are programmes introduced at a later stage of a teacher's career, teachers should be developed further for them to promote teaching and learning.

According to Kirkpatrick's (1994) model of learning and training evaluation, four levels of evaluation should always be followed to evaluate the effectiveness of the training programme, namely: reactions, learning, transfer and results. By *reactions* Kirkpatrick implies the measurement of how participations in a training programme react to it. Kirkpatrick (1994) argues that every programme should be evaluated at this level to provide for the improvement of the training programme. He further explains that *assessing at the level of 'learning'* means moving beyond learner satisfaction and attempting to assess the extent to which students have advanced in skills, knowledge and attitude. *Transfer* measures whether the learning programme has changed the learners' behaviour. The fourth level of Kirkpatrick's model is *results*, and this measures the success of the programme in terms of improved quality training programme.

2.7   CRITICAL ASPECTS OF PROFESSIONAL DEVELOPMENT OF TEACHERS IN RURAL PRIMARY SCHOOLS

To assess critical aspects of professional development of teachers in rural primary schools taking into account the contextual factors for them to promote teaching and learning.

2.7.1 Impact of teaching and learning resources on the professional development

Schools in South Africa differ greatly in terms of resources. Some schools are well-resourced while others are poorly resourced, particularly those which serve poor communities. This hinders strategies for promoting teaching and learning. Insufficient teaching and learning resources are regarded as critical for teachers in implementing competence based curriculum with variations from one school to another (Makunja, (2016).

Schools are arranged in terms of quintiles, with the poorest 20% of schools in Quintiles 1, 2, 3 and located in rural areas and townships (Blease & Condy, 2014; 2015). The study puts focus on the different teaching strategies that the teachers use to overcome the realities of teaching in an under-resourced environment. This includes different aspects that affect the teaching and learning process, both directly and indirectly. The allocation and distribution of resources by the department of education might be one of the problems that cause poor learner performance. Literature is silent on how under-resourcing of schools affects professional development of teachers and learner performance. What is remarkably common in most South African rural schools is that they lack instructional resources, basic services and facilities to implement the curriculum design, unlike in urban schools (Hassan, 2015).

2.7.2 Challenges faced by rural primary school teachers

Schools in rural areas that are far from the district office are not receiving enough supervision as the inspectors find it difficult to visit such schools regularly due to logistical problems. Some teachers with only two months' teaching experience are allocated a class of more than 80 learners in a rural school with socio-economic challenges (Chuunga, 2013). Chuunga indicates that some teachers receive relevant support in relation to their needs, others receive only verbal encouragement yet others receive no support at all. According to Ingersoll and Smith (2003), teachers

that are not supported in terms of learning materials and induction may leave the teaching profession in their first few years of service.

Teachers from rural schools are put under very difficult conditions due to lack of learning and teaching materials and over-enrolment; some parents cannot provide such necessities to their children (McIntyre, Hulan & Layne, 2011). Chuunga (2013) explains that the class size has some effects on literacy acquisition, class management and organization, teaching and learning resources and giving differentiated activities to learners. Some teachers are losing hope while others are developing some amount of resilience because of these challenges. The above researcher adds that another challenge is lack of continuity as teachers are regularly transferred from one school to another. This affects learners negatively because they have to start getting used to another teacher, and it takes long for teachers and learners to develop mutual relationship that can result in learning.

2.7.3 Lack of resources to promote teaching and learning

One of the most significant barriers to learning is the inability of learners to access educational provision and other services which contribute to the learning process (DoE, 1997). Therefore, school facilities need proper attention as they have great value in the support of teachers and students. The students' morale and motivation play a significant role to improve the quality of education. DoE (1997) suggests that in most instances, the inability of learners to access education provision results from inadequate or non-existent services and facilities key to participation in the learning process.

There is also lack of access to information and telecommunication in most educational institutions. Furthermore, there is also a huge gap in terms of infrastructure development between the urban and rural areas (Farrel & Isaacs, 2008). For example, poor access to reliable electricity supply is a general problem in most countries across the continent (Eberhard, Foster, BriceñoGarmendia,

Ouedraogo, Camos & Shkaratan, 2008). However, the situation is far worse in rural areas due to challenges of connecting to national electric grids (Bernard & Torero, 2009)

2.8 TEACHERS' MOTIVATION

It is the role of the Department of Education to motivate teachers. Motivation can be in the form of incentives and allowances that can encourage teachers to perform well. Teachers feel good and motivated, and their mental health is promoted when they are involved in the conception and implementation of their own professional development initiatives while being supported by the school management and seeing professional development linked to additional financial rewards and salary progression (Ravhuhali, Kutame, Mutshaeni & Maluleke, 2014). In addition, Andrew (2004) points out that reward system and recognition affects teacher motivation as the pay given to teachers is not worth the services they render.

Badugela (2012) agrees that teachers do well in curriculum implementation where they are motivated. However, Badugela confirms that teachers feel that they are not supported by department and community, their efforts are not recognized, and incentives and rewards for outstanding achievements are limited financially by the Department of Education. Nyakundi (2012) adds that teacher motivation plays an important role to promote teaching and learning because motivated teachers can motivate learners to learn in the classroom. Nyakundi indicates that the work environment plays an important role in teachers' motivation. Ngidi and Sibaya (2002) concur with Nyakundi that in disadvantaged schools, working conditions are often not conducive to teaching and learning. It was found that workplace arrangement and availability of teaching and learning resources affect teachers' motivation.

2.8.1 Relationships of reciprocity

Professionally trained teachers often believe that what they know is superior to what students' families know and encourage young people to use education to escape their communities, which drives a wedge between students and their families. Cochran-Smith (2004) believes in developing relationships of reciprocity with students, families and communities. Cochran-smith defines reciprocal relationships as working with individuals, families and communities. Gorski (2013) adds that developing such relationships requires work and suggests starting by building relationships of trust and reciprocity with students.

Prospective teachers have low expectations for learners from lower income groups and further add that teachers assume that these children would need extra academic support and would be less likely to experience academic success (Lampert & Burnett, 2014). Sleeter, Montecinos and Jiménez (2013) recommend preparing teachers to work productively with learners in poverty and collaborate with their parents. Sleeter et al. (2013) recommend development of productive family-school relationships to boost students' academic success.

2.9 INCLUSIVE EDUCATION

Mutshaeni, Denhere and Mudhovozi (2010) confirm that in the Apartheid era, South African people with disabilities endured a history of rejection and segregation in the disability society and in education. Mutshaeni et al. further indicate that after apartheid era, the new democratic government sought to remove all barriers to education, and a number of initiatives and policies have been put in the place with regard to the introduction of inclusive education in the schools. Engelbrecht (2006) shows negative attitudes of teachers as the main barrier to inclusive education. Whiting and Young (1995) add that teachers perceive inclusion of learners with disabilities into mainstream settings as difficult and stressful. Moon, Todd, Morton & Ivey (2012) conclude that disabled learners may not be comfortable in the mainstream due to a system that is not supportive and that rejects learners with disabilities. In conclusion, Mutshaeni et al. (2010) recommended that teachers need

continuous training to enable them to handle inclusive classes to promote teaching and learning.

Bullock, Gable and Mohr (2008) suggest that college instructors must improve their own instruction to match the technological and expectations of their students, as well as to model the practices that future teachers will use in their classrooms.

2.10   DEVELOPING PRIMARY SCHOOL TEACHERS TO COPE WITH TEACHING AND LEARNING REALITIES IN A RURAL CONTEXT

This section presents literature on how primary school teachers can be developed to cope with teaching and learning realities in a rural context.

2.10.1 PREPARING TEACHERS FOR CURRICULUM CHANGES

The primary purpose of teaching and learning process is to bring a significant change in behaviour through active participation and critical thinking of the learner (Afework, 2014). Change is a phenomenon that affects all aspects of a person's life and brings about alterations in both personal and employment spheres. According to Badugela (2012), change can be described as the process of analysing the past to elicit present actions required for the future. It involves moving from a present state, through a transitional state, to a desired future state.

The focus of change is to introduce an innovation that produces something better, hence implementation of the new curriculum. It seems that since the introduction of the new national curriculum, subject teachers are required to appropriate kinds of knowledge in order to teach the new curriculum.

Literature reveals that the majority of rural learners in KZN receive inadequate education by unqualified or under qualified educators who lack the necessary content knowledge to implement the curriculum in rural environments (Gordon 2009; KZN Treasury, 2010). There is a strong correlation between education qualification level and students' performance (KZN Treasury, 2010). It seems as if teachers' exposure to suitable teaching strategies is limited and there is no new curriculum adaptation in rural areas.

Consequently, teachers need to be highly trained, resourceful, creative and hardworking and sometimes go beyond their required duty to make learning a success in rural contexts. Legari (2004) maintains that curriculum and associated teaching methods often have difficulty when implemented across the nation. It is critical to determine how teachers in rural primary schools are being developed to promote teaching and learning. Botha (2015) agrees that teachers perceive that learners do not always respond positively to learning as expected even when teachers try to use various strategies of learning; as a result, assessment results reflect negatively. Botha indicates further that when learners' performance is not satisfactory, it indicates that teaching is not effective.

There are internal factors such as curriculum transformation, laboratories, libraries, ablution blocks and canteens influencing teachers in curriculum implementation (Lumadi, 2014). Lumadi (2014) further indicates that there are challenges caused by the introduction of rationalization, retrenchment and redeployment policy as most South African teachers were redeployed to various districts away from their homes, which caused negative impact on curriculum implementation. Lumadi further adds that it also brought a negative impact on children whose parents were redeployed because they could no longer cope with their academic work. Therefore, teachers are not trained to handle these challenges when they come across them.

Goodnough (2011) notes that several stakeholders have identified the need for fundamental changes in teacher preparation and professional development. In

addition, the National Research Council (1996) states that teachers need opportunities to participate in a variety of professional development experiences that foster an understanding of Science and Science teaching for significant changes in teacher education of both student-teachers and practicing teachers.

Darling-Hammond (2005) recognizes that teachers are facing new challenges in today's schools and there is need for teacher preparation and professional development that enables the learning of many different learners in diverse contexts. Cochran-Smith and Zeichner (2005) recommend new well- designed research studies that can provide evidence to inform policy and practice in teacher education. A school-based team of teachers should investigate how to improve specific facets of their teaching and learning through the implementation of classroom interventions. According to Goodnough (2011), action research usually involves planning a change, implementing the change, observing outcomes of the change and reflecting on the outcome of the change.

Davis, Petish and Smithey (2006) indicate that new teachers identified challenges in five areas: the content and disciplines of Science, knowledge of learners, instruction, learning environments and professionalism. Goodnough (2011) found that teachers' reflection on action research is that they viewed themselves as critical learners and recognized the importance of being risk-takers when trying something new and internalizing what is being learnt. Goodnough further indicates that teachers recognized that learning is both individual and collaborative, meaningful sharing, dialogue and support within a community of practice were essential to fostering individual and group understanding.

Teachers are willing to participate in professional development activities that are similar to collaborative action research because they view this as being teacher-driven, collaborative, reflective, systematic and student-focused (Goodnough, 2011).

2.10.2 TRAINING TO TEACH IN OVERCROWDED CLASSES

An enormous challenge facing education in rural areas is producing productive learning classroom environments where effective teaching and assessment strategies are effective. Teachers cannot practice a variety of methods, such as higher-order questioning and active learning approaches. In fact, teachers are effectively confined to the 'chalk and talk 'instructional method and this is widely practiced in South African schools. For example, some schools in the Eastern Cape have more than 130 learners squeezed into one classroom, and teachers are obliged to present lessons with their backs pressed up against the blackboard (Guardian Africa Network, 2013). Muthusamy (2015) states that teacher experiences with over-crowded classroom are stressful; however they still navigate ways to manage them. Group activities should be done outside to minimize movement and noise. Teachers should group learners to give instructions and check the work of learners. Managing overcrowded classrooms requires proper planning that involves using activities that can engage the learners in an active way.

Muthusamy (2015) states that according to the Department of Basic Education (2014), the learner-teacher ratio for public schools in South Africa was 1:30. The DBE (2014) states that when the learner teacher ratio is exceeded, this results in overcrowded classrooms. Overcrowded classrooms have not only demonstrated a teaching and learning problem, but are also a health risk for teachers and learners. Class size can affect how much time teachers give to individual students as well as the social dynamics among students (Ehrenberg, 2001).

According to Mtika (2010), large class sizes in Malawi leave trainee teachers with only one choice of using convenient teaching methods which require learners to be mainly passive recipients of knowledge during lessons. This does not allow for learner-teacher interaction. Some South African provinces still have schools where learners are being taught under the trees, whereas such a problem is not found in developed provinces. That is why I say some provinces are being undermined.

2.10.3 TEACHER PREPARATION FOR QUALITY TEACHING AND LEARNING

Every individual is exposed to some sort of educational system, which can either be formal or informal. Muijs and Reynolds (2000) states that teachers are at the helm of the formal education system and can either be effective or ineffective educators. According to Thiessen (2000), teachers' colleges and schools of education are institutions responsible for training teachers; therefore, the quality of a nation's education highly rests on the shoulders of teacher educators. Thiessen (2000) emphasizes the role of schools of education as being the main sources of power to both hinder and coerce significant changes in teacher preparation. Zeichner (2003) states that colleges and schools of education carry an important responsibility of preparing teachers to teach and to support teachers learning. Preparation of teachers must be focused and should be based on the context for them to succeed in promoting teaching   and learning.

Quality education comprises of what learners bring, environments, content, processes and outcomes (UNICEF, 2015). The quality of education children receive is critical to genuine learning and human development. Such quality is influenced by what goes on in the classroom and beyond. UNICEF (2015) further identifies life-long learning as one of the processes that support quality education.

According to Powers (2012), new teacher professional development must be on-going and meaningful in order to improve new teacher instruction and increase student achievement. The Alliance for Excellent Education (2004) points out that this professional development must include content knowledge, diverse learner needs and how to manage student behaviour.

When preparing teachers, they need practical experience to work with learners under the guidance of expert teachers (Darling-Hammond & Bransford, 2005). Darling-Hammond and Bransford further add that pre-service teachers also need

strong mentor teachers so that they can observe best practice classroom management techniques.

Shabani (2016) adds that novice teachers could experience professional development through mentoring and peer coaching. Shabani suggests that school principals and education authorities should design specific professional development programme in such a way that novice teachers are given an opportunity to benefit from one another's contributions, knowledge and experiences. Additionally, Shabani (2016) indicates that pre-service teachers could benefit from diary writing, electronic dialogues, journal, collaborative peers and mentors. Shabani (2016) further indicates that teachers need in-service training after they have gone through professional development and when they are placed in their socio-cultural instructional contexts. Shabani (2016) concludes that teachers are provided opportunity to reach intersubjectivity when they share instructional problems and challenges with each other.

Rogoff (1990) confirms that guided participation would involve the learner and the tutor in a collaborative process and the learner's level of understanding is linked to a new level. Reid and Kleinhenz (2015) indicate that teacher education is effective when they are trained in effective pedagogies relevant to their contexts. The above authors indicate further that high-quality professional learning to teachers depends on the skills of trainers and providing in-school support in conjunction with training programs. However, most teacher trainers have significant challenges in acquiring knowledge required to train prospective teachers (Davis and Higdon, 2008).

2.10.4 TRAINING TEACHERS FOR MULTI-GRADE TEACHING

Multi-grade education is a way of life for most rural communities and constitutes a shift from teacher support to group support, peer support and, ultimately, individual self-directed learning (Blease & Condy, 2014). Mulryan-Kyne (2007) states that Multi-grade classrooms are consequently ideal, as teachers guide children and

children guide their peers towards their own independent learning and writing. The teacher should be trained to construct learning environments appropriately contextualized and inspirational. However, Hlalele (2011) indicates that that teachers' exposure to suitable teaching strategies is limited as teachers are not trained on multi-grade teaching and that no support is offered to these teachers. Hlalele indicates further that many rural communities struggle to find and keep effective teachers. According to Hlalele (2011), rural communities have a higher number of less-qualified teachers as they lose their most experienced employees because they move to urban areas or to higher paying posts.

Despite insults and discrimination of public opinion, South African teachers are dedicated and work hard to educate children under difficult circumstances (Taylor, 2008). However, multi-grade teachers who are mostly found in rural and farm school environments need to plan and prepare for more than one grade per lesson and face special challenges. Beukes (2006) notes the absence of clear guidance for the combination of grades; inconsistent learner attendance; lack of classroom management skills; mother tongue influences; grouping and time management as some of the difficulties faced by rural multi-grade teachers in Namibia. Such challenges call for specialized training for quality teaching and learning to take place.

Teachers should use a powerful strategy of showing learners that they really care and respect them both as individuals and as a group. Due to the multi-grade system, quality teaching and learning may not be possible because the department is reluctant in filling the vacant posts. Teacher learner ratio should be revived. Moreover, Miller (1990) indicates that multi-grade teaching requires on-going teacher training and commitment to hard work.

Miller (1990) further indicates that teachers are not trained to acquire some skills needed for multi-grade teaching whereas multi-grade the classroom remains a powerful reality for small rural schools throughout the world. Mulkeen (2010) adds that multi-grade teaching is particularly used in rural areas as results of failure to deploy teachers to remote schools. However, multi-grade teaching is not integrated

into teacher deployment policy and teacher training. Although multi-grade teaching is widely used in most countries, initial teacher training is not preparing teachers to teach in multi-grade situations (Mulkeen, 2010).

2.10.5 TEACHER TRAINING FOR RESILIENT CONDITIONS

A desired outcome of teacher education programs is to develop graduates who will be high quality teachers, experiencing job satisfaction and enjoyment in their work as well as maintaining their motivation, commitment and enthusiasm for many years (Mansfield, Beltman, Weatherby-Fell & Broadley, 2016). Howard and Johnson (2004) state that resilient teachers have been described as those who have the capacity to thrive in difficult circumstances, skilled in behaviour management, able to empathize with difficult learners in varied environments, able to restrain negative emotions and focus on the positive, experience a sense of pride and fulfilment and increased commitment to their school and profession. Mansfield et al. (2016) further indicate that teacher quality has also recently been placed at the forefront of educational initiatives concerning student outcomes, teacher accountability and on-going professional learning in many countries.

Gilroy (2014) confirms that teacher education has been impacted by "top-down, often evidence-light but ideology-heavy" approaches. In the United Kingdom, Murray and Passy (2014) voiced concern for teacher educators about how to assist future teachers cope with "the demands of future curricular, pedagogical changes and the new roles and responsibilities" (p 492) that will emerge in the profession.

Murray and Passy (2014) conclude that teacher resilience can positively influence outcomes for teachers and students. Teachers need training that may help them to cope with any condition no matter how challenging it is.

2.10.6   PREPARING TEACHERS TO COPE WITH BARRIERS TO IMPLEMENT EFFECTIVE PROFESSIONAL DEVELOPMENT

According to Kedzior (2004), professional development that seeks to support teaching into more effective classroom practice must overcome several significant barriers to change. Birman, Desimore, Garet, Porter and Yoon (2001) indicate that professional development that focuses on subject matter content and classroom practices can meet with resistance because some individuals may be uncomfortable to share their understandings and beliefs with colleagues and supervisors. Birman et al. further indicate that a teacher may hesitate to commit time to professional development that extends beyond the regular school day. In addition, Birman et al., suggests that school administrators and policy makers must address school level obstacles to teachers' efforts to improve their practices.

2.10.7 Experiences of beginning primary school teachers

Manwa and Mukeredzi (2016) indicate that most new teachers do not experience mentoring from experienced teachers; therefore, they navigate their new environment from student-hood to teacher-hood alone. Manwa and Mukeredzi suggest that the education system needs to offer on-going in-service mentor training courses to experienced teachers to expose them to mentoring to prepare them for professional guidance of beginning teachers. Manwa (2013) points out that a supportive, encouraging school culture; communication, recognition, as well as support to foster success in their teaching are critical variables for developing novice teachers to promote positive experiences. Kim and Roth (2011) confirm that beginning teachers experience some challenges that are stressful such as duplicating colleagues' previous work out of context. Another challenge is that they sometimes borrow teaching and learning aids from other teachers.

Tope (2012) suggests that induction and mentoring conducted for beginning teachers should guide them on personal conduct, scheming, lesson planning, social issues, career ethics and policies so that they can gain confidence in all their

activities. Additionally, Moyo (2002) confirms that mentoring will strengthen and promote teacher effectiveness in the classroom. Manwa and Mukeredzi (2016) add that when beginning teachers experience limited mentoring, it minimizes their professional growth and development in rural primary schools. Manwa and Mukeredzi point out that both beginning teachers and mentors handle over-crowded classes and heavy teaching loads that hinder effective mentoring guidance. Finally, Manwa and Mukeredzi recommend mentoring of beginning teachers as the single most powerful process of classroom practice intervention in rural school settings.

2.11 TEACHERS PROFESSIONAL DEVELOPMENT IN IMPROVING LEARNERS' LITERACY

Sanoto (2017) indicates that when teaching literature to primary school learners, teachers must exhibit certain reading habits and practices of their life-world in their classrooms. Furthermore, findings indicate that Colleges of Education curriculum does not lay a foundation for a solid language base (Sanoto, 2017). Data reveals that lack of resources for leisure reading in the schools frustrates teachers because an appreciation for literature starts very early on in the teaching of literacy. However,

Leask (2014) adds that classrooms are not used as a resource to promote literacy development through their physical arrangement. Moreover, teachers did not seem to have sufficient training. Leask (2014) confirms that teachers' low level of English proficiency combined with lack of resources made it difficult for them to meet the learning challenges faced by rural learners. Makhubele (2015) reports that the Department of Education in 2010 revealed that many learners in primary schools are not able to read and write. The problem is that learners are not exposed to English outside the classroom, therefore, their English proficiency is not adequate for purposes of formal learning and as a result, they do not perform well (Makhubele, 2015). Makhubele (2015) concludes that although the majority of teachers were trained to implement Curriculum Assessment Policy Statement (CAPS), the training was too short to equip the teachers to implement CAPS smoothly on reading and writing skills for intermediate phase teachers.

2.12   SUMMARY

It has been indicated in this study's preliminary review of literature that professional development of teachers for promoting teaching and learning encompassing action and a specific type of work in education is interwoven with certain contemporary and successive coherences. There are many factors that contribute to the debate on professional development of teachers for promoting teaching and learning.

In this chapter, literature studies revealed various effects of professional development of teachers for promoting teaching and learning in rural primary schools. Teachers need to increase their effectiveness in the classroom in order to increase learners' achievement. Many teachers develop effective strategies by getting the support and training they need for future improved socio-economic and educational status and effect on professional development of teachers, challenges that might hinder professional development of teachers for promoting teaching and learning were laid down. The following chapter documents the study's design and mixed-methodology.

CHAPTER 3

RESEARCH DESIGN AND METHODOLOGY

3.1   INTRODUCTION

In the previous chapter, literature on professional development of teachers for promoting teaching and learning in rural primary schools was discussed. This chapter presents details of how the whole research process was conducted. A research design directs the structure and procedures followed to answer research questions.

3.2   THE AIM OF THE STUDY

The aim of this study was to investigate professional development of teachers for promoting teaching and learning in rural primary schools of Tshinane Circuit.

3.3   OBJECTIVES OF THE STUDY

The study was guided by the following research objectives:

- To explore how professional development of teachers in rural primary schools is affecting the promotion of teaching and learning;
- To assess critical aspects of professional development of teachers in rural primary schools taking into account the contextual factors for them to promote teaching and learning.
- To investigate how primary school teachers can be developed to cope with teaching and learning realities in rural contexts.

3.4 RESEARCH QUESTIONS

This study was guided by the following research questions:

- How is professional development of teachers in rural primary schools affecting the promotion of teaching and learning?
- What are the critical aspects of professional development of teachers in rural primary schools taking into account the contextual factors for them to promote teaching and learning?
- How can primary school teachers be developed to cope with teaching and learning realities in rural contexts?

3.5 RESEARCH DESIGN

The research design of this study was based on the pragmatic research paradigm. Research design refers to the detailed plan of how research will be conducted. It provides a plan for assembling, organizing and integrating data (De Vos, Strydom, Fouche '&Delport 2011). It also provides the framework for collecting the data to investigate the research topic.

The study followed the concurrent mixed method approach (quantitative and qualitative) research approach. Mixed method research design combines the strengths of both quantitative and qualitative research approaches. The strength of a mixed methods research design is supported by Connelly (2009:31) who indicates that "the goal of mixed methods research is to draw on the strengths and minimize the weaknesses of both types of research". Wyse (2011) indicates that quantitative research is used to quantify the problem by generating numerical data or data that can be transformed into useable statistics. Quantitative research methods are those methods in which numbers are used to explain findings (Kowalczyk, 2016). Quantitative research often improves on the validity of research instruments as well as the provision of a numerical dimension to analysis when addressing phenomena (Teddile & Tashakkori, 2009). It is used to quantify attitudes, opinions, behaviour and

other defined variables and from a larger sample population (Wyse, 2011). Quantitative research uses measurable data to formulate facts and uncover patterns in research.

Qualitative research approach uses interviews; it takes into account the lived experiences hence enabling contextualisation on the analysis of phenomenon and they allow for an in-depth understanding of phenomenon since they are often structured to collect data over an extended period of time (Teddile & Tashakkori, 2009). According to Struwig and Stead (2001), qualitative researchers are interested in understanding the issues being researched from the perspective of the research participants to see through the eyes of the participants.

In this study, I combined quantitative and qualitative methods in the same study in order to get a full understanding of the phenomenon under study. A quantitative research approach was performed during the first stage, and then the qualitative research approach in second stage. The sequence followed to make inquiry to move beyond explanation and description during the quantitative first stage of the study, to a qualitative exploration and in-depth investigation for deeper understanding of professional development of teachers for promoting teaching and learning in rural primary schools of Tshinane circuit.

3.6   PREPARATION FOR THE FIELD INVESTIGATION

Written permission was sought and obtained from Vhembe District Manager and Tshinane circuit manager, (see Annexure) to conduct this study in Primary schools in the Vhembe District. I requested permission from the Principals of all (twenty-four) Tshinane circuit primary schools, to conduct the study in their respective schools. The consent forms were written in English. I requested for contact numbers of principals to secure appointments. All principals granted me permission and signed the consent form.

3.7   FIRST STAGE-QUANTITATIVE RESEARCH METHODOLOGY

Research methodology is the systematic, theoretical analysis of methods applied to field of study. It comprises the theoretical analysis of the body of methods and principles associated with a branch of knowledge. Strauss and Corbin (1998) states that research methodology is a systematic and theoretical analysis of the methods applied to a field of study. It offers the body of methods and principles associated with branch knowledge. Babbie (2007) defines a questionnaire as a document containing questions or other types of items designed to solicit information appropriate for analysis. Babbie further explains that the basic objective of a questionnaire is to obtain facts and opinions about a phenomenon from people who are informed on the particular issue.

In this study, a survey questionnaire with close-ended statements was used to collect data during the first stage. Furthermore, in this section, the population of the study, sampling procedures, construction of questionnaire and pre-tested, distribution and collection process are explicitly documented.

3.7.1 Population

Asika (1991) defines the population of a research as "all conceivable elements, subjects or observation relating to a particular phenomenon of interest to the researcher. The population in this study were teachers and principals from the rural primary schools of Tshinane circuit under Vhembe District of Limpopo province in South Africa. In the Tshinane circuit, there are a total of 200 teachers and 24 principals in the 24 public primary schools. These teachers and principals teach a total of 7017 learners.

3.7.2 Sampling procedure

Payne (2004) refers to sampling as the process of selecting a sub-set of people or social phenomenon to the studies from a large universe to which they belong. During the quantitative stage of the study, simple random sampling was applied to select a total of 150 teachers and principals from the 24 public rural primary schools in the Tshinane circuit. Random sampling allows anyone in the population to have an equal chance of being selected in the study, thus minimising biasness of the study findings (Babbie & Mutton, 2009). In this study, I requested a list of teachers and principals from each school in order to have a composite list from which the sample was selected.

3.7.3 Development of the questionnaire

Data gained from the studied literature serves as a guiding structure for the development of the instruments (questionnaires). The approach was intended to determine whether certain generalisations about professional development of teachers for promoting teaching and learning found in other studies were also true for the practice of this study. A questionnaire was then developed to collect data. The fundamental concept of the study, which is professional development of teachers, was viewed to determine suitable and appropriate methods to measure the variable, which was the survey questionnaire. Babbie and Mouton (2009) recommend guiding the construction and development of survey questionnaires such as avoiding contingency statements, using short items and avoiding double barrelled questions were followed in the construction of this study's survey questionnaire.

Section A contains four close-ended items required for sourcing demographic data from the respondents. Section B of the survey questionnaire sourced responses on effects of professional development in rural areas and had 20 close-ended items. Section C of the survey questionnaire contained critical aspects of development for rural teachers with 10 close-ended items. In all the items, respondents responded by making a mark over a box which applies to them and clear instructions to do this

were provided. In all the items, respondents responded by making a mark over a box which applies to them and clear instructions to do this were provided. Pre-testing was done to rectify any misunderstanding that could arise from the statement and were not included in 150 questionnaires that were finally distributed and collected.

3.7.4 Pre-testing the questionnaire

The questionnaire of this study was pre-tested on three teachers and three principals in different schools from the one under study. McMillan and Schumacher (2001) indicate that these comments were invited to reveal errors in and validate the content clarity of the instrument to improve format of the statements made and to refine the research instrument before the main investigation began. The respondents did not suggest any change to the instrument, and the results of the pre-test was not analysed.

3.7.5 Quantitative data collection procedure

Data collection method is the gathering of information needed by the researcher to address a research problem (Pilot & Hungler, 1999). In this study, a self-constructed survey questionnaire was administered on teachers and principals to collect adequate, relevant quantitative data. Numbers indicating respondents' responses were used to construct variables degrees of the respondents' opinions. The results were expected to provide descriptive information to shed light on the research questions.

Survey questionnaires were distributed to the school and collected after two weeks from all the 24 primary schools in the Tshinane Circuit. I personally delivered the survey questionnaire to the schools and discussed the purpose with teachers and principals. I phoned all schools to confirm times of the survey questionnaire

collection, and a 97% return rate of survey questionnaire was achieved. Only 3% were not returned.

3.7.6 DATA ANALYSES PROCEDURE

I captured and analysed the results through the Statistical Package for Social Sciences (SPSS). Frequency percentages were established and the confidence level of the results obtained.

3.8 SECOND STAGE-QUALITATIVE RESEARCH METHODOLOGY

In this section, I present the qualitative approach adopted to explore the extent in which professional development of teachers for promotion of teaching and learning in rural primary schools.

3.8.1 Sampling procedure

According to Babbie and Mouton (2009), the logic of purposeful sampling lies in selecting information-rich cases from, and one can learn a great deal about issues of central importance to the purpose of research.

For this stage of the study, the purposive sampling technique was applied to select five primary schools within the twenty-four that were used as units of sample during first stage. I selected four most experienced teachers, two novice teachers and two principals so to give their perspectives and perceptions about their professional development.

3.8.2 Qualitative data collection procedure

Face-to-face interviews entail the researchers sending interviewers to ask the questions orally and recording participants' answers (Babbie & Mouton, 2009). For this study, in-depth face-to-face interviews were used to obtain data from the participants. Data collection consists of direct quotations from people about their experiences, opinions and knowledge.

3.8.3 Interview schedule

According to de Vos et al. (2011), an interview schedule is the format of an interview where the fieldworker reads the questions to the participants and records the participants' response.

In this study, semi-structured and unstructured interview questions were outlined as follows: Section D addressed the development of teachers for rural schools. Objective 1 had two questions, Objective 2 had three questions and objective 3 had questions. I asked eight questions which were guided by the following main research questions:

- How can professional development of teachers in rural primary schools affect the promotion of teaching and learning?
- What are the critical aspects of professional development of teachers in rural primary schools taking into account the contextual factors for them to promote teaching and learning?
- How can primary school teachers be developed to cope with teaching and learning realities in rural contexts?

3.8.4 The interview process

The interview process was administered through face-to-face interaction with the participants. The following sub-paragraphs present the setting of the interview, how the interviews were conducted, probing, the participants' behaviour during the interview sessions as well as the length of interview sessions.

- **Setting for the interview**

  The second stage of the study used the qualitative approach. Interviews were done in a proper place with the help of school principals who secured a venue free from disturbances and noise. Participants (principals, experienced teachers and novice teachers) were available at their respective schools. Select a setting that provides privacy, comfort, non-threatening, easy access and seating arrangements that encourage involvement and interaction (De Vos, Strydom, Fouche & Delport, 2011). These interviews were conducted from 28 August to 11 September 2018. I ensured that the participants other activities were not disturbed by scheduling with them the convenient time that suits them.

- **Procedure followed during the interview**

  Total number of participants' research for this stage of the study was eight. I conducted the open-ended interviews personally. The questions allowed the participants to express themselves freely; they were non-judgmental and unbiased (Smit 1995). I informed the interview participants about the nature and aims of the study. I also assured them confidentiality of their contributions as provided on the consent form that they signed upon agreeing to participate.

- **Recording the interview**

  After the introductory comments about the subject under investigation, I asked for permission to record the interviews from research participants. In this

study all participants agreed that the interviews be recorded. . A Samsung Galaxy 7 cellular phone was used to record all the information without video recording during interviews. During the process, an interview schedule was used as a guide finalizes the whole procedure for producing a report.

- **Probing**

In this study, probing was used in a few cases for clarification of responses given by the participants. According to Babbie and Mouton (2009), probing enables the researcher to get participants to answer in more detail and more accurately or at least provide a minimal acceptable answer.

- **Language and duration of interview**

The interviews were conducted in English to all participants. An average, the interview sessions lasted for 30 to 40 minutes.

3.8.5 DATA ANALYSES PROCEDURE

According to Mashau (2017), qualitative data analysis is a very personal process with a few rigid rules and procedure. Mashau further indicates that for this purpose, the researcher needs to go through a process called Content Analysis. Contents of an interview are analysed in order to identify the main themes that emerge from the responses given by the participants. In this study, data was analysed through ATLAS.ti package of interpreting the data in the basic sense of reflecting on the data until a better understanding is achieved.

3.9   ETHICAL AND SAFETY ISSUES

Ethics is defined as "the branch of philosophy dealing with values that relates to human conduct, with respect to the rightness or wrongness of specific actions, and

to the goodness or badness of the motives and ends actions" (Chandler & Plano, 1998).

In the preparation for this study, letters to obtain permission from the provincial Department of Education, district office, circuit office and schools were written. I read and explained the informed consent forms to the participants first, before we engaged on the process of data collection. The participants were fully informed of the purpose and process of the research. Participants were also informed that they are free to participate or withdraw from the study, and data will be kept confidential and anonymous.

3.10   SUMMARY

In this chapter, I provided the description of mixed methods that were engaged in the study, as well as the instruments that were used to collect data. The sample was described and the sampling procedure explained. The next chapter presents an analysis and interpretation of data driven from both stages of this study.

CHAPTER 4

RESULTS OF THE STUDY

4.1   INTRODUCTION

The previous chapter presented the research design and methodology indicating the structure and procedures that were followed to answer the study's research questions. In the current chapter, the presentation, analysis and interpretation of data driven by both quantitative and qualitative of the study are presented and discussed.

4.2   Respondents Demographic Factors

The demographic factors presented consist of gender, age, highest academic qualifications and teaching experience of respondents in years.

4.2.1 Population distribution

The section presents the number of both female and male principals and teachers respondents who took part during the first stage (quantitative) and the second stage (qualitative) of this study. Data on gender is given in Table 4.1.

Table 4.1 Gender distribution of principals and teachers

	Response	Frequencies	Percentage
1	Female	93	63.3
2	Male	54	36.7
	TOTAL	147	100

The sample of the first stage of the study consisted of 150 respondents for the survey of questionnaires. Of 150 of respondents, 93(63.3%) were females whereas 54(36.7) were males. Respondents did not return 3% questionnaires. All returned questionnaires constitute 97% of the total issued questionnaires whose findings are interpreted in the following sections. During the second stage of the study, eight respondents were interviewed in a face-to-face interview session. Two respondents were principals and the other five were post-level one teachers.

4.2.2 Respondents' age range

The following table presents the age of the principals and teachers who took part during the first stage of this study.

Table 4.2 Age of respondents

	Response	Frequencies	Percentage
1	21 – 30 years	7	4.8
2	31- 40 years	14	9.5
3	41-50 years	57	38.8
4	51-60 years	61	41.5
5	61 years and older	8	5.4
	TOTAL	147	100

Most principals and teacher respondents who took part during the first stage of this study are adults aged of between ages 51 and 60 years (41.5%) and 41 and 50 years (38.8%). Only (4.8%) respondents were the youngest, aged between 21-30 years while (5.4%) respondents were aged between 61 years and older. The ages of the face-to-face interview respondents during the second stage of the study were not asked.

4.2.3 Respondents' highest academic qualifications

Table 4.3 presents different academic qualifications of the principals and teacher respondents.

Table 4.3 Highest academic qualifications

	Response	Frequencies	Percentage
1	Standard 10 (Grade 12)	42	28.6
2	First Degree	44	29.9
3	B.ED or Honours' Degree	57	38.8
4	Master's Degree	3	2.0
5	Doctoral Degree	1	7
	TOTAL	147	100

The majority (38.8%) of principals and teacher respondents who took part in the first stage of this study have B.Ed. or Honours' degrees. Forty-four respondents (29.9%) had their first degree whereas (28, 6%) had Standard 10 (Grade 12), (2, 0%) had Master's degree and only (7%) had a Doctoral Degree.

4.2.4 Respondents' teaching experience in years

Table 4.4 presents results showing teaching experience in years for all principals and teachers who completed the survey questionnaires.

The majority (36.1%) of the respondents who took part during the first stage of this study have 21-30 years teaching experience; (23.1%) respondents are those between 0-10 years of teaching experience; (22.4%) respondents have 11-20 years teaching experience whereas (16.3%) respondents have 31-40 teaching experience and only (2.0%) respondents have 41 years and more teaching experience.

Table 4.4 Teaching experience in years

	Response	Frequencies	Percentage
1	0 – 10 years	34	23.1
2	11 – 20 years	33	22.4
3	21 – 30 years	53	36.1
4	31 – 40 years	24	16.3
5	41 and more	3	2.0
	TOTAL	147	100

4.3: THE EFFECT OF TEACHER PROFESSIONAL DEVELOPMENT ON TEACHING AND LEARNING

In this section, I present the results and analysis from the data regarding the effect of teacher professional development on teaching and learning. Principals and teachers were requested to complete the questionnaire.

4.3.1 Training of teachers to promote teaching and learning in rural environments

Table 4.5 presents the results showing the perception regarding the extent to which teachers view their training as promoting quality teaching and learning in the rural environment.

The majority (55.8%) of respondents agreed that teachers are adequately trained to promote teaching and learning in rural environments whereas (18.4%) respondents strongly agree that teachers are adequately trained. This confirms that most teachers felt that they were trained enough to teach in rural environments. However, (10.9%) of the respondents disagree that teachers are adequately trained to promote teaching and learning. They felt that their training was not enough to promote teaching and learning in rural environments. The results show that teachers are adequately trained to promote quality teaching and learning in rural environments.

Table 4.5 Teachers are adequately trained to promote teaching and learning in rural environments

	Response	Frequency	Percentage
1	Strongly agree	27	18.4
2	Agree	82	55.8
3	Not sure	10	6.8
4	Disagree	16	10.9
5	Strongly disagree	12	8.2
	TOTAL	147	100.0

These results are in agreement with Birman, Desimore, Garet, Porter and Yoon (2001) who found that incorporating active learning in professional development increases knowledge and skills and changes teachers' classroom practices. Novice teacher number 1 interviewed confirmed this:

"Yes, because since I started working, I found it difficult to teach learners before I went for professional development. I would sometimes fail to follow the lesson plans, and I would also not know what to do when experiencing problems with learners. But since I went for professional development, it has helped a lot and I have improved and gained a lot of knowledge and skills".

The novice teacher revealed that it was not easy to teach learners before to teachers' professional development training. It was frustrating for them to have challenges like following the lesson plans and experiencing problems with learners. However, professional development helped novice teachers to gain knowledge and skills to overcome those challenges.

The results showed that effective and meaningful support systems for on-going growth and development of certified teachers should be created before they start teaching in their classrooms. Teachers need to increase their effectiveness in the

classroom in order to increase learners' achievement. Many teachers are getting the support and training they need to be effective and efficient in many ways.

4.3.2 In-service training for teachers in rural environments

Table 4.6 presents teachers' perception of the effect of in-service training in preparation for rural environments.

Table 4.6   In-service training for teachers in rural environments

	Response	Frequencies	Percentage
1	Strongly agree	17	11.6
2	Agree	65	44.2
3	Not sure	21	14.3
4	Disagree	30	20.4
5	Strongly disagree	14	9.5
	TOTAL	147	100.0

The majority (44.2%) of principals and teachers agreed that in-service training is done to prepare teachers for rural environments. In-service training is helping in preparing teachers for professional development in rural areas. In contrast to the above, (20. 4%) respondents strongly disagreed that in-service trainings for professional development are done to prepare teachers for rural environments because they find that it does not serve the intended purpose. To add, (14.3%) respondents were not sure whether the in-service training they receive prepares teachers for rural environments. These results confirm that in-service training is beneficial for preparing teachers for rural areas.

These results are consistent with Letsatsi (2010) that the key purpose of teacher professional development is about empowering teachers to enhance their efficiency in teaching while developing them in their professional career cycle as a whole. Geldenhys, Lizette and Oosthuizen (2015) agree with Letsatsi (2010) on the different forms of teacher professional development programmes in South Africa such as

workshops, conferences, consultation and peer appraisal. This form of development is recommended to be continuous throughout the year after every each quarterly assessment. Principal number 2 interviewed emphasised this:

"Development of teachers in rural areas   should happen when they are being trained and while they are at their place of work and it must be done on a quarterly basis according to how the school's time is demarcated, and it must also be done at the end of the term, therefore at the beginning and end of the term. Thus in my opinion those developments should be done twice per quarter".

In-service training for teachers in rural areas should be conducted when they are still in training and when they are at their work place. It should be done on a quarterly basis, at the beginning and end of the term so that teachers can participate for upgrading their professional skills, knowledge and interest.

Professional development plans for teachers should, therefore, take into consideration rural environments in order to support them in the work they do efficiently. To teach effectively, teachers need access to on-going teacher professional development. This professional development enables teachers to improve their own education through seminars, workshops and classes. Teachers will be able to acquire new knowledge, better methods, etc. for improving their skills towards more effective, efficient and competent rendering of service in various fields.

4.3.3 Training of teachers in relation to the area where they teach is important for effective teaching and learning

Table 4.7 presents training of teachers in relation to the area where they teach as important.

Table 4.7 Training of teachers in relation to the area where they teach is important for effective teaching and learning

	Response	Frequencies	Percentage
1	Strongly agree	57	38.8
2	Agree	62	42.2
3	Not sure	6	4.1
4	Disagree	10	6.8
5	Strongly disagree	12	8.2
	Total	147	100.0

The majority (42.2%) of respondents agreed that training of teachers in relation to the area where they teach is important for effective teaching and learning, whereas (38.8%) strongly agreed. Mastering the subject matter helps the teacher to develop certain skills that can assist in dealing with different kinds of learners with regard to their level of intelligence. This type of development enables teachers to have an in-depth understanding of content of a particular learning area to help students to grasp everything taught by the teacher.

The study showed that (8.2%) of respondents strongly disagreed that training of teachers in relation to the area where they teach is important for effective teaching and learning. The results are in line with Ogbonnaya (2007) who indicated that professional development rooted in the subject matter and focused on students' learning can have a significant impact on students' achievement. Experienced teacher number 4 during interviews remarked in the following manner:

"They change their strategy. If we were unable to teach something, when they get back from the workshops, they will tell us that they have asked their facilitator to equip them on how to present such particular lessons. For instance, in Mathematics, when It comes to the digital watch most of the learners did not understand that lesson, but after they came back from the workshops they gave us the strategy on how to teach that subject, so learners now do understand how to read and use the watch".

The experienced teacher revealed that teachers change their teaching strategies after attending professional development workshops. When teachers have a challenge of teaching a certain concept, they ask their facilitators to help and they equip them with knowledge. Learners were having a problem of learning digital watches, but after the workshop, teachers transferred the skill they learnt from the workshop to their colleagues, which helped learners to understand that concept.

Teachers who have comprehensive knowledge of their subject matter let their learners actively participate in the lessons. Teachers require a formal training period for an individual to specialize in a subject matter because today, knowledge is produced and consumed quite rapidly. Therefore, the information the teacher conveys to learners should be up-to-date and should reflect the latest scientific facts of the field.

4.3.4 Teachers' professional development workshops are conducted by training experts who have experience of rural environments

Table 4.8 presents data on teachers' development workshops conducted by experts who have rural experience.

Table 4.8 Teachers' professional development workshops training experts

	Response	Frequencies	Percentage
1	Strongly agree	26	17.7
2	Agree	50	34.0
3	Not sure	34	23.1
4	Disagree	23	15.6
5	Strongly disagree	14	9.5
	TOTAL	147	100.0

Many respondents (34.0%) agreed that teachers' development workshops are conducted by training experts who have the experience of rural environments. Therefore, (15.6%) of the respondents disagreed that teachers' development workshops are conducted by training experts who have the experience of rural environments. Based on research question theme three on how primary school teachers can be developed to cope with teaching and learning realities in rural context. The following is a remark from experienced teacher number 2 interviewed who indicated this:

"Yes, it is working, because, as an example, the day before yesterday I was at a workshop. The workshop was for Mathematics, Tshivenda home language and English. There is something called spider in Mathematics, which I was currently busy with, but I was doing it without the correct understanding. Nevertheless, because of attending that workshop, I have gained enough knowledge and understanding regarding that concept"

The experienced teacher revealed that it is beneficial to attend workshops. The teacher did not have knowledge to teach learners spider in Mathematics, but after attending the workshop, the teacher gained knowledge and skills to teach that concept.

Teacher training and professional development are, therefore, seen as central mechanisms for the improvement of teachers, content knowledge, teaching skills and the practice in order to meet high educational standards.

About (23.1%) of respondents were not sure that teachers' development workshops are conducted by training experts who have the experience of rural environments. In contrast with the literature review, Reid and Kleinhenz (2015) indicate that teacher education is effective when they are trained in effective pedagogies relevant to their contexts. Reid and Kleinhenz (2015) indicate further that high-quality professional

learning for teachers depends on the skills of trainers and providing in-school support in conjunction with training programs. However, most teacher trainers have significant difficulties in acquiring the knowledge required to train prospective teachers (Davis and Higdon, 2008). The following is a remark from Experienced teacher number 4 interviewed who specified that:

"For me, it depends on the kind of facilitator I get, because some facilitators are there just for work, only to find that that person is unable to present good enough for me to understand. From some facilitators however I do gain some teaching strategies, for instance how to teach learners to read English, how to use punctuations, how to pronounce, how to find vocabulary words using a dictionary, or using story sentences in order to find the meaning of a word".

The experienced teacher revealed that some facilitators are not passionate about their work. Therefore, teachers can gain nothing from them as they fail to present their matter. However, from some facilitators who are passionate about their work, teachers can gain some teaching strategies.

Engagement of teacher professional development workshops differs among trainers. Not every trainer is effective, but the best trainers understand that people learn at different speeds and in different ways. The remark from the experienced teacher also recognised that they may not learn a lot, if they do appreciate that the trainer is knowledgeable, they feel happy that their colleagues will learn. Trainers that are passionate about learning understand that it is an ever-evolving process.

4.3.5 Teachers in rural primary schools are differently professionally developed from those in urban areas

Table 4.9 presents perceptions on the extent to which teachers in rural and urban areas are professionally developed.

Table 4.9 Teachers in rural primary schools are professionally developed differently from those in urban areas

	Response	Frequencies	Percentage
1	Strongly agree	19	12.9
2	Agree	35	23.8
3	Not sure	37	25.2
4	Disagree	30	20.4
5	Strongly disagree	26	17.7
	TOTAL	147	100.0

Most respondents (25.2%) were not sure of the statement that teachers in rural primary schools are professionally developed differently from those in urban areas. Moreover, (23.8%) agreed that rural with the statement. Conditions in rural areas are varied and different from those in urban areas and therefore need special attention. About (20.4%) disagreed with the statement. These results are not consistent with Kruijer (2010) in Togo who discovered that students taught by qualified teachers perform better than those who are taught by unqualified teachers.

Azano and Steward (2016) agree that recruitment and retention of highly qualified teachers is one of the challenges faced by rural communities. Schools in rural areas face major problems in attracting and retaining adequately qualified and experienced teachers duly trained to teach in these areas. Qualified and more experienced teachers are concentrated in urban schools, which tend to be overstaffed. Majongwe (2013) in Zimbabwe adds that rural schools, mainly staffed with professional unqualified teachers, performed badly in 2011 and 2012 whereas from South Africa, Mitchell, de Lange, Balfour and Islam (2011) confirm that rural children receive poorer education due to many unqualified teachers and other complexities in rural schools. Teachers must take a leading role in developing strong university-school-department of education partnerships to create university awareness of the realities in rural schools. Novice teacher number 2 interviewed noted this:

"Yes, because we are in rural areas and not urban areas, and when it comes to developing us they should look at our circumstances because in urban areas, their facilities are developed, and also accommodate the learners who are slow in learning, but in rural areas we do not have such facilities, and learners in rural areas who are slow in learning do not have assistance at home as most of them stay with their grandparents".

There is a big difference between urban and rural teachers and even the standard of the education will never be the same because the urban teachers have well equipped infrastructures that enable learners to learn and understand what the teacher is teaching. Most rural areas learners are from disadvantaged families and learners do not get assistance from home. The respondents felt that these rural realities should be considered when developing the teachers.

Rural schools have always been synonymous with resource shortage, inadequate infrastructure and poor education compared with urban schools. Professional development is generally associated with more use of specific instructional practices. One of the novice teachers interviewed suggested that teachers should be developed in strategies for coping with challenges in their daily professional life and well-being to shape learners' learning environment and influence learners' motivation and achievement.

4.3.6 In-service training workshops attended have an impact on the quality of teaching and learning in rural primary schools

Table 4.10 presents the impact of in-service training workshops attended as perceived by the principals and teachers.

Table 4.10 In-service training workshops attended have an impact on the quality of teaching and learning in rural primary schools

	Response	Frequencies	Percentage
1	Strongly agree	25	17.0
2	Agree	74	50.3
3	Not sure	20	13.6
4	Disagree	23	15.6
5	Strongly disagree	5	3.4
	TOTAL	147	100.0

The results show that the majority (50.3%) of those who took part in the study agreed that in-service training workshops attended have an impact on the quality of teaching and learning in rural primary schools. About (15.6%) of those respondents disagreed that in-service training workshops attended have an impact on the quality of teaching and learning in rural primary schools. However, (13.6%) were not sure that in-service training workshops attended have an impact on the quality of teaching and learning. These results are in agreement with Mohan et al. (2017) who said that professional development, if well managed, improves student learning and makes effective teaching to be practical, giving new knowledge, where there's be needs-based and encourage participation through sharing ideas (Mohan et al. 2017). Smith and Gillespie (2007) state that the productivity of teachers comes from pre-service training and continuous professional development. Harris, Cale and Musson (2011) state that teachers develop better content knowledge and become more confident in their practice through participation in professional development programmes. The following is a remark by the experienced teacher number 1 interviewed.

"I think workshops and in-service training can help to empower teachers with new knowledge and maybe technology can help to lessen the barriers between people in urban areas and rural areas".

The experienced teacher suggested that in-service training and workshops can help to empower teachers to gain knowledge of teaching and learning in rural environments.

In-services training acts as a catalyst for teachers' effectiveness and also a way of upgrading teachers' skills and knowledge for improving teaching and learning which lead to better job performance in urban and rural areas.

4.3.7 Induction workshops of novice teachers are conducted to help them to understand teaching and learning conditions in rural contexts

Table 4.11 presents the results showing the extent to which induction of novice teachers are conducted in rural contexts.

Table 4.11 Induction workshops of novice teachers are conducted to help them to understand teaching and learning conditions in rural contexts

	Response	Frequencies	Percentage
1	Strongly agree	14	9.5
2	Agree	68	46.3
3	Not sure	30	20.4
4	Disagree	23	15.6
5	Strongly disagree	12	8.2
	TOTAL	147	100.0

Almost half (46.3%) of the respondents agreed that induction workshops of novice teachers are conducted to help them to understand teaching and learning conditions in rural contexts. To add, (20.4%) of respondents were not sure if induction workshops of novice teachers help them. About (15.6%) of respondents disagreed that induction workshops of novice teachers are conducted to help them to understand teaching and learning conditions in rural contexts.

Novice teachers have different professional development priorities when compared to the experienced teachers. These results are in line with Mohan (2016) who observed that rural teachers are more in need of professional development relating to student learning and teaching, community partnership, school culture and how to manage with minimum teaching resources. Mohan further indicates that professional development of teachers should address their specific needs so that the experience becomes more meaningful. Aminudin (2012) points out that teachers' professional development experience allows them to keep up with the changes taking place in education system and as a result ensures their teaching practice remains relevant to their students' needs. These professional development activities should be planned to determine needs of novice, experienced, rural and urban teachers (Mohan et al., 2017).

Based on research question theme two on critical aspects of professional development of teachers are in rural primary schools, taking into account the contextual factors for them to promote teaching and learning, one of the principals of face-to-face interviews was of the view that most rural schools have poor facilities; this has a negative impact on the promotion of teaching and learning. The following remark by principal number 1 confirmed this:

> **"**Most rural schools do not have proper facilities so as educators are being trained, they must be given self-improvising skills. They must also be taught entrepreneurial skills so that they can recruit business people or other educated people to help schools develop towards acquiring resources that enhance the facilities, for the facilities to be adequate for learning. For example some schools do not have enough tables and chairs, and as a result, some learners must sit on the floor, and as a teacher I might see nothing wrong because I am not properly developed, but for better education things have to change holistically by enriching the environment in which we are teaching"*.

The above principal revealed that most rural schools have poor facilities like tables and chairs adequate for learning. Teachers are not developed for entrepreneurial skills to recruit business and educated people to help with providing facilities for teaching and learning. The induction workshops should capacitate teachers to acquire self-improvising and entrepreneurial skills in order to cope with under-resourced conditions.

4.3.8 Teachers' skills learnt from professional development workshops are applicable to rural primary schools

Table 4.12 presents data on whether teachers' skills learned from professional development workshops are applicable.

Table 4.12 Teachers' skills learnt from professional development workshops are applicable to rural primary schools

	Response	Frequencies	Percentage
1	Strongly agree	21	14.3
2	Agree	63	42.9
3	Not sure	24	16.3
4	Disagree	25	17.0
5	Strongly disagree	14	9.5
	TOTAL	147	100.0

The table above shows that (42.9%) of the respondents agreed and (14.3%) strongly agreed that teachers' skills learnt from professional development workshops are applicable to rural primary schools. However, (17.0%) disagreed. Only 16.3% of the respondents were not sure if teachers' skills learnt from professional development workshops are applicable to rural primary schools. These results are consistent with Craig, Kraft and Plessis (1998) who found that considerable issues should be considered when recruiting teachers for rural schools. These include training needs for rural schools and recruitment of teachers trained to meet these specific needs. Moreover, in recruiting teachers for rural schools, it has been recommended that

candidates be recruited from regions where schools are situated with the hope that personality history and family connections may entice them to return to teach in their home area after certification.

Heeralal (2014) suggests that schools should target candidates with rural backgrounds or those who have personal characteristics that predispose them to live in rural areas, in order to attract good quality teachers. Students that have a rural background should be encouraged to consider returning to their rural home communities once they qualify. The presumption is that those individuals have family roots in these rural areas and would be willing to return and remain in these rural settings. Experienced teacher number 2 explained this:

> "Yes. From my experience, when we are at the workshops we are put into groups and required to teach our subjects in our own way, which brings to our attention that when teaching there are different learners from different backgrounds and we therefore cannot apply the same teaching method. I also get to learn other strategies from other teachers that I then apply in my classroom. In the last workshop that I attended, there was a chapter about multiplication, and the other teachers showed us a strategy that would make it easier for the learners to understand, which currently works".

The experienced teacher revealed that teachers are put in groups in workshops. Teachers are expected to teach their lessons in different ways as they teach different learners using different methods. By that, teachers can learn different strategies from each other, which currently work because they can apply those strategies learnt from workshops in their classrooms.

Teachers' skills learnt from professional development appear effective in supporting changes in teacher practices and learners' learning. High-quality professional development creates space for teachers to share ideas and collaborate in their

learning, often in job-embedded contexts that relate new instructional strategies to teachers, learners and classrooms. Implementing effective Professional Development requires responsiveness to the needs of teachers and learners and to contexts in which teaching and learning will take place.

4.3.9 Teachers are trained to develop teaching skills for coping with situations in rural areas

Table 4.13 presents data on teachers in rural areas being trained to develop teaching skills to cope.

Table 4.13 Teachers are trained to develop teaching skills for coping with situations in rural areas

	Response	Frequencies	Percentage
1	Strongly agree	16	10.9
2	Agree	57	38.8
3	Not sure	24	16.3
4	Disagree	34	23.1
5	Strongly disagree	16	10.9
	TOTAL	147	100.0

Results showing that teachers are trained to develop teaching skills of coping with situations in rural areas indicate that more than a quarter (38.8%) of the teachers interviewed agreed whereas (10.9 %) strongly agreed. About (23.1%) disagreed that teachers are trained to develop teaching skills of coping with situations in rural areas. Only (16.3%) were not sure about that idea. The results suggested that teachers who teach in rural schools should receive specialized training for them to cope with conditions prevailing there. Majongwe (2013) and Mitchell De Lange, Balfour and Islam (2011) indicated that unqualified and under-qualified teachers bring negative impact in the performance of rural learners. Collins (1999) further argues that a teacher with emotional support and good mentoring can also assist in increasing retention rates significantly. Institutions should consider developing teachers and put

in place appropriate monitoring strategies to ensure learner success in rural areas. Principal number 1 interviewed specified this:

> "I think it should be a continuous thing because we do not expect changes to happen overnight, so it means regularly teacher development must always be in position. And also follow ups, because if it is identified that a certain community has got a serious challenge and we work towards improving that aspect, then there must be some on-going monitoring."

The principal confirmed that teachers' professional development should be continuous as it takes time for changes to happen. There must be follow ups so that if there is a challenge it must be addressed. Teacher development should be continuous followed by on-going monitoring so that they can over-come some challenges they come across during teaching and learning in rural environments.

4.3.10 Rural teachers are developed to cope with challenges of professional practices in the rural contexts

Table 4.14 presents respondents' views that rural teachers are developed to cope with challenges of professional practices.

Table 4.14 Development of rural teachers for rural context

	Response	Frequencies	Percentage
1	Strongly agree	21	14.3
2	Agree	46	31.3
3	Not sure	33	22.4
4	Disagree	31	21.1
5	Strongly disagree	16	10.9
	TOTAL	147	100.0

More than a quarter (31.3%) of teachers in the study revealed that rural teachers are developed to cope with challenges of professional practices in rural contexts. However, (22.4%) of the respondents were not sure about that idea. About (21.1%) disagreed that rural teachers are developed to cope with challenges of professional practices in rural contexts. These results are in line with Mukeredzi (2013) who found that if teachers' learning and professional development are to be supported in rural schools, particularly in South Africa, then schools' support should be built into structures that continuously and purposefully bring teachers together to enhance their professional development as determined by the context. Conditions in rural contexts require specialized training and development of teachers to cope with situations for them to promote the quality of teaching and learning. These results suggest that teachers who teach in rural schools should receive specialized training for them to cope with conditions prevailing there. The following remark by novice teacher number 1 interviewed confirmed this:

"They must be developed in a different way. In a way that they should understand where they come from. Most of the teachers who teach in rural schools come from rural areas. The development must be based on the rural lifestyle. Learners may come to school without pens, shoes and jerseys, which means as teachers we should know what to do and understand that the learner is like your child and you can do something to change their situation, try by all means to show the learner love so that they can forget about their background".

Results showed that in some rural areas, economic decline and increased poverty accompanied depopulation. To promote learners learning in rural schools, both the distinct advantages of rural communities and their possible disadvantages should be taken into account when developing teachers in rural primary schools. Some parents in rural areas do not show any interest in school activities and progress of their kids. The fact that some parents are uneducated makes them less interested in the progress of their children because they themselves do not understand the implications. Learners from rural primary schools also face challenges due to them coming from poverty stricken homes, child abuse and broken families. Therefore,

teachers can change learners' perspective by giving them love so that they can forget about their situations to promote teaching and learning.

4.3.11. Teachers develop their coping skills for rural primary learners

Table 4.15 presents data on teachers developing their coping skills to teach rural learners.

Table 4.15 Teachers develop their coping skills for rural primary

	Response	Frequencies	Percentage
1	Strongly agree	22	15.0
2	Agree	72	49.0
3	Not sure	14	9.5
4	Disagree	26	17.7
5	Strongly disagree	13	8.8
	TOTAL	147	100.0

Nearly half (49.0%) of the respondents agreed that teachers who teach in rural areas develop their teaching skills to cope with teaching in rural primary schools. Only (17.7%) of respondents disagreed with the idea. About (9.5%) of the respondents were not sure if teachers develop their coping skills to teach rural learners. These results are in agreement with Kennedy (1998) who said that programs that focus on subject matter knowledge and on student learning of particular subject-matter are likely to have positive effects on student learning. When teachers meet during these workshops, they share experiences. These programmes have the greatest effect on students' basic skills, reasoning and problem-solving performance as a result of these collaborations.

Furthermore, Carpenter, Fennema, Franke and Levi (2001) indicate that when teachers collaborate, they learn from their mistakes and share successful strategies.

Birman, Desimore, Garet, Porter and Yoon (2001) confirm that incorporating active learning in professional development increases knowledge and skills and changes teachers' classroom practices. These changes would have a positive effect on teaching and learning. On being asked how professional development of teachers in rural primary schools affects promotion of teaching and learning, one of the novice teachers thought that training institutions are doing their job. Teachers trained from these institutions have to further develop themselves. The following remark by novice teacher number 2 confirmed this:

"I think the Universities do their job accordingly, but when it comes to me as a person, I have to do the Job. Nowadays I think they've taught us how to handle different circumstances because now we have modules called curriculum which show us how to love different learners as an example, there are those learners who are slow and those who are fast to learn. I also believe that teaching is a profession which is also a calling for each individual, and if I have love for all the learners, it becomes easier for me to know how to handle and teach them". I think it is. Because I use all the things that I have been taught in my profession. For example, before I started my Job, I went to different schools to observe how a class should be for foundation phase teachers, and I prepared materials before I was told were I was going to teach".

Teachers who are able to cope with the special qualities of the job in rural schools provide intrinsic professional challenge and interest. Teachers have the skills to get their learners to learn, if they have supported and have facilities to enrich their classroom teaching. Teachers are trained to develop their coping skills to teach rural learners.

4.3.12 Teachers are developed well enough to teach effectively in a rural context

Table 4.16 presents data that teachers are developed well to teach in rural contexts.

Table 4.16 Teachers are developed well enough to teach effectively in a rural context

	Response	Frequencies	Percentage
1	Strongly agree	27	18.4
2	Agree	43	29.3
3	Not sure	27	18.4
4	Disagree	32	21.8
5	Strongly disagree	18	12.2
	Total	147	100.0

More than a quarter (29.3%) of respondents agreed that teachers are developed well enough to teach effectively in rural contexts. It is very rare these days to find unqualified teachers in rural schools, but there are government grant holders who have been granted scholarships by the Department of Education to train as teachers. Although teachers are recruited and professionally developed in rural schools, it is not easy to retain them. These results are consistent with Anderson, Horton and Orwick (2004) who suggested that teacher training schools should prepare pre-service teachers with the knowledge of rural people and their culture, and (21.8%) of respondents disagreed with the above idea. Even though they are given four years of training, it seems as if they are not trained enough. They seem inexperienced and find themselves struggling with learners, not knowing how to handle them in a classroom situation. Only (18.4%) of the respondents were not sure if teachers are developed well enough to teach effectively to teach in rural context. Experienced teacher number 2 interviewed remarked:

"I can see the change now. The way we used to discuss matters has now changed. Before we went to the workshop we were complaining that the learners cannot understand what we are trying to teach them, but now because of the workshop, we no longer complain, we have learnt to encourage and appreciate all the learners regardless of their capabilities and level of understanding".

Experienced teachers revealed that there is change after attending workshops. Teachers used to complain about learners as they cannot grasp what they are teaching. Attending workshops changed their way of thinking and discussing things. Professional development of teachers has a positive effect on teacher knowledge. Teachers become capable of engaging with learners and can also show leadership skills. Most important indicators of effective teachers are that they know their subject matter and transfer knowledge gained in professional development to their classrooms.

4.3.13 Teachers have been given sustained high quality training for teaching in all environments

Table 4.17 presents data on teachers being given high quality training for teaching.

Table 4.17 Teachers have been given sustained high quality training for teaching in all environments

	Response	Frequencies	Percentage
1	Strongly agree	32	21.8
2	Agree	55	37.4
3	Not sure	12	8.2
4	Disagree	32	21.8
5	Strongly disagree	16	10.9
	Total	147	100.0

The table above shows that (37.4%) of the respondents agreed. The same percentage (21.8%) of respondents strongly agreed and disagreed that teachers have been given sustained high quality training for teaching in all environments. The importance of continuing professional development for teachers is to improve their teaching practice. The results are in agreement with Ingvarson, Meiers and Beavis (2005) who illustrated that the role of the trainer is to give feedback tailored to the concerns, practices and learning characteristics of each individual teacher and in different contexts. Furthermore, Lekome (2006) said that the idea of developing a

new appraisal system as a component of Integrated Quality Management System (IQMS) is to improve the quality of education in South African Schools. The following remark by principal number 2 interviewed confirmed this:

"I do not think it's a good idea because we have the so called R&R, which can allocate a rural school teacher to an urban school. So if they are being taught differently, they will not be able to cope well in other educational environments, so they must be taught both in rural and urban development".

The principal suggested that teachers should not be professionally developed differently to cope with conditions in rural areas because a rural teacher can be allocated to go and teach in urban areas. If rural and urban teachers are developed differently, they will not cope to teach to other environments.

Teachers should not be developed to teach in rural areas only because they can be transferred to teach in urban areas. They should be developed to cope to teach in any educational environment. Therefore, rural and urban teachers should not be differently developed.

Experienced teacher number 1 interviewed added this:

" I don't think so, I think they should be developed in such a way that they will be able to go and teach anywhere as some teachers would want to go to teach in urban areas or maybe get promotions or posts in urban areas".

The experienced teacher suggested that teachers should be developed to teach anywhere, whether in urban or rural areas. They should be developed to teach in both rural and urban areas because after development, they can get posts or promotions to teach in urban area.

4.3.14 Teachers find teacher professional development programmes too demanding

Table 4.18 presents responses on teacher professional development programmes being too demanding.

Table 4.18 Teachers find teacher professional development programmes too demanding

	Response	Frequencies	Percentage
1	Strongly agree	30	20.4
2	Agree	63	42.9
3	Not sure	21	14.3
4	Disagree	29	19.7
5	Strongly disagree	4	2.7
	Total	147	100.0

Most respondents (42.9%) agreed whereas (20.4%) of respondents strongly agreed that teachers find teacher professional development programmes too demanding. About (19.7%) of the respondents disagreed that teachers find teacher professional development programmes too demanding. Only (14.3%) of respondents were not sure of the above idea. The results are in agreement with Kolobe (2017) who said that some teachers perceived developmental appraisal as non-developmental and biased. Kolobe adds that money rewards is a source of conflict and that senior staff detests being evaluated by junior staff. Evaluators should strive to add new ideas about how the developmental appraisal can empower teachers. Principal number 2 interviewed remarked:

" It should happen when they are being trained and while they are at their place of work and it must be done on a quarterly basis according to how the school's time is demarcated, and it must also be done at the end of the term, therefore at the beginning and end of the term. Thus in my opinion those developments should be done twice per quarter".

The principal suggested that training of teachers should be done when they are still in training and when they are at their workplace. Development should be conducted quarterly, at the beginning and end of the term. Training of teachers should be conducted when teachers are at their workplaces at the beginning and end of the term.

Experienced teacher number 2 interviewed added:

"Those who are already in practice should undergo training and those who are in state colleges can be trained in college. But the only thing that would be best is not to have the training sessions during school days as these interrupts the teaching and learning process. The best time to have these training sessions is during the school holidays".

The experienced teacher suggested that teachers who are at their work should receive their training, and those who are still in college should undergo training. The training of teachers who are at work should be conducted during school holidays to avoid disruption of classes. Teachers' professional development should be a continuous process for it to succeed, thus contributing to the general improvement of education.

4.3.15 Teachers find professional development effective in improving learner literacy

Table 4.19 presents professional development being effective in improving learner literacy.

Table 4.19 Teachers find professional development effective in improving learner literacy

	Response	Frequencies	Percentage
1	Strongly agree	28	19.0
2	Agree	75	51.0
3	Not sure	21	14.3
4	Disagree	18	12.2
5	Strongly disagree	5	3.4
	Total	147	100.0

The results show that (51.0%) of the respondents agreed and (19.0%) strongly agreed that teachers find professional development effective in improving learner literacy. Moreover, (14.3%) of the respondents were not sure about the idea. About (12.2%) disagreed and (3.4%) strongly disagreed that teachers find professional development effective in improving learner literacy. These results are in line with Leask (2014) who confirmed that teachers' low level of English proficiency combined with a lack of resources made it difficult for them to meet the learning challenges faced by rural learners.

Makhubele (2015) reports that the Department of Education in 2010 revealed that many learners in the primary schools are not able to read and write. The problem is that learners are not exposed to English outside the classroom; therefore, their English proficiency is not adequate for the purposes of formal learning and as a result, they do not perform well (Makhubele, 2015).

Makhubele concludes that although the majority of teachers were trained to implement Curriculum Assessment Policy Statement (CAPS), the training was too short to equip the teachers to implement CAPS smoothly on reading and writing skills for intermediate phase teachers.

The following remark by experienced teacher number 1 interviewed confirmed this:

"The other aspect that should be considered is the language that should be used when they get back to their schools because most rural schools use English as a medium of instruction however when the learners go to their homes they use their vernacular language, so I think it should be considered that the teacher should be taught how to encourage learners to use the second language in learning".

The experienced teacher suggested that teachers should be professionally developed to use English as a medium of instruction. Teachers should be trained to encourage learners to use English even outside the classroom for the promotion of teaching and learning, and this will improve learners' literacy.

The results describe teachers' work in terms of English as a medium of instruction as challenging but they remain active and flexible. The teacher aims to face up to and cope with all the challenges. Teachers must be prepared to handle unanticipated situations, to adapt current knowledge to deal with new problems, to learn radically new things and deal constructively with change. Those are qualities of teachers who value all kinds of rural school contexts.

4.3.16 Highly qualified teachers are easily retained in rural contexts after being professionally developed

Table 4.20 presents data on highly qualified teachers being retained in rural contexts.

The majority (32.7%) of respondents were not sure if highly qualified teachers are easily retained in rural contexts after being professionally developed. To add, (28.6%) agreed that highly qualified teachers are easily retained in rural contexts after being professionally developed. About (22.4%) of respondents disagreed with the above idea.

Table 4.20 Highly qualified teachers are easily retained in rural contexts after being professionally developed

	Response	Frequencies	Percentage
1	Strongly agree	15	10.2
2	Agree	42	28.6
3	Not sure	48	32.7
4	Disagree	33	22.4
5	Strongly disagree	9	6.1
	Total	147	100.0

These results are consistent with Heeralal (2014) who suggested that schools should target candidates with rural backgrounds or those who have personal characteristics that predisposes them to live in rural areas in order to attract good quality teachers. Students that have a rural background should, therefore, be encouraged to consider returning to their rural home communities once they qualify. The presumption is that those individuals have family roots in these rural areas and would be willing to return and remain in these rural settings. The following remark by experienced teacher number 4 interviewed confirmed this:

"Before developing the teacher we need to look at the training sessions where teachers are being trained. There are no specific trainings for teachers who will teach in rural areas or those who will teach in urban areas. They need to train all teachers in the learning institutions equally, and then they need to implement trainings in rural areas and develop teachers on how to teach in rural areas. I say these because we do not know how long a rural school teacher will be stationed there. So if the government would have to train teachers on how to teach in rural areas it could result in a waste of money because teachers may not be based there for the rest of their lives. So I think these developments should not be done while we are already employed, they should be done while aspiring teachers are still in the training schools".

Teacher training institutions should prepare teachers on pre-service training with the knowledge of rural areas in order to prepare teachers for rural area so that they can be easily retained. There is no education for rural or urban teachers. Therefore, their college training curriculum should prepare them for the conditions and needs of the schools because some teachers leave teaching for better paying posts. This training should improve the quality of the teachers to make them effective in urban or rural areas.

4.3.17 Teachers are continuously trained to enable them to handle multi-grade classes common in rural areas

Table 4.21 presents data on teachers being continuously trained to handle multi-grade classes.

Table 4.21 Teachers are continuously trained to enable them to handle multi-grade classes common in rural areas

	Response	Frequencies	Percentage
1	Strongly agree	21	14.3
2	Agree	41	27.9
3	Not sure	25	17.0
4	Disagree	42	28.6
5	Strongly disagree	18	12.2
	Total	147	100.0

A large number of respondents (28.6%) disagreed that teachers are continuously trained to enable them to handle multi-grade classes common in rural areas. However, (27.9%) of respondents agree that teachers are continuously trained to enable them to handle multi-grade classes common in rural areas. Only (17.0%) of respondents were not sure about the idea. The results suggest that teacher training institutions should equip teachers to teach in multi-grade classrooms. These results are in line with Hlalele (2011) who indicated that teachers' exposure to suitable teaching strategies is limited as teachers are not trained on multi-grade teaching and

that no support is offered to these teachers. Hlalele indicates that many rural communities struggle to find and keep effective teachers. Hlalele further indicates that rural communities have a higher number of less-qualified teachers as they lose their most experienced employees because they move to urban areas or to higher paying posts. Novice teacher number 2 interviewed remarked:

 "Lack of classrooms. Right now in my experience, we make use of one class for two grades. Foundation phase learners have to concentrate, but how can they do so when the other teacher is teaching on the other side. And the curriculums and lesson plans require our classrooms to be print rich, but how can that be so when I as a teacher do not have space. At our school, learners are also expected to clean after school, and according to the law, we should not leave children at school after school hours".

Lack of classrooms is the main cause of multi-grade teaching. One grade is used to accommodate two grades, and it is difficult for learners to concentrate when there are two teachers teaching different grades and aspects in the same classroom. It is also difficult for these classrooms to be print rich as it is expected from foundation phase classrooms. A print rich environment is one in which children interact with many forms of print like wall stories, word displays, charts and other printed materials to enrich their learning.

4.3.18 Teachers are professionally developed to help them to increase their knowledge regarding instructional practices in a rural context

Table 4.22 presents data on teachers being professionally developed to increase knowledge of instructional practices.

Table 4.22 Teachers are professionally developed to help them to increase their knowledge regarding instructional practices in a rural context

	Response	Frequencies	Percentage
1	Strongly agree	15	10.2
2	Agree	68	46.3
3	Not sure	28	19.0
4	Disagree	26	17.7
5	Strongly disagree	10	6.8
	Total	147	100.0

The above table shows that (46.3%) of the respondents agreed that teachers are professionally developed to help them to increase their knowledge regarding instructional practices in rural context. To add, (19.0%) respondents were not sure that teachers are professionally developed to help them to increase their knowledge regarding instructional practices in a rural context. Only (17.7%) respondents disagreed with the above idea. These results are in line with Mohan et al. (2017) who indicated that professional development while imposed well, improves student learning and makes effective teaching to be practical, thus giving new knowledge where there is be needs-based and encourages participation through sharing ideas. Harris et al. (2011) state that teachers develop better content knowledge and become more confident in their practice through participation in professional development programmes. Smith and Gillespie (2007) state that the productivity of teachers comes from pre-service training and continuous professional development. Experienced teacher number 1 remarked in the following way during interviews:

"Some teachers have been trained from 20 to 30 years ago and the education system is changing. They are now teaching methodology that teachers acquire when they go for development and they become better teachers. They give teachers new ideas and new ways of learning".

Professional development gives teachers an opportunity to explore new strategies of teaching and learning because education is changing. Training helps to improve

teachers' teaching skills. Teachers become better teachers after acquiring new teaching methodologies from professional development programmes.

4.3.19 Teachers are professionally developed to use technology in their classrooms in coping with rural challenges

Table 4.23 presents data that teachers are professionally trained to use technology in their classrooms.

Table 4.23 Teachers are professionally developed to use technology in their classrooms in coping with rural challenges

	Response	Frequencies	Percentage
1	Strongly agree	17	11.6
2	Agree	50	34.0
3	Not sure	16	10.9
4	Disagree	41	27.9
5	Strongly disagree	23	15.6
	Total	147	100.0

The results of the above table show that (34.0%) of the respondents agree that teachers are professionally developed to use technology in their classrooms in coping with rural challenges. The issue of teachers' professional development has become necessary because of the introduction of the use of computers in teaching and learning processes in Science classrooms (Ogunkola & Olatoye, 2008). Kadijevick (2002) suggests that teachers should develop the knowledge and skills in learning technologies to be able to use the tools, resources, processes, systems and to be able to retrieve, assess and evaluate information from various media. To add, (27.9%) disagreed and (15.6%) strongly disagreed with the idea that teachers are professionally developed to use technology in their classrooms in coping with rural challenges.

These results are in agreement with Ikram (2017) who indicated that teachers in rural areas of Pakistan are trained to use learning media in their nursery classrooms. Ikram also points out those teachers' frustration and motivation towards learning technology in those areas. There is a contradiction between the results of the above table with the respondents of the qualitative research. Experienced teacher number 4 interviewed suggested this:

"The government should bring equipment's, for instance technological equipment's like computers and overhead projectors. They should not differentiate between the urban and rural schools because what is essential is giving education to the learners".

Teachers who are professionally developed to use technology in their classrooms feel better prepared compared to their colleagues who do not have such training.

Novice teacher number 1 confirmed this:

"It is important for teachers in rural primary schools to promote teaching and learning because in rural areas there are a lot of challenges that teachers experience but if rural teachers attend workshops, they can promote teaching and learning. Some rural teachers cannot use laptops or computers and not having those skills can hinder positive teaching. Sometimes it is also hard for those teachers to photocopy a question paper because they cannot use the photocopy machine".

Teachers in rural schools should be developed to use technological equipment in their classrooms like those in urban schools. Teachers in rural areas show frustration to use technological equipment like laptops, overhead projectors and photocopy machines. Teachers' development in technology provides them with different teaching techniques.

4.3.20 Teachers in rural primary schools are involved in the conception of their own professional development initiatives

Table 4.24 presents data on teachers being involved in the conception of their own professional development.

Table 4.24 Teachers in rural primary schools are involved in the conception of their own professional development initiatives

	Response	Frequencies	Percentage
1	Strongly agree	14	9.5
2	Agree	48	32.7
3	Not sure	42	28.6
4	Disagree	30	20.4
5	Strongly disagree	13	8.8
	Total	147	100.0

The majority (32.7%) of respondents agreed that teachers in rural primary schools are involved in the conception of their own professional development initiatives. About (28.6%) were not sure about the idea. Only (20.4%) respondents disagreed that teachers in rural primary schools are involved in the misconception of their own professional development initiatives. These results are in line with Ravhuhali, Kutame, Mutshaeni and Maluleke (2014) who said that teachers feel good and motivated and their mental health is promoted when they are involved in the conception and implementation of their own professional development initiatives. They also add that being supported by the school management and seeing professional development linked to additional financial rewards and salary progression motivate teachers. In addition, Andrew (2004) points out that reward system and recognition affect teacher motivation as the pay given to teachers is not worth the services they render. Principal number 1 interviewed suggested this:

"Yes. Most of the rural schools are not that much monitored by for example the management from the Department and the school governance, which then leads to

educators to work as per their skills and abilities. But if they can be developed or appreciated in any other way, it can be something that can uplift the interest of educators in the rural development. In urban areas, governing bodies will always be at the school, and monitoring their schools governance issues. Management will be looking after their provisional issues so that their schools match the required levels or standards of education as there is competition in urban schools rather than rural schools. That level of professionalism needs to be cultivated within the rural teachers".

The principal revealed that most rural schools are not monitored enough, and this compels the teachers to work on their own without any guidance from the management. Rural teachers need something that can motivate them so that, like in urban areas, their schools match the required level of education. Teachers need some kind of motivation from the department and school management to learn and improve teaching. Teachers' professional development can motivate teachers to improve their teaching skills. If teachers are not monitored they may not be able to reveal their teaching challenges and cannot improve their teaching quality. Unlike in rural schools, in urban areas governing bodies monitor their schools to give them support in order to promote teaching and learning. Teachers in rural schools need this kind of motivation in order to improve their teaching and   learning skills.

4.3.21 Staff development programmes

Table 4.25 presents staff development programmes included in the year plan of school.

Table 4.25 Staff development programmes

	Response	Frequencies	Percentage
1	Yes	106	72.1
2	No	41	27.9
	Total	147	100.0

The high percentage of respondents (72.1%) showed that staff development programmes are included in the year plan of their schools. About (27.9%) of respondents do not support the above statement. They do not see themselves improving their job performance skills. These results suggest that staff development programmes should be included in the year plan of the schools so that teachers can learn to be more effective and efficient. These results are in line with the Association for Supervision and Curriculum Development (2003) which indicated that professional development should be continuous and include follow-up and support for further learning. Letsatsi (2010) states that the key purpose of teacher professional development is about empowering teachers to enhance their efficiency in their teaching while developing them in their professional career cycle as a whole. Shabani (2016) adds that novice teachers could experience professional development through mentoring and peer coaching. Shabani suggests that school principals and education authorities should design specific professional development programme in such a way that novice teachers are given opportunities to benefit from one another's contributions, knowledge and experiences. Novice teacher number 2 remarked in the following way during interview:

"Each and every term. Because I think it will work for us as a wakeup call. As a teacher I need to know what to do. They should not only develop us, but they should check on us, as to how we are progressing and what we are still lacking".

The novice teacher revealed that teachers' professional development should be conducted every term. After teachers' development programme, there should be follow-ups to check how the teachers are applying what they have learnt from professional development workshops. Teachers' development should be continuous and done every term so that they can have skills to deliver lessons with effectiveness and confidence. There should be follow-ups and on-going monitoring after each development programme.

4.3.22 School development team

Table 4.26 presents school development team at schools.

Table 4.26 School development team

	Response	Frequencies	Percentage
1	Yes	119	81.0
2	No	28	19.0
	Total	147	100.0

The majority of the respondents (81.0%) confirmed that they have a school development team at their schools. However, (19.0%) of the respondents revealed that they do not have development team at their schools. If teachers have no development teams at their schools, it will be impossible to identify skills gaps. Therefore, there should be a development team at the schools so that teachers can be evaluated and receive feedback to improve their teaching strategies. These results are consistent with Ogbonnaya, Louks- Horsley Hewson, Love and Stiles (2007, 1998) who said that teachers need extensive learning opportunities in order to meet the current education challenges. They added that practicing teachers can receive professional development through their interaction with other teachers; they can be taught by other teachers during meetings of professional associations and through numerous workshops and presentations. Experienced teacher number 2 confirmed this:

"What I gained from the workshops and in-service training is that when you are following the activity or activities of the day, you have to follow through every step and not skip some activities because you do not understand them. Rather go to your colleague and ask for assistance".

The experienced teacher suggested that teachers must follow every activity they learnt from workshops and in-service training. If they do not understand some of the

activities, they should ask their colleagues for assistance. Teachers should employ a variety of teaching methods learnt from the workshops. If they forgot how to teach a certain concept, they should not skip that concept; they should seek assistance from their colleagues who are more knowledgeable about that concept. Teachers should work together as a team.

4.3.23 Management encourage professional development of teachers

Table 4.27 presents data on management encouraging professional development of teachers at school.

Table 4.27 Management encourage professional development of teachers

	Response	Frequencies	Percentage
1	Yes	124	84.4
2	No	23	15.6
	Total	147	100.0

The high percentage of (84.4%) revealed that management encourages professional development of teachers at their schools. Only (15.6%) of the respondents do not agree with the above idea. The results suggest that management should be empowered to manage professional development of teachers at schools. These results are in line with Botha (2015) who indicated that collaboration provides opportunity to create professional learning community that shares and learns together and further indicated that lack of professional development for school leaders and teachers can be a hindrance to the improvement of learner performance. Experienced teacher number 4 revealed this:

"My colleagues are changing and what leads us to change is that our institution is competent. When in class you need to know that you are competing with your colleagues. Each and every term we have a staff meeting with rankings showing which teachers showed the best teaching abilities. This encourages us to have

energy and to have the interest to work hard in order to get good results at the end of the term and at the end of the year".

The experienced teacher revealed that teachers who attend workshops show better teaching ability when they return back to their schools. Teachers strive to show the best teaching ability when their institution is competent. Management encourages teachers to compete against each other by ranking them according to their teaching abilities. After each teacher development workshop, teachers change their teaching strategies knowing that they are competing with their colleagues. Management encourages professional development of teachers by ranking teachers who showed the best teaching abilities by producing good results.

4.3.24 Attendance of staff development workshops according to needs

Table 4.28 presents data on attendance of staff development workshops according to the needs.

Table 4.28 Attendance of staff development workshops according to needs

	Response	Frequencies	Percentage
1	Yes	102	69.4
2	No	45	30.6
	Total	147	100.0

There is a clear indication from Table 4.28 by the respondents with the great percentage of (69.4%) that teachers attend staff developmental workshops according to their needs. However, (30.6%) of the respondents do not support that idea. They feel that there is no one who is an expert on their needs. The results suggest that teachers who are more knowledgeable about what is going on in the classroom should conduct training for teachers. These results are in agreement with Aminudin (2012) who confirmed that teacher professional development experience allows teachers to keep up with the changes taking place in the education system;

as a result, it ensures that their teaching practice remains relevant to their students' needs. Novice teacher number 1 indicated:

"Yes, because when attending workshops, the facilitators are experienced and they tell us what to do and what is expected in this profession. Sometimes those that do not attend these workshops do not enjoy the profession and conclude that this profession is boring, however when you attend the workshops, you do better, you improve as an individual and you can gain a lot of teaching abilities when implementing your teaching and learning skills".

The novice teacher revealed that teacher development workshops are conducted by experienced facilitators and they teach them what is expected from them to promote teaching and learning. Teachers who do not attend workshops do not enjoy teaching. Teachers who attend workshops do better in the profession; they improve teaching abilities and gain teaching and learning skills.

Experienced teacher number 3 also confirmed this:

"According to my own experience, they have better skills than those who have not been developed because the developed teachers have more understanding of what is happening in the rural areas than those who have not been developed".

The experienced teacher confirmed that teachers who attend professional development workshops have better teaching skills than those who have not been developed. Developed teachers have the knowledge of rural environments than those who have not been developed.

One of the novice teachers and the experienced teacher revealed the same results that teachers who undergo professional development have better teaching skills than

those who have not been developed. They gain strategies like: well-planned lessons and lessons delivery, new knowledge about a particular subject that they are teaching and knowledge of curriculum.

4.3.25 Teachers developed to handle inclusive classes

Table 4.29 presents data on being developed to handle inclusive classes.

Table 4.29 teachers developed to handle inclusive classes

	Response	Frequencies	Percentage
1	Yes	84	57.1
2	No	63	42.9
	Total	147	100.0

As reflected in Table 4.29, about (57.1%) of respondents believed that they are being developed to handle inclusive classes in their schools. About (42.9%) respondents do not support the above idea. This shows that teachers are not exposed to inclusive classes through workshops where they will be taught the strategies of handling inclusive classes. The results suggest that inclusive education should be included in teachers' training curriculum. These results are not consistent with Mutshaeni, Denhere and Mudhovozi (2010) who confirm that in the apartheid era, South African people with disabilities endured a history of rejection and segregation in the disability society and in education. Engelbrecht (2006) shows negative attitudes of teachers as main barriers to inclusive education. Whitting and Young (1995) add that teachers perceive inclusion of learners with disabilities into mainstream settings as difficult and stressful.

Moon, Todd, Morton & Ivey (2012) conclude that disabled learners may not be comfortable in the mainstream due to the system that is not supportive and that rejects learners with disabilities. In conclusion, Mutshaeni et al. (2010) further

recommended that the teachers need continuous training to enable them to handle inclusive classes to promote teaching and learning.   Novice teacher number 1 suggested the following:

"How to include learners with disabilities because sometimes teachers do not understand the concept of inclusion where as a teacher you are not allowed to discriminate learners with disabilities like visual impairment, or crippled learners. Not including such learners can hinder the progression of those learners"

The novice teacher confirmed that teachers are not developed to teach learners with disabilities in their classrooms like those with visual impairment and are crippled. Teachers do not understand the concept of inclusive education, and this can lead to discrimination of those learners. Teachers should be developed to have strategies of handling learners with different disabilities in their classrooms so that they should not discriminate against them. This can result in effective teaching and learning.

4.3.26 Peer teachers observe lessons

Table 4.30 presents peer teachers observe lessons.

Table 4.30 Peer teachers observe lessons

	Response	Frequencies	Percentage
1	Yes	99	67.3
2	No	48	32.7
	Total	147	100.0

The above table clearly illustrates that (67.3%) of respondents confirmed that peer teachers observe their lessons at their schools. On the other hand, (32.7%) did not agree that peer teachers observe their lessons at their schools. This means that there are teachers who do not see the benefit of being evaluated by other teachers

as they feel that it is not a true reflection of what is going on in the classrooms. The results suggest that experienced teachers should observe the lessons of the new teachers so that they can benefit from the experienced ones.

The results of the majority are in agreement with the following literature which says that when preparing teachers, they need practical experience to work with learners under the guidance of expert teacher (Darling-Hammond & Bransford, 2005). Darling-Hammond and Bransford further add that pre-service teachers also need strong mentor teachers so that they can observe best practice of classroom management techniques. Experienced Teacher number 1 interviewed confirmed:

"I agree, because if you don't have experience of what is happening in the rural areas, you might come up with something that you are not well conversant with. If you acquire knowledge from books, you may find that the conditions in those areas is not the same as there are changes and rural areas are also starting to become semi-urban areas because of the development in our country. So I think those who have got experience can help new teachers and it can make teaching and learning better".

The experienced teacher suggested that teachers should be developed by those who have the experience of rural environments to promote teaching and learning and not by a person who can read the conditions of rural areas from books because rural areas are becoming semi-urban areas. Teachers should be evaluated by a person with experience of rural areas, and it must be conducted by a person who is an expert in that field to promote teaching and learning.

4.3.27 teachers developed to cope with conditions

Table 4.31 presents data on being developed to cope with conditions where resources are lacking.

Table 4.31 teachers developed to cope with conditions

	Response	Frequencies	Percentage
1	Yes	101	68.7
2	No	46	31.3
	Total	147	100.0

As reflected in Table 4.31 above, (68.7%) respondents believed that they are developed to cope with conditions where resources for teaching and learning are lacking. Only (31.3%) of respondents did not believe in the above idea. They felt that it was hard to teach what they planned because of the scarcity of these resources. The results suggest that teachers should be adequately developed to cope with scarcity of teaching and learning resources, which is a common experience in rural environments.

These results are in agreement with Blease and Condy (2014, 2015) who said that schools are arranged in terms of quintiles; the poorest 20% of schools are in Quintiles 1, 2, 3 and located in rural areas and townships. The study puts focus on the different teaching strategies that the teachers use in order to overcome realities of teaching in an under-resourced environment. This includes different aspects that affect the teaching and learning process, both directly and indirectly. The allocation and distribution of resources by the Department of Education might be one of the factors that cause poor learner performance. Literature is silent on how under-resourcing of schools impact on the professional development of teachers, thus affecting learner performance. What is remarkably common in most South African rural schools is that they lack instructional resources, basic services and facilities to implement the curriculum design, unlike in urban schools (Hassan, 2015). Novice teacher number 1 specified this:

> "Yes. Because in rural areas we have different conditions like schools without water or fences. This can be disturbing to the learning process because when there is no water learners fail to concentrate and participate, but if teachers know what to do when there is no water or that teacher can cope with the conditions in rural areas, we can conclude that that teacher has been professionally developed".

The novice teacher revealed that most schools in rural areas do not have water and fences. Therefore, teachers should be professionally developed to cope with such conditions; they must know what should be done because learners cannot concentrate and participate when they are thirsty, and this can hamper the promotion of teaching and learning.

Experienced teacher number 2 specified this:

"I think teachers should be developed because in rural schools there are limited resources and when there are limited resources they might be expected to teach without some teaching aids, for example an overhead projector. You might find that the school does have an overhead projector but in the area there is no electricity. There are also no bookshops or libraries where learners can go to, to improve their reading".

The experienced teacher confirmed that teachers should be professionally developed to work in conditions where there are limited resources like teaching aids, overhead projector, electricity, bookshops and libraries. Lack of resources can disturb the promotion of teaching and learning. Teachers in rural schools need to be professionally developed to work in under-resourced environment. Schools lack basic resources like water, tables and chairs, library, bookshops, overhead projector and electricity. Inability to cope with the scarcity of teaching and learning resources is frustrating, like when learners sit on the floor. Teachers should be trained on self-improvising skills and entrepreneurial skills so that they can cope with under-resourced conditions.

4.3.28 Professional development activities aligned to conditions

Table 4.32 presents data on professional development activities aligned to conditions.

Table 4.32 Professional development activities aligned to conditions

	Response	Frequencies	Percentage
1	Yes	97	66.0
2	No	50	34.0
	Total	147	100.0

A high percentage of (66.0%) respondents showed that professional development activities are aligned to conditions in the area where they are teaching. Only (34.0%) did not support the above idea. This shows that some teachers feel that teachers' professional development activities do not make them effective to promote teaching and learning as they are not aligned with the conditions of their environment. The results suggest that training of teachers should be conducted by people who have rural experience so that teachers' professional development activities should be aligned to the conditions of the area where they are teaching.

These results are in line with Vermunt and Endedijk (2011) who discovered that teachers' learning processes within the context of continuing professional development may vary considerably. Therefore, it must be taken into consideration that teachers learn differently and have different learning needs when conducting a continuing professional development programme. Teachers in rural areas have different needs compared to those in urban areas and would therefore have different training needs. Based on research question theme three on how primary school teachers are developed, teachers in rural areas will have different needs as compared to those in urban areas and would therefore have different training developed to cope with teaching and learning realities in rural contexts. Experienced Teacher number 2 in face-to-face interviews confirmed this:

"Yes, because experience is the best teacher. Those facilitators who have the experience of a rural background know the depth of the conditions and therefore how to deal with the challenges, as well as how to fix those challenges, whereas a facilitator from urban areas would not have the same understanding".

The experienced teacher revealed that facilitators from urban areas cannot develop rural teachers because they cannot understand the conditions of the rural context.

Therefore, teachers should be developed by facilitators who have the knowledge and experienced of rural contexts. Such facilitators know the challenges prevailing in rural contexts and their solutions.

Additionally, principal number 1 during interviewed added this;

> "Yes. It is of no use to take someone who has not been exposed to the rural realities to come and workshop teachers from rural areas at a hotel. If a person wants to develop rural teachers, they should at least come to the rural areas and observe what is identified as challenges so that when we tackle those challenges, one must really know the reality of the challenges. So I think people who have the idea and knowledge of rural realities must work in collaboration with teachers working within the rural communities. That is how they can build a common understanding and a better way for development".

The principal added that teachers in rural areas should be developed by people who have knowledge of rural realities. If facilitators from urban areas need to workshop rural teachers, they must not stay at the hotel but should have first-hand experience and come to rural areas to learn about the challenges of rural areas and how to solve those challenges.

In conclusion, principal number 2 added:

> "That is correct, because it is not easy for someone who has never been exposed to rural realities to train someone in that condition, but someone with a rural background will be able to conduct the training successfully as he will have the knowledge of rural realities. If the facilitator does not know about rural realities, he/she will not be able to develop the teachers successfully".

The above principal confirmed that training of teachers should be conducted by a person who has a rural background because that person will have knowledge of rural realities and can develop rural teachers successfully. Professional development activities should align to conditions where development of teachers should be

conducted by facilitators who have the experience of the rural background. Such facilitators know the rural conditions and challenges and how to capacitate teachers to handle those challenges because they have first-hand experience and not reading from the books.

4.3.29 The implementation of (IQMS) at school

Table 4.33 presents data on the implementation of (IQMS) at school.

Table 4.33 The implementation of (IQMS) at school

	Response	Frequencies	Percentage
1	Yes	98	66.7
2	No	49	33.3
	Total	147	100.0

Table 4.33 reflects the high percentage of (66.7%) respondents confirming that the implementation of (IQMS) in their schools takes into consideration the rural context of their schools. Only (33.3%) of the respondents did not support that statement. These respondents feel that IQMS in their schools does not take into consideration their rural contexts because some criteria used to evaluate teachers are not on a list of activities which is not fair. The results suggest that the implementation of (IQMS) should take into consideration the rural context of the schools in order to boost teachers' morale due to their poor working conditions and remuneration packages. These results are in agreement with Lekome (2006) who said that the idea of developing a new appraisal system as a component of Integrated Quality Management System (IQMS) is to improve the quality of education in South African Schools. Lekome further indicated that this idea was developed to address the competency and incompetency of teachers. The purpose of Developmental Appraisal System (DAS) is to evaluate the strength and weakness of individual teachers and to draw up developmental programmes (Rambuda, 2006). Teachers from different contexts would need to be evaluated and trained based on their needs.

Some researchers (Hammonds, 2002; Gallie, 2006) confirm that it is imperative that teachers conceptualise developmental appraisal as a tool for self-empowerment, advancement, accountability and improvement of staff performance. Some teachers perceived developmental appraisal as non-developmental and biased (Kolobe, 2017).

Kolobe (2010) adds that money rewards is a source of conflict and that senior staff detest being evaluated by junior staff. Therefore, evaluators should strive to add new ideas about how the developmental appraisal can be done to empower teachers. Experienced teacher number 4 interviewed confirmed this:

> "Some, depending on their willingness. Some people come into the teaching profession due to poor backgrounds only to find that even after attending workshops their teaching abilities are still the same, so to them attending the workshop is just part of the teaching service and they do not learn anything".

The above experienced teacher revealed that some teachers who attend workshops show teaching abilities that can promote teaching and learning whereas some do not show those teaching abilities. There are some teachers who came to the teaching profession because of poverty. Those teachers have a negative attitude about workshops and cannot improve their teaching strategies even when they attend workshops.

The results revealed that there are some teachers who did not choose the teaching profession as their first priority but were compelled by their poverty. Even when those teachers attend workshops, they cannot change their teaching strategies to show teaching abilities that can promote teaching and learning. Those teachers are not willing to be developed and cannot become effective at all.

4.3.30 Teachers developed to cope with teaching multi-grade classes

Table 4.34 presents data on being developed to cope with teaching multi-grade classes.

Table 4.34 Teachers developed to cope with multi-grade classes

	Response	Frequencies	Percentage
1	Yes	54	36.7
2	No	93	63.3
	Total	147	100.0

Table 4.34 shows that the majority of the respondents (63.3%) revealed that they were not developed to cope with teaching multi-grade classes. About (36.7%) agreed that they were developed to cope with teaching multi-grade classes. Multi-grade teachers who are mostly found in rural and farm school environments need to plan and prepare for more than one grade per lesson, face special challenges. These results are in line with Beuks (2006) who notes the absence of clear guidance for the combination of grades; inconsistent learner attendance; lack of classroom management skills; mother tongue influences; grouping; and time management as some of the difficulties faced by rural multi-grade teachers in Namibia.

Hlalele (2011) indicates that teachers' exposure to suitable teaching strategies is limited as teachers are not trained on multi-grade teaching and that no support is offered to these teachers. Due to the multi-grade system, quality teaching and learning may not be possible because the department is reluctant to fill vacant posts.

4.4   SUMMARY

In this chapter, I presented and interpreted data for the first quantitative stage, followed by the contextual analysis of the second qualitative study. From both

stages, it becomes evident that teachers find teacher professional development programmes too demanding. Taking teachers out of school to attend a day-long course is expensive when there is no guarantee that the course is high quality and no follow-up session to consolidate teachers. Kolobe (2017) indicates that some of the teachers perceived developmental appraisal as non-developmental and biased. Kolobe adds that money rewards is a source of conflict and that senior staff detest being evaluated by junior staff. Therefore, Kolobe suggests that evaluators should strive to add any new ideas about how the developmental appraisal can empower teachers. The study also revealed that Multi-grade teachers who are mostly found in rural and farm schools need to plan and prepare for more than one grade per lesson and face special challenges. Face-to-face interview respondents indicated that making use of one class for two grades is a major problem. For example, Foundation phase learners have to concentrate while other teacher is teaching on the other side; the curricular and lesson plans require being print ridge. The oncoming chapter will round off this study with a list of findings, recommendations and possible future research possibilities and a conclusion on the theme relations between teachers' professional development and promotion of teaching and learning in rural primary schools.

CHAPTER 5

SYNTHESIS, FINDINGS, RECOMMENDATIONS AND CONCLUSION

5.1 INTRODUCTION

In this chapter, an outline of the study is documented focusing on the research aims, questions of the study and research approaches applied to solve the research problem. A summary of findings is also presented followed by recommendations for both contexts of the study and for future research study.

5.2 OVERVIEW OF THIS STUDY

The first chapter presented an orientation of this study, whereby a background, problem statement, aim and objectives of the study were documented. It was further revealed that the study is placed over a mixed methodology research design. The area over which the study was conducted is indicated as delimitation of the study, followed by ethical considerations in the process of investigation and its significance. The first chapter further closed by providing outline of what the study entails in subsequent Chapter 2 to 5.

This study investigated professional development of teachers for promoting teaching and learning in rural primary schools of Tshinane Circuit. The study used a mixed method research design. Thus, the qualitative data in phase 2 of the study went beyond the quantitative description information through an in-depth investigation to present respondents' experiences of reality

The aim and objectives of the study:

The aim of this study was to investigate professional development of teachers for promoting teaching and learning in rural primary schools of Tshinane Circuit.

Objectives

- To explore how professional development of teachers in rural primary schools is affecting the promotion of teaching and learning;
- To assess critical aspects of professional development of teachers in rural primary schools taking into account the contextual factors for them to promote teaching and learning.
- To investigate how primary school teachers can be developed to cope with teaching and learning realities in rural contexts.

Research questions

- How is professional development of teachers in rural primary schools affecting the promotion of teaching and learning?
- What are the critical aspects of professional development of teachers in rural primary schools, taking into account the contextual factors for them to promote teaching and learning?
- How can primary school teachers be developed to cope with teaching and learning realities in rural contexts?

5.3 MAIN FINDINGS FROM THE STUDY

A study of relevant literature revealed that most teachers are professionally developed in rural primary schools to cope with challenges of professional practices in rural contexts. The majority of teacher respondents agreed that teachers are

adequately trained to promote teaching and learning in rural environments. The majority of principal respondents during the first phase of the study agreed that in-service training of teachers is done to prepare teachers for rural environments. The key purpose of teacher professional development is about empowering teachers to enhance their efficiency in their teaching while developing them in their professional career cycle as a whole (Letsatsi, 2010).

The empirical evidence revealed that professional development gives teachers opportunity to explore new strategies of teaching and learning because education is changing. The training helps to improve teachers teaching skills. Teachers become better teachers after acquiring new teaching methodology from professional development programmes.

Teachers need access to on-going professional development for effective teaching. This professional development enables teachers to improve their own education through seminars, workshops and classes. Teachers are able to acquire new knowledge, better methods for improving their skills toward more effective, efficient and competent teaching.

Despite some barriers between rural and urban areas, conditions in rural areas are varied and different from those in other areas and therefore need special attention. Conditions in rural contexts require specialized training and development of teachers to cope with situations for them to promote the quality of teaching and learning. It was further revealed that for teachers in South Africa, school support is built into structures that continuously and purposefully bring teachers together to enhance their professional development as determined by the context.

Therefore, professional development is designed to meet the needs of particular teachers in a particular setting. The best possible solution is to look at rural circumstances because in urban areas, their facilities are developed. Therefore,

school facilities need proper attention as they have a great value in the support of teachers and students. The students' morale and motivation play a significant role to improve the quality of education. It has also been emphasised by the DoE (1997) that in most instances, the inability of learners to access education provision results from inadequate or non-existent services and facilities which are key to participation in the learning process. In addition, the study has proven that there is a correlation between the effect of teacher professional development on teaching and learning and how teachers in rural primary schools are being developed to promote teaching and learning.

5.3.1 How is professional development of teachers in rural primary schools affecting the promotion of teaching and learning?

Training of teachers to promote teaching and learning in rural environments

The majority of respondents agreed that teachers are adequately trained to promote teaching and learning in rural environments. This confirms that most teachers are trained enough to teach in rural environments. However, some respondents disagreed that teachers are adequately trained to promote teaching and learning. Interview results from one of the teachers confirmed that it was not easy to teach learners before going to teachers' professional development. It was frustrating to meet challenges like following lesson plans and experiencing problems with learners. Therefore, professional development helped to gain knowledge and skills to overcome those challenges. The results show that teachers are adequately trained to promote quality teaching and learning in rural environments. The study further suggested that effective and meaningful support systems for on-going growth and development of certified teachers should be created before they start teaching in their classrooms.

Training of teachers in relation to the area where they teach is important for effective teaching and learning

The majority of teachers agreed that training of teachers in relation to the area where they teach is important for effective teaching and learning, whereas some of them strongly agreed. Mastering the subject matter helps the teacher to develop certain skills that can assist in dealing with different kinds of learners with regard to their level of intelligence. Teachers who undergo professional development have better teaching skills than those who have not been developed. They gain strategies like: well-planned lessons and lessons delivery, new knowledge about the particular subject that they are teaching and knowledge of curriculum. Teachers change their teaching strategies after each professional development workshop. Learners had a problem of learning digital watch but after the workshop, teachers transferred the skill that they learnt from the workshop to their colleagues, which helped learners to understand that concept. Teachers' skills learnt from professional development appear effective in supporting changes in teacher practices and learners' learning.

Teachers' skills learnt from professional development workshops are applicable to rural primary schools

Most teachers and principals agreed that teachers' skills learnt from professional development workshops are applicable to rural primary schools. However, considerable issues should be considered when recruiting teachers for rural schools. These include the training needs for rural schools and recruitment of teachers trained to meet these specific needs. Teachers are placed in groups in the workshops to teach their lessons in different ways, as they teach different learners using different methods. Through that, teachers learn different strategies from each other because they can apply those strategies learnt from workshops to their classrooms.

Teachers' skills learnt from professional development appear effective in supporting changes in teacher practices and learners' learning. High-quality professional

development creates space for teachers to share ideas and collaborate in their learning, often in job-embedded contexts that relate new instructional strategies to teachers, learners and classrooms. Implementing effective professional development requires responsiveness to the needs of teachers and learners and to contexts in which teaching and learning will take place.

Teachers are developed well enough to teach effectively in a rural context

The majority of teachers agreed that teachers are developed well enough to teach effectively in rural context. Although teachers are recruited and professionally developed in rural schools, it is not easy to retain them. One of the teachers during the interview revealed that there is a change after attending workshops. Teachers used to complain about learners as they cannot grasp what they are teaching. After they attended workshops, their way of thinking and discussing things changed. Findings from the study confirmed that professional development of teachers had a positive effect on teacher knowledge. Teachers become capable of engaging with learners and can also manifest leadership skills. Most important indicators of effective teachers know their subject matter. Teachers transfer knowledge/skills gained in professional development to their classrooms.

5.3.2 What are the critical aspects of professional development of teachers in rural primary schools, taking into account the contextual factors for them to promote teaching and learning?

Teachers in rural primary schools are professionally developed differently

Conditions in rural areas are varied and different from those in urban areas and therefore need special attention. However, teachers interviewed revealed that there is a big difference between urban and rural teachers and that even the standards in teaching is not the same because urban teachers have well equipped resources which enable learners to learn and understand what the teacher is teaching. Most rural areas learners are from disadvantaged families and learners lack home support. The results showed that rural schools have always been synonymous with

resource shortages, inadequate infrastructure and poor education compared to urban schools. Teachers should be developed in strategies for coping with challenges in their daily professional life and general well-being as they shape learners' learning environment and influence learners' motivation and achievement.

Teachers find professional development effective in improving learner literacy

The majority of teachers agreed that teachers find professional development effective in improving learner literacy whereas some teachers disagreed. It is revealed that many learners in primary schools are not able to read and write. The problem is that learners are not exposed to English outside the classroom; therefore, their English proficiency is not adequate for formal learning and as a result, learners in rural contexts do not perform well. Teachers should be professionally developed to use English as a medium of instruction and should be trained to encourage learners to use English even outside the classroom for the promotion of teaching and learning as this will improve learners' literacy.

The results describe teachers' work in terms of English as a medium of instruction as challenging, but they remain active and flexible. Teachers must be prepared to handle unanticipated situations to adapt current knowledge, to deal with new problems, to learn radically new things and deal constructively with change. Those are qualities of teachers who bring value to all kinds of rural school contexts.

Teachers are continuously trained to enable them to handle multi-grade classes

The majority of teachers and principals disagreed that teachers are continuously trained to enable them to handle multi-grade classes common in rural areas. Teachers' exposure to suitable teaching strategies is limited as teachers are not trained on multi-grade teaching and no support is offered to these teachers. The results revealed lack of classrooms as the main cause of multi-grade teaching. One

grade is used to accommodate two grades, and proves difficult for learners to concentrate when there are two teachers teaching different grades and aspects in the same classroom. It is also difficult for these classrooms to be print ridge as expected from foundation phase classrooms. The results suggest that teacher training institutions should equip teachers to teach in multi-grade classrooms.

Teachers' development to cope with conditions where resources for teaching and learning are lacking

The majority of teachers believed that they are developed to cope with conditions where resources for teaching and learning are lacking, but some teachers do not believe that they are being developed. However, most South African rural schools lack instructional resources, basic services and facilities to implement the curriculum design, unlike in the urban schools. Teachers should be professionally developed to cope with such conditions; they must know what should be done. The inability to cope with the scarcity of teaching and learning resources is frustrating, like when learners sit on the floor. Teachers should be trained on self-improvising skills and entrepreneurial skills so that they can cope with under-resourced conditions.

5.3.3   How can primary school teachers be developed to cope with teaching and learning realities in rural contexts?

In-service training for teachers in rural environments

The majority of those who took part in the study agreed that in-service training is done to prepare teachers for rural environments. The key purpose of teacher professional development is empowering teachers to enhance their efficiency in their teaching while developing them in their professional career cycle as a whole. In-service training for teachers in rural areas must be conducted even when they are at their workplace. These trainings should be done on a quarterly basis, at the beginning and end of the term so that teachers can participate for upgrading their professional skills, knowledge and interest. Teachers require a formal training period

for an individual to specialize in a subject matter because today, knowledge is produced and consumed quite rapidly. Therefore, the information that the teacher conveys to learners should be up-to-date and reflect the latest scientific facts of the field.

Teachers' professional development workshops training experts

Most teachers agreed that teacher development workshops should be conducted by training experts who have experience in rural environments. Teacher education is effective when they are trained in effective pedagogies relevant to their contexts.

Teacher training and professional development are seen as central mechanisms for improvement of teachers, content knowledge and their teaching skills and practice in order to meet high educational standards. However, some were not sure that teachers' development workshops are conducted by training experts with experience of rural environments. Some facilitators are not passionate about their work; therefore, teachers gain nothing from them as they fail to present their matter. However, from some facilitators who are passionate about their work, teachers can gain some teaching strategies. Teacher professional development workshops differ among trainers. Not every trainer is effective, but the best trainers understand that people learn at different speeds and in different ways.

Highly qualified teachers are easily retained

The majority of teachers were not sure if highly qualified teachers are easily retained in rural contexts after being professionally developed. Students that have a rural background should be encouraged to consider returning to their rural home communities once they qualify. Training institutions need to train all teachers in the learning institutions equally. Teacher training institutions should prepare teachers' pre-service training with the knowledge of rural areas to prepare teachers for rural areas so that they can easily be retained. There is no education for rural or urban

teachers. Therefore, their college training curriculum should prepare them for the conditions and needs of schools because some teachers leave teaching for better paying posts. This training should improve the quality of teachers to make them effective in urban or rural areas.

Development of rural teachers for rural contexts

Rural teachers are developed to cope with challenges of professional practices in rural contexts. Conditions in rural contexts require specialized training and development of teachers to cope with situations for them to promote quality of teaching and learning. Teachers in rural schools should receive specialized training for them to cope with conditions prevailing there. Results showed that in some rural areas, economic decline and increased poverty accompanied depopulation. To promote learners' learning in rural schools, both the distinct advantages of rural communities and their possible disadvantages should be taken into account when developing teachers in rural primary schools.

5.4   SYNTHESIS OF THE MAIN FINDINGS

The study sought to investigate professional development of teachers for promoting teaching and learning. The research found that teachers are adequately trained to promote teaching and learning in rural environments in Tshinane Circuit primary schools. Teachers who undergo professional development have better teaching skills than those who have not been developed. The key purpose of teacher professional development is empowering teachers to enhance their efficiency in their teaching while developing them in their professional career cycle.

The different forms of teacher professional development programmes in South Africa such as workshops, conferences, consultation and peer appraisal should be continuous throughout the year. This form of practice can make important

contributions to assist teachers on the evaluation and monitoring or the effectiveness of the training and development programmes.

5.5   RECOMMENDATIONS

- Teacher Professional development should, through workshops, continuously be organised as it benefits students and teachers through new strategies, techniques, or tips that can be utilized in the classroom; it also promotes interaction with teachers from other areas to improve their own teaching. This means that teachers must be lifelong learners attending workshops organised in order to teach each new group of students.

- Professional development should focus on instructional strategies proven to impact student performance. To be effective, professional development should be based on curricular and instructional strategies that have a high probability of affecting student learning and, just as important, students' ability to learn.

- Teachers who participate in professional development must put their new knowledge and skills to work. Teaching quality greatly depends on teachers' competence in acquiring new knowledge and this will, in turn, help improve students' learning.

- Teachers' professional development must be well planned and implemented effectively. An effective comprehensive plan for professional development should be based on a shared vision developed in a collaborative process carried out by the education partners involved in the implementation and delivery of the plan.

- Teachers must be taught to use technology in their classrooms well enough to teach learners. They need to be able to tie technology into a unit of inquiry so

that learners learn to think and create as they learn the technology, particularly in rural areas.

- Teachers should be professionally developed to acquire self- improvising skills to cope limited resources. Teachers can develop creative learning environments for their learners.
- Teachers should be trained during the school holidays to avoid interruptions of clas Teachers' professional development should be a continuous process for it to succeed, contributing to the general improvement of education.

- There should be follow-up-programmes after every workshop. Trainers must do follow-u support teachers' efforts to implement the training in their classrooms, evaluative and trai functions and underlying supportive function. Trainers should adopt a supportive role to trai rather than inspectorial role.

- Teachers in rural schools should be differently developed from those in urban areas as conditions are not the same.

5.6   CONTRIBUTION TO THE BODY OF KNOWLEDGE

The collected data on professional development of teachers for quality teaching and learning will make an innovative and worthwhile contribution to the fields of education. The study will, therefore, contribute to knowledge regarding strategies that these teachers use and to what effect. The study will also provide knowledge on what rural primary teachers think about professional development.

5.7   SUMMARY

This study was conducted to investigate professional development of teachers for promoting teaching and learning in rural primary schools of Tshinane Circuit. The findings showed that teachers are adequately trained to promote teaching and learning in rural environments. In the first chapter, the problem was stated and the aims of the study were also spelt out. A literature review was conducted on teachers'

professional development, challenges of teaching and learning in rural primary schools and possible measures in a South African context were also presented. In conclusion, the study accomplished its stated aims and answered all the research questions stated in chapter one.

REFERENCES

Adedeji S.O. & Olanrewaju, O. (2011). Fundamentals of teacher education development: Improving the conditions of teachers and teaching in rural schools across African countries. Addis Ababa. UNESCO: International Institute for Capacity Building in Africa.

Afework, T.H. (2014). The availability of school facilities and the effects on the quality of education in government primary schools of Harare Regional state and East Hararghe Zone, Ethiopia: Haramay University.

Alexander, J.O. (1999). Collaborative design, constructivist learning, information technology immersion, & electronic communities: a case study. Interpersonal Computing and Technology: An Electronic Journal for the 21st Century No.7, Pp.; 1–2.

Alexander, R., Rose, J. & Woodhead, C. (1992) Curriculum organization and Practice in Primary Schools, A discussion paper, Department of Education and Science.

Alliance for Excellent Education. (2004). tapping the potential: Retaining and developing high-quality new teachers. Washington, DC: Author.

Allie, F. (2014). The influence of school principals' leadership styles on the effectiveness of schools. Cape Peninsula University of Technology. Faculty of Education and Social Sciences.

Amadi, M. N. (2010). Current Issues and Trends in Nigeria Higher Education. Course Material Written for B.Ed. and M.Ed. Student, pp. 98 - 99. Lagos: VITAMED Publisher. American Educational Research, 38(4), 915-945.

Aminudin, N.A. (2012). Teachers' perceptions of the impact of professional development on teaching practice: The case of one primary school. MA thesis, Unitec Institute of Technology, Auckland.

Anderson, D., Horton, L. & Orwick, S. (2004). Aboriginal teacher education; issues for first nation's communities. Prepared for the ATEP Advisory Committee.

Andrew, D. (2004). The impact of perceived leadership behaviours on satisfaction, commitment and motivation: An expansion of the multidimensional model of leadership. International Journal of Coaching Science, 1 (1), 35-56.

Asika, N. (1991). Research methodology in the behavioural Science, Ikeja, Longman Nigeria Plc.

Association for Supervision and Curriculum Development. (2003). what professional development structures best affect classroom instruction? Translating Education Research into Action. I (15), 1-4. http://www.ascd.org/publications/research brief//volume I//vlnls.html. Retrieved November 2003.

Atchoarena, D. & Gasperini, L. (2002). Education for rural development, towards new policy initiatives. Retrieved on 24 September 2012 from ftp://ftp.fao.org/docrep/fao/006/ad423e/ad423e00.pdf.

Azano, A.P. & Stewart, T.T. (2016). Confronting challenges at the Intersection of rurality, Place, and Teacher Preparation: Improving Efforts in Teacher Education to Staff Rural Schools. Global Education Review, 3(1), 108-128.

Babalola, J., Ogunkola, B.J. & Olatoye, R.A. (2008). Predictors of computers attitudes of secondary school Science teachers in Ogun State: Nigeria. International Journal of Environmental & Science Education 3 (2), 53-57

Babbie, E. & Mouton. (2009). The practice of social research. Cape Town: Oxford University Press. South Africa.

Babbie, E. (2007). The practice of social research, 11th ed. Belmont: Thomson Wadsworth.

Badugela, T.M. (2012). Problem Facing Educators in Implementing the National Curriculum Statement: The cause of Tshifhena Secondary School, Vhembe District, Limpopo Province, South Africa, UNISA.

Bernard, T. & Torero, M. (2009). Social Interaction Effects and Connection to Electricity: Experimental Evidence from Rural Ethiopia, mimeo, International Food Policy Research Institute, Washington, D.C.

Beukes, F.C.G. (2006). Managing the effects of multi-grade teaching on learner performance in Namibia. Unpublished MA thesis. Johannesburg, University of Johannesburg.

Birman, B. F., Desimone, L., Garet, M. S., Porter, A. C. & Yoon, K. S. (2001) what makes professional development effective? Results from a national sample of teachers. American Educational Research Journal, 38(4), 915-945.

Blease, B. & Condy J. (2014). What Challenges do foundation phase teachers experience when teaching writing experience when teaching writing in rural multi-grade classes? South African Journal of Childhood Education. University of Johannesburg.

Blease, B. & Condy, J. (2015). Teaching of writing in two rural multi-grade classes in the Western Cape. Reading & Writing-Journal of the Reading Association of South Africa, 6(1), 1-9.

Bonner, P.J. (2006). Transformation of teacher attitude and approach to math instruction through collaborative action research. Teacher Education Quarterly, 33(3), 27-35.

Botha E.M. (2015). Effective use of assessment data to improve teaching and learning in primary schools in South Africa: Four case studies South of Johannesburg. Wits school of Education.

Bullock, L.M., Gable, R.A., & Mohr, J.D. (2008). Technology-mediated instruction in distance education and teacher preparation. Teacher Education and Special Education, 31-242., 229

Carpenter, T.P., Fennema, E., Franke, M.L., & Levi, L. (2001). Capturing teachers' generative change: A Follow-up study of professional development in Mathematics. American Education Research Journal, 38(3), 653-689.

Chandler, R.C. & Plano, J.C. (1998). The public administration dictionary, (2nd ed.) New York: Clio Press.

Chikoko, V. (2006). Negotiating roles and responsibilities in the context of decentralized school governance: A case study of one cluster of schools in

Zimbabwe. (Unpublished doctoral dissertation). University of KwaZulu-Natal, Durban, South Africa.

Chuunga, M.S. (2013) Teachers' Practices in the Teaching of Reading and Writing towards supporting learners with reading difficulties at Lower Primary: A Case Study of teachers for fourth-graders in Monze District-Zambia, University Of Oslo.

Cochran-Smith, M. & Zeichner, K. eds. (2005). Studying teacher education: The report of the AERA panel on research and teacher education. Mahwah, NJ: Lawrence Erlbaum.

Cochran-Smith, M. (2004). Walking the road: Race, diversity and social justice in teacher education. New York: Teachers College Press.

Colbert, J. A., Brown, R. S., Choi, S., & Thomas, S. (2008). An investigation of the impacts of teacher-driven professional development on pedagogy and student learning. Teacher Education Quarterly, 35(2), 135-154.

Collins, T. (1999). Attracting and retaining teachers in rural areas: ERIC Digest.www.ericdigests.org/2000-4/rural.hmt. Accessed: 10 October 2008.

Connelly, L.M (2009) Mixed Method Studies. Medsurg Nursing, 18(1).

Corbett, M. (2007). Learning to leave: The irony of schooling in a coastal community. Halifax, NS: Fernwood.

Craig, H.J., Kraft, R.J., & du Plessis, J. (1998). Teacher development: Making an impact. Washington, D.C.: U.S. Agency for International Development and the World Bank.

Danielson, C. (2005). Strengthening the School's Backbone. Journal of Staff Development, 26(2), 34-37.

Darling-Hammond, L. (2005). Correlation between teachers and student achievement. Paper presented at the meeting of the American Education Research Association (AERA), Montreal.

Darling-Hammond, L., & Bransford, J. (2005). Preparing teachers for a changing world: What teachers should learn and be able to do. San Fransisco, CA: Jossey-Bass.

Davis, E., D. Petish, and J. Smithey. (2006). Challenges new Science teachers face. Review of Educational Research 76, no. 4: 607-51.

Davis, B. & Higdon, K. (2008). The effects of mentoring/induction support on beginning teachers' practices in early elementary classroom (K-3). Journal of Research in Childhood Education. 22(3): 261-274

Dawadi, B. R., & Shakya, S. (2016). ICT Implementation and Infrastructure Deployment Approach for Rural Nepal. In P. Meesad, S. Boonkrong & H. Unger (Eds.), Recent Advances in Information and Communication Technology 2016: Proceedings of the 12th International Conference on Computing and Information Technology (IC2IT) (pp. 319-331). Cham: Springer International Publishing.

De Vos, A.S., Strydom, H., Fouche, C.B. & Delport, C.S.L. (2011). Research at Grass Roots. For the social Sciences and human service professions. Fourth Edition. Van Schaik Publishers, Pretoria, South Africa.

Department of Basic Education and Training Unit. (2014). Education policy: Pupil teacher ratio. Retrieved March, 12, 2014, fromhttp://www.etu.org.za/toolbox/docs/government/pupilteacherratio.html

Department of Basic Education. (2010). Status of the Language of learning and Teaching Report, 2010. Pretoria: Government Printer.

Department of Education (2000). A South African Curriculum for the twenty first century: report of the Review Committee on Curriculum 2005. Pretoria: DOE

Department of Education (2005). Report on the Ministerial Commission on Rural Education: A new vision for rural schooling. Retrieved on 23 June 2012 from www.pmg.org.za/.../20050613-report-ministerial-committee-rural-ed.

Department of Education. (1997). QUALITY EDUCATION FOR ALL: Overcoming barriers to learning and development. REPORT OF THE National Commission on

Special Needs in Education and Training (NCSNET) National Committee on Education Support Services (NCESS)

Department of Education. (2006). The National Policy Framework for Teacher Education and Development in South Africa. More teachers; Better teachers" Pretoria.

Department of Education.(June, 2001). National Strategy for Mathematics, Science and Technology Education in General and Further Education and Training. Pretoria, Department of education.

Eberhard, A., Foster, V., BriceñoGarmendia, C., Ouedraogo, F., Camos, D & Shkaratan, M. (2008). AFRICA INFRASTRUCTURE COUNTRY DIAGNOSTIC: The State of the Power Sector in Sub-Saharan Africa. Background paper 6. U.K. Department for International Development.

Ehrenberg, R.G. (2001). The class size controversy. Retrieved May, 7, 2014 from htt: //digital commons. Cornelledu/ working papers.

Engelbrecht, P. (2006). The implementation of inclusive education in South Africa after ten years of democracy. European Journal of Psychology of Education, 21(3):253-264

Eisenhart, M. (1991). Conceptual frameworks for research circa 1991: Ideas from cultural anthropologist; implications for Mathematics education researchers. Paper presented at the Proceedings of the Thirteen Annual Meeting North American Paper of the International Group for the Psychology of Mathematics Education, Blacksburg, Virginia, USA.

Farrel. G. & Isaacs, S. (2008). Survey of ICT and Education in Africa: A summary Report Based on 53 country Surveys. Washington, DC: infodes/ World Bank. www.infodev.org/en/ Publication.353. Htm [11 April 2012]

Fullan. M.G. (1991). The new meaning of educational change. 2nd edn. New York, NY: Teachers College Press.

Gallie, M. (2006). The implementation of Developmental Appraisal Systems in a low functioning South African School. [On line]: http: //www.saflii.org/za/-legis/num-at/Iral1995188. (Date of access: 18 September 2009.

Garet, M. S., Porter, A. C., Desimone, L., Birman, B. F., & Yoon, K. S. (2001). What makes professional development effective? Results from a National Sample of Teachers. American Educational Research Journal, 38, 915-945. Doi: 10.3102/00028312038004915

 Garmston, R. J. (2005). Group wise: Create a culture of inquiry and develop productive groups. Journal of Staff Development, 26(2), 34-37.

 Geldenhys, J. L., Lizette C. Oosthuizen (2015). Challenges influencing teachers' involvement in continuous professional development: A South African perspective. Nelson Mandela Metropolitan University. P.E. South Africa.

Gilroy, P. (2014). International teacher education: Changing times, changing practices.

Goodnough, K. (2011). Examining the long-term impact of collaborative action research on teacher identity and practice: the perceptions of K-12 teachers, Educational Action Research, 19(1), 73-86.

Gordon, A. (2009). Restructuring teacher education. Issues in Education Policy Number 6. Johannesburg, SA: Centre for Education Policy Development.

Gorski, P.C. (2013). Reaching and teaching students in poverty. New York: Teachers College Press.

Guardian Africa Network (2013). South Africa's forgotten schools – in pictures. Guardian, 1 May. Available at http://www.theguardian.com/world/gallery/2013/may/01/southafrica-forgotten-schools-inpictures.Accessed 24 April 2016

Guskey, T. R. (1995) Results-oriented professional development: In search of an optimal mix of effective practices, North Central Regional Educational Laboratory. http://www.ncrel.org/sdrs/areas/rpl_esys/pdlitrev.htm. Retrieved November 2003.

Guskey, T. R. (2003) Analysing lists of the characteristics of effective professional development to promote visionary leadership. NASP Bulletin, 87(637), 38-54.

Guskey, T.R. (2003). What makes professional development effective? Phi Delta Kappan, 84(10), 748-750.

Hammonds, B. (2002). Quality learning: A vision for the future. Leading and learning for 21st century: 1(8.

Harris, A. & Hopkins, D. (2008). Seven strong claims about successful school leadership. School leadership and management, 28(1), 27-42.

Harris, J., Cale, L., & Musson, H. (2011). The effects of a professional development programme on primary school teachers' perceptions of physical education. Professional Development in Education, 37(2), 291-305.

Hassan, K. (2015). Investigating identity experience of Wits student teachers in Acornhoek rural schools, Mpumalanga Province, University of Witwatersrand.

Heeralal, P.J.H. (2014). Preparing Pre-Service Teachers to Teach in Rural Schools, MCSER Publishing, Rome-Italy.

Hlalele, D. (2011). Sustainable rural learning ecologies- a prolegomenon traversing transcendence of discursive notions of sustainability, social justice, development and food sovereignty, University of the Free State.

Hlalele, D. (2012). Social justice and rural education in South Africa. Perspective in Education, 30(1): 111-118.

Holloway, J. H. (2003). Sustaining experienced teachers. Educational Leadership, 60(8), 87-89.

Howard, S., and Johnson, B. (2004). Resilient teachers: resisting stress and burnout. Social Psychology of Education, 7(4), 399-420

Ikram, H. (2017, June). Effect of Teachers' Professional Development in Media Technology on Pre-schoolers Learning in Rural Settings. In EdMedia: World Conference on Educational Media and Technology (pp. 509-513). Association for the Advancement of Computing in Education (AACE).

Ingersoll, R. & Smith, T. (2003). "The Wrong Solution to the Teacher Shortage". Educational Leadership, 60(8), 30-33.

Ingvarson, L., Meiers, M. & Beavis, A. (2005). Factors affecting the impact of professional development programs on teachers' knowledge, practice, student outcomes & efficacy. Education Policy Analysis Archives, 13(10), 1-28.

Kadijevick, D.J. (2002). Four Critical Issues of Applying Educational Technology: Standards to Professional Development of Mathematics Teachers. Proceedings of the 2nd International Conference on the Teaching of Mathematics at the Undergraduate Level, University of Crete.

Kapfunde, L., Wolhuter, C., Lemmer, E., de Wet, N. (2007). Comparative education: Education systems and contemporary issues. Pretoria, South Africa: Van Schaik.

Kedzior, M.S. (2004). Teacher Professional Development. University of Delaware. Education Research & Development Centre. United States in Newark.

Kennedy, M. (1998). Form and substance in in-service teacher education. Research monograph13, National Institute for Science Education. University Wisconsin-Madison.

Killen, R. (2007). Teaching strategies for outcome-based education. Kenwyn: Juta.

Kim, K., & Roth, G. (2011). Novice teachers and their acquisition of work-related information. Current Issues in Education, 14(1), 1–20. Retrieved from: http://cie.asu.edu/

King, M. B. & Newmann, F. M. (2000) Will teacher learning advance school goals? Phi Delta Kappan. 81(8), 576- 580

Kirkpatrick, D. (1994) Evaluating Training Programs, 3rd ed. San Francisco: Barrett-Koehler.

Kolobe, A.B.M. (2017). The developmental appraisal system (DAS) as a major issue in educational policy discourse in the foundation phase of schools in Free State. Source: Interim: Interdisciplinary Journal 13, pp. 12

Kowalczyk, D. (2016). Research methodologies: Quantitative, qualitative, and mixed methods [video file]. Retrieved from http://study.com/academy/lesson/research-methodologies-quantitative-qualitative-mixed-method.htm

Kruijer, H. (2010). Learning how to teach: The upgrading of unqualified primary teachers in sub-Saharan Africa: Lessons from Tanzania, Malawi, and Nigeria. Belgium: Education International.

Lampert, J., & Burnett, B. (2014). Teacher education for high-poverty schools: Keeping the bar high. In S. Gannon & W. Sawyer (Eds.), Contemporary issues of equity in education (pp. 115-128). Newcastle, UK: Cambridge Scholars Publishing.

Leask, M.C. (2014). Teaching English as a second language in Grade 3 rural schools. Faculty of Education: University of Pretoria.

Legari, K. (2004). Teaching physical science in rural (under-resourced) secondary schools. University of Durban- Westville. School of education studies.

Lekome, B.T. (2006). Professional development of primary school educators through the development of appraisal system. (Unpublished MEd Dissertation). Pretoria: University of Pretoria.

Letsatsi, S. (2010). School leadership and teacher professional development in Lesotho: a case study of two secondary schools in Leribe District. – wiredspace.wits.ac.za

Leu, E. (2004). The patterns and purposes of school-based and cluster teacher professional development programs (EQUIPI Working Paper No.2). Washington DC: USAID. Available at www.equip123.net.docs/ working p2. Pdf. Accessed 12 December 2006.

Linnemanstons, K.A. & Jordan, C.M. (2017) Learning through place: Evaluation of a professional development program for understanding the impact of place-based education and teacher continuing education needs. Journal of sustainability education, 12, University of Minnesota-Twin Cities.

Loucks-Horsley, S., Hewson, P.W., Love, N., & Stiles, K.E. (1998). Designing professional development for teachers of Science and Mathematics. California: Crowning Press, Inc.

Lumadi, M.W. (2014). Exploring factors faced by teachers in curriculum implementation. Department of curriculum and instructional studies, college of education, University of South Africa. South Africa.

Majongwe, R. (2013). Zimbabwe Education Unions deplore use of temporary unqualified teachers. Sunday News. Retrieved from http://www.thestandard.co.zw/

Makhubele, E. (2015). Exploring challenges faced by Grade 4 teachers in the implementation of reading practices in the Mano'mbe Circuit of the Mopani District: University of South Africa.

Makunja, G. (2016). Challenges Facing Teachers in Implementing Competence-Based Curriculum Secondary Schools in Marogoro Municipality. (Tanzania).

Mansfield, C.F., Beltman, S., Broadley, T. & Weatherby-Fell, N. (2016). Building resilience in teacher education: An evidenced informed framework. Article in Teaching and Teacher Education .February 2016. Murdoch University.

Manwa, L. (2013). The role of school social climate in assessment of home economics subjects at high schools in Masvingo, Zimbabwe. Journal of Sociological Research, 4(1). 349–363.

Manwa, L., Mukeredzi, T.G. (2016). Rural school teaching in Zimbabwe: Mentoring experiences of' beginning' primary school teachers. Faculty of Education, Great Zimbabwe University, School of Education, Faculty of Arts and design, Durban University of Technology.

Mashau, T. S. (2017) Foundation of Educational Research beginners. University of Venda Library. Unpublished Research.

Masinire, A., Maringe, F. & Nkambule, T. (2014). Education for rural development: Embedding rural dimensions in initial teacher preparation. http://www.perspectives-in-education.com. University of the Free State.

Mathonzi, V. (2011). National Association of School Governing Bodies, A Speech based on the South African Act No.84 of 1996 and the School Governing Bodies. http:// www.sadtu.org.za/press/speeches/2001/15-5-2001.1.htm

Mbulaheni, V.M. (2015). Creating sustainable teaching and learning environment is dysfunctional Secondary Schools in the Mutale Area of Vhembe District. University of Venda, Thohoyandou.

McIntyre, E., Hulan, N., & Layne, V. (2011). Reading Instruction for Diverse Classrooms: Research-Based, Culturally Responsive Practice. New York and London: Guilford Press.

McLean, S.N. & Saqlain, N. (2017). Teacher Recruitment in Rural and Aboriginal Communities. Faculty of Education. Memorial University of Newfoundland, Faculty of Education.

McMillan, J.H. & Schumacher, S. (2001) Research In Education: A Conceptual Introduction. 5th ed. Addition Wesley: Longman.

Meichtry, Y., & Smith, J. (2007). The Impact of a place-based professional development program on teachers' confidence, attitudes, and classroom practices. The Journal of Environmental Education, 38(2), 15–32.

Miller, B.A. (1990). A review of the quantitative research on Multi-grade instruction. Research in rural education, 7(1), 1-8.

Mitchell, C., de Lange, N., Balfour, R., Islam, F. (2011). Transforming teacher education? A rural teacher education project experience. School–university partnerships for educational change in rural South Africa (pp. 59-82). New York, NY: Edwin Mellen Press.

Mohan P.P. (2016). A study on novice and experienced teacher perceptions of professional development in Fiji. Waikato Journal of Education, 21(1), 167-174.

Mohan, P.P., Lingam, G.I. & Chand, D.D. (2017). Teachers Perceptions of the Impact of Professional Development on Learning and Teaching in a Developing Nation. Australian Journal of Teacher Education, 42(11).

Moletsane, L. (2012). Repositioning educational research on rurality rural education in South Africa: Beyond deficit paradigms. Perspectives in education, 30(1), 1-8.

Moon, N.W., Todd, R.L., Morton, D., & Ivey, E. (2012). Accommodating students with disabilities in science, technology, engineering, and mathematics (STEM): Findings from research and practice for middle grades through university education. Atlanta: Centre for Assistive Technology and Environmental Access, Georgia Institute for Technology.

Moyo, P. V. (2002). Effective teaching practice. Masvingo, Zimbabwe: Morgenster Teachers' College

Mtika, P. (2010). Trainee teachers' experiences of teaching practicum. Issues, challenges and new possibilities. Africa Education Review, 8(3), 551-567.

Muijs, D. & Reynolds, D. (2000). School effectiveness and teacher effectiveness in mathematics: Some preliminary findings from the evaluation of the Mathematics Enhancement Programme (Primary). School Effectiveness and School Improvement,

11(3), 273–303.

Mukeredzi, T. G. (2009). Exploring professional development experiences of the professionally unqualified teachers in rural secondary schools (Unpublished doctoral dissertation). University of KwaZulu-Natal, Durban, South Africa.

Mukeredzi, T.G. & Mandroma, A.R. (2013). The journal to becoming professionals: Student teachers experiences of teaching practice in rural South African context. School of Education University of KwaZulu-Natal, Pietermaritzburg. South Africa.

Mukeredzi, T.G. (2016). The nature of professional learning needs of rural secondary school teachers: Voices of professionally unqualified teachers in rural Zimbabwe. University of Technology, Pietermaritzburg. South Africa.

Mulkeen, A. (2010). Issues in teacher supply, training and management. The World Bank, 1818 H Street NW, Washington, DC 20433, USA

Mulryan-Kyne, C. (2007). The preparation of teachers for multi-grade teaching. Teaching and Teacher Education, 23, 501-514.

Muremela, M.G. (2014). An investigation of the nature and extent of the induction of Secondary School Novice Educators at Mvudi Circuit, Vhembe District in Limpopo Province, University of Venda, Thohoyandou.

Murray, J., & Passy, R. (2014). Primary teacher education in England: 40 years on. Journal of Education for Teaching, 40(5), 492-506. doi: 10.1080/02607476.2014.956542

Muthusamy, N. (2015). Teachers experiences with Overcrowded classrooms in a mainstream school. University of KwaZulu-Natal.

Mutshaeni, N., Denhere, C. & Mudhovozi, P. (2010). Inclusive Education in South Africa: Using the lenses of disabled learners. University of West Indies. North America.

Naidoo, G. (1997). Educational Transformation and Open Learning. Possibilities in South Africa. A Contribution to ICDE Conference. UNESCO.

National Research Council. (1996). National Science education standards. Washington, DC: National Academy Press.

National☐ Treasury.☐ (2010)☐ Provincial Budgets: 2009/2010 Financial Year

Third Quarter Year-to-Date Provincial Budgets and Expenditure Report.☐

http://www.treasury.gov.za/comm_media/press/2010/2010031001.pdf

Ngidi, D.P. & Sibaya P.T. (2002). Black teachers' personality dimensions and work-related stress factors. South African Journal of Psychology, 32 (3), 7-15.

Ntapo, N.D. (2009). A critical study of a Continuing Professional Development Orientation Programme for Educators. University of Pretoria.

Nyakundi, K.T. (2012). Factors affecting teacher motivation in public secondary schools in Thika West District, Kiambu Country, Kenyatta University.

Nyambane, C. O. and Nzuki, D. (2014). Factors Influencing ICT integration in teaching- A literature Review. International Journal of Education and Research, 2 (3), 1-18.

OECD. (2013). Teaching and Learning International Survey TALIS 2013

Ogbonnaya, U. (2007). The influence of teachers' background, professional development and teaching practices on students' achievement in Mathematics in Lesotho: University of South Africa.

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

Osterholm, K., Horn, D., & Johnson, W. (2006). Finders Keepers: Recruiting and Retaining Teachers in Rural Schools. National Forum of Teacher Education Journal, 16 (3), 1-12.

Pachler, N. (1999). Theories of learning and ICT. In Leask, M & Pachler, N. (eds.).Learning to teach using ICT in the Secondary School. London: Routledge.

Payne, G. & Payne, J. (2004). Key concepts in social research London Sage.[Crossref],

Pilot, D. F., & Hungler, B. P. (1999). Nursing research: principles and methods. Philadelphia: JB Lippincott Company

Potgieter JM, Visser PJ, Van der Bank AJ, Mothata MS & Squelch JM (1997). Understanding the SA Schools Act. Pretoria: Department of Education

Powers, K.J. (2012). New teachers' perceptions on their preparation: A follow-up study. Ames, Iowa: Iowa State University.

Rambuda, A.M. (2006). A study of the application of Science process skills to the teaching of Geography in Secondary schools in the Free State province. (Unpublished PhD Thesis), Pretoria: University of Pretoria.

Rana, K.B.M. (2018). ICT in rural primary schools in Nepal: Context and Teachers Experiences. University of Canterbury, Christchurch: New Zealand.

Ravhuhali F., Kutame, A.P., Mutshaeni, H.N. & Maluleke, M. (2014). Teaching strategies for rural dysfunctional schools: Can teachers make a difference? University of Venda.

Reid, K. & Kleinhenz, E. (2015). Supporting teacher development: Literature review. Canberra: Department of foreign affairs and Trade.

Research Methods-Quantitative, Qualitative, and Mixed methods. Available from: https://www.researchgate.net/publication/305215626_Research_Methods-Quantitative_Qualitative_and_Mixed_methods [accessed Oct 28 2018].

Rogoff, B. (1990). Apprenticeship in thinking: Cognitive development in social context. New York, NY: Oxford University Press.

Sanoto, D.V. (2017). Teaching literature to English second language learners in Botswana Primary schools: Exploring in-service education and training teachers' classroom practices, Stellenbosch University.

Schmoker, M. (2004). Tipping point: From feckless reform to substantive instructional improvement. Phil Delta Kappa, 85, 424-432.

Seroto, J. (2004). The impact of South African legislation (1984-2004) on Black education in rural areas: A historical and educational perspective. Unpublished PhD thesis, Pretoria: UNISA. Retrieved on 20 September2012 from http://uir.unisa.ac.za/bitstream/handle/10500/1915/thesis.pdf?sequence=1.

Shabani, K. (2016). Teacher education and development/ Review article. Applications of Vygotsky's sociocultural approach for teachers' professional development, University of Tehran.

Sinyosi, L.B. (2015). Factors affecting Grade 12 Learners performance in Mathematics at Nzhelele East Circuit, UNISA.

Sleeter, C., Montecinos, C. & Jiménez, F. (2013). Preparing teachers for social justice in the context of education policies that deepen class segregation in schools: The case of Chile. California State University, Long Beach, CA, USA.

Smit, G.T. (1995). Research guidelines for planning and documentation. Halfway House: Southern.

Smith, C., & Gillespie, M. (2007). Research on professional development and teacher change: Implications for adult basic education. Retrieved from http://www.ed.gov/teachers/how/tools//initiative/factsheet.pdf

Strauss, A. & Corbin, J. (1998) Basics of Qualitative Research – Techniques and Procedures for Developing Grounded Theory. (2nd Ed). CA: Sage.

Struwig, F.W. & Stead, G.B.(2001). Planning, designing and reporting Research. 1st ed. Cape Town: Pearson Education.

Swell, B.T & Buirski-Burger, N. (1998). Can Computer Based Education Save Science Education in South Africa. South African Science Education. http://web.uct.ac.za/depts/emu/cbe/projects/saarmse. Htm.

Tatum, S. & Morote, E.S. (2007). A case study of teacher' motivation and frustration to use instructional technology in their classrooms and after a stand-alone course. 24th International Conference on Case Method Research & Application.

Taylor, N. (2008). What's wrong with our school and how can we fix them? Unpublished paper presented at the CSR in Education Conference, Cape Town.

Teddile, C. & Tashakkori, A. (2009) Foundation of Mixed Methods Research. Califonia, Thousand Oaks: SAGE.

Teddile, C. & Tashakkori, A. (2009) Foundation of Mixed Methods Research: Integrating Quantitative and Qualitative Approaches in the Social and Behavioural Sciences. Los Angeles: Sage Publications.

Thiessen, D. (2000, Jan-Mar). Developing knowledge for preparing teachers. Redefining the roles of schools of education. Educational Policy. Vol 14 No.1. pp 129-144.

Timperley, H., Wilson, A., Barrar, H., & Fung, I. (2007). Teacher professional learning and development: Best evidence synthesis iteration (BES). Wellington. New Zealand: Ministry of Education. Retrieved fromhttp://www.educationcounts.govt.nz/publications/series/2515/15341/.

Tope, O. (2012). Effects of teachers' competence on academic performance: A case study of Ikeja Local Government area of Lagos State. Ogun State, Nigeria: Ego Books. EgoBooks.wwwometere.tk.

Truter, M.A. (2015). Education in the best interests of the child: a case study of rural schools in KwaZulu-Natal. Pretoria: University of South Africa.

Tshikululu Social Investments. (2016). Teachers, parents and school leaders working together to improve learners education. Wits school of Governance and Bridge.

UNICEF Zambia Country Office (2015). [Comments on the Improving Quality Education and Children's Learning Outcomes and Effective Practices in the Eastern and Southern Africa region: Final Report].

University of Maryland Survey Research Centre. (2000). Environmental studies in the K-12 classroom: A teacher's view. College Park, MD.

Van Veen, K., Zwart, R., & Meirink, J. (2012). What makes teacher professional development effective? A literature review. In M. Kooy, & K. van Veen (Eds.), Teacher learning that matters: International perspectives (pp. 3-21). New York: Routledge.

Vermunt, J.D. & Endedijk, M.D. (2011). Patterns in teacher learning in different phases of the professional career. Learning and Individual Differences, 21, 294-302.

Whiting, M. & Young, J. (1995). Integration: Social justice for teachers. Paper presented at the Australian Association for Research in Education Conference., Hobart, Tasmania.

Wyse, E. 2011. What is the Difference between Qualitative Research and Quantitative Research? [Referenced 09.11.2016]. Snap Surveys Inc.

Yushau, B., Mji, A. & Wessels, D.C.J. (2003). Creativity and Computer in the Teaching and Learning of Mathematics. Technical Report Series TR 311.

Zeichner, K. N. (2003). Teacher research as professional development for P-12 educators in the USA. Educational Action Research, 11, 301-325.

ANNEXURE A: QUESTIONNAIRE

RURAL SCHOOLS TEACHER PROFESSIONAL DEVELOPMENT QUESTIONNAIRE

The purpose of this questionnaire is to establish the extent to which teachers in rural primary schools are professionally developed for them to promote teaching and learning.

SECTION A: DEMOGRAPHIC FACTORS

For each of the following items, indicate what applies to you by making a mark in the appropriate box:

1. Gender

Female	1
Male	2

2. Age

21 – 30 years	1
31- 40 years	2
41-50 years	3
51-60 years	4
61 years and older	5

3. Highest academic qualifications

Standard 10 (Grade 12)	1
First Degree	2
B.Ed. or Honors' Degree	3
Master's Degree	4
Doctoral Degree	5

4. Teaching experience in years

0 – 10 years	1
11 – 20 years	2
21 – 30 years	3
31 – 40 years	4
41 and more	5

SECTION B: EFFECT OF TEACHER PROFESSIONAL DEVELOPMENT ON TEACHING AND LEARNING

For each of the following statements, indicate the extent to which you Agree or Disagree about your training to promote teaching and learning in a rural school by making a mark in the appropriate block,

Training to promote teaching and learning in a rural school	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
1. Teachers are adequately trained to promote teaching and learning in rural environments.	1	2	3	4	5
2. In-service training for professional development is done to prepare teachers for rural environments.	1	2	3	4	5
3. Training of teachers in relation to the area where they teach is important for effective teaching and learning.	1	2	3	4	5
4. Teachers professional development workshops are conducted by training experts who have the experience of rural environments.	1	2	3	4	5
5. Teachers in rural primary schools are differently professionally developed from those in urban areas.	1	2	3	4	5
6. In-service training workshops attended have an impact on the quality of teaching and learning in rural primary schools.	1	2	3	4	5
7. Induction workshops of novice teachers are conducted to help them to understand teaching and learning conditions in rural contexts.	1	2	3	4	5
8. Teachers' skills learnt from professional development	1	2	3	4	5

Training to promote teaching and learning in a rural school	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
workshops are applicable to rural primary schools.					
.9. Teachers are trained to develop teaching skills of coping with situations in rural areas.	1	2	3	4	5
10. Rural teachers are developed to cope with challenges of professional practices in the rural contexts.	1	2	3	4	5
11. Teachers develop their coping skills to teach rural primary learners through professional development.	1	2	3	4	5
12. Teachers are developed well enough to teach effectively in rural context.	1	2	3	4	5
13. Teachers have been given sustained high quality training for teaching in all environments.	1	2	3	4	5
14. Teachers find teacher professional development programmes too demanding.	1	2	3	4	5
15. Teachers' find professional development effective in improving learner literacy.	1	2	3		5
16. Highly qualified teachers are easily retained in rural context after being professionally developed.	1	2	3	4	5
17. Teachers are continuously trained to enable them to handle multi-grade classes common in rural areas.	1	2	3	4	5
18. Teachers are professionally developed to help them to increase their knowledge regarding instructional practices in a rural context.	1	2	3	4	5
19. Teachers are professionally developed to use technology in their classrooms in coping with rural challenges.	1	2	3	4	5
20. Teachers in rural primary schools are involved in the conception of their own professional development initiatives.	1	2	3	4	5

For each of the statement below, indicate by marking Yes or No how teachers in rural primary schools are being developed to promote teaching and learning:

Teacher development in rural primary schools	YES	NO
1. Are staff developmental programmes included in the year plan of your school?	1	2
2. Do you have a school development team at your school?	1	2
3. Does management encourage professional development of teacher at your school?	1	2
4. Do you attend staff development workshops according to your needs?	1	2
5. Are you being developed to handle inclusive classes in your school?	1	2
6. Do peer teachers observe your lessons at your school?	1	2
7. Are you developed to cope with conditions where resources for teaching and learning are lacking?	1	2
8. Are professional development activities aligned to conditions in the area where you are teaching?	1	2
9. Does the implementation of (IQMS) at your school take into consideration the rural context of your school?	1	2
10. Are you being developed to cope with teaching multi-grade classes?	1	2

ANNEXURE B: INTERVIEW SCHEDULE

INTERVIEW SCHEDULE
The in-depth interview will be guided by the following questions:

1. How is professional development of teachers in rural primary schools affecting the promotion of teaching and learning?

    Follow-up questions should include:
    - To what extent is it being effective? (Have those strategies been successful? What makes you think they have been successful? If not successful, what makes you think that way?)
    - Why do you say so?

    - Which ones were most useful? Why do you say so?

2. What are the critical aspects of professional development of teachers in rural primary schools taking into account the contextual factors for them to promote teaching and learning?
    - How should teachers in rural primary schools be developed for them to promote teaching and learning?
    - What aspects of professional development should be considered when work shopping primary school teachers to cope with conditions in rural schools?
    - Do you think teachers in rural primary schools should be differently professionally developed for them to cope with conditions in rural areas? Substantiate your answer.

3. How can primary school teachers be developed to cope with teaching and learning realities in rural contexts?
    - How do you think teachers in rural primary schools should be developed taking into account rural realities? (Learner starting by going to the dipping tanks, fetch cattle from the bush, teaching under trees, teaching under trees where the school does not even have a yard and animals are roaming).

- When do you think development of teachers in rural areas should happen? (When still in training or when they are already placed there? Substantiate your answer.
- Do you think that teachers' professional development should be conducted by people who have the experience of rural background? Substantiate your answer.

ANNEXURE C: LETTERS FOR PERMISSION TO CONDUCT RESEARCH

University of Zululand

Kwadlangezwa Campus

Private bag x 1001

Kwadlangezwa

3886

The Circuit Manager

Tshinane

P.O. Box   4000

Tshidimbini

0972

Dear Madam

REQUEST FOR PERMISSION TO CONDUCT RESEARCH AT SCHOOLS
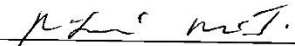
Research Topic: Professional Development of Teachers for promoting Teaching and Learning in Rural Primary Schools.

I am writing this letter to seek permission to conduct the above mentioned research at Tshinane Circuit Primary Schools. (For Masters Degree of Education).

The project will involve teachers and principals. They will complete the self-administered questionnaires during the data collection process. Activities will not disturb the teaching and learning process at schools.

Yours Faithfully

Muthivhi Mashudu Julia

_____ (Researcher)

Cell No: 083 311 8955

ANNEXURE C: PERMISSION FROM DISTRICT

LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF
EDUCATION
VHEMBE DISTRICT

DEPARTMENT OF EDUCATION
VHEMBE DISTRICT
2017 -08- 2 8
PRIVATE BAG X 2250 SIBASA 0970
TEL: 015 962 1313/4 FAX: 015 962 6039
LIMPOPO PROVINCE

CONFIDENTIAL

REF: 14/7/R
ENG: MATIBE M.S
TEL: 015 962 1029

MUTHIVHI M.J
UNIVERSITY OF ZULULAND
KWADLANGEZWA CAMPUS
PRIVATE BAG X 1001
KWADLANGEZWA
3886

PERMISSION TO CONDUCT RESEARCH AT SCHOOLS

1. The above matter refers.

2. You are hereby informed that your request for permission to conduct research on *"Professional development of teachers for promoting teaching and learning in rural schools."* has been granted.

3. You are expected to adhere to research ethical considerations, particularly those relating to confidentiality, anonymity and informed consent of your research subjects.

4. Kindly inform circuit manager and School Principal of selected school prior to commencing your data collection.

5. Wishing you the best in your study.

_____
DISTRICT DIRECTOR

2017-08-28
DATE

PERMISSION TO CONDUCT RESEARCH AT SCHOOLS: MUTHIVHI M.J

Thohoyandou Government Building, Old Parliament, Block D, Private Bag X2250, SIBASA, 0970
Tel: (015) 962 1313 or (015) 962 1331, Fax: (015) 962 6039 or (015) 962 2288

The heartland of southern Africa - development is about people!

ANNEXURE D: ETHICAL CLEARANCE

**UNIVERSITY OF ZULULAND
RESEARCH ETHICS COMMITTEE**
(Reg No: UZREC 171110-030)

RESEARCH & INNOVATION
Website: http://www.unizulu.ac.za
Private Bag X1001
KwaDlangezwa 3886
Tel: 035 902 6887
Fax: 035 902 6222
Email: ManqeleS@unizulu.ac.za

ETHICAL CLEARANCE CERTIFICATE

Certificate Number	UZREC 171110-030 PGM 2017/460				
Project Title	Professional Development of Teachers for Promoting Teaching And Learning in Rural Primary Schools.				
Principal Researcher/ Investigator	MJ Muthivhi				
Supervisor and Co-supervisor	Prof AP Kutame		Mr MC Dube		
Department	Social Sciences				
Faculty	EDUCATION				
Type of Risk	Med risk – Data collection from people				
Nature of Project	Honours/4ᵗʰ Year	Master's x	Doctoral	Departmental

The University of Zululand's Research Ethics Committee (UZREC) hereby gives ethical approval in respect of the undertakings contained in the above-mentioned project. The Researcher may therefore commence with data collection as from the date of this Certificate, using the certificate number indicated above.

Special conditions:

(1) This certificate is valid for 3 years from the date of issue.

(2) Principal researcher must provide an annual report to the UZREC in the prescribed format [due date-30 April 2018]

(3) Principal researcher must submit a report at the end of project in respect of ethical compliance.

(4) The UZREC must be informed immediately of any material change in the conditions or undertakings mentioned in the documents that were presented to the meeting.

The UZREC wishes the researcher well in conducting research.

Professor Gideon De Wet
Chairperson: University Research Ethics Committee
Deputy Vice-Chancellor: Research & Innovation
11 April 2017

CHAIRPERSON
UNIVERSITY OF ZULULAND RESEARCH
ETHICS COMMITTEE (UZREC)
REG NO: UZREC 171110-30

22 -02- 2018

RESEARCH & INNOVATION OFFICE

ANNEXURE E: EDITORS REPORT