FACTORS AFFECTING GRADE 12 LEARNERS PERFORMANCE IN LIFE SCIENCES AT LUVUVHU CIRCUIT

BY

NTAMBUDZENI GRACE MUKHETHONI

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: MR S. MOKOENA

2019

DECLARATION

I hereby declare that this dissertation is my original work and has not been submitted by anyone for a degree at this university or any other university. All the sources that I have used have been indicated and acknowledged by means of complete references.

SIGNATURE…… DATE

STUDENT NUMBER: 201759994

DEDICATION

I would like to dedicate my research to my mother, Mutshinye Ntsundeni, my husband Matodzi, my children, Fulufhelo, Ndivhuwo, Tshilidzi, Ntambu, Ipfani, Zwoluga, my grandchildren, Chantelle, Dzithendo, Dzinduvho, the late Dziphathutshedzo, my siblings and all the people who helped me to overcome pressure while doing this dissertation.

ACKNOWLEDGEMENTS

I would like to express my sincere gratitude to my supervisors, Professor Kutame A.P and Mr Mokoena S. for the supervision and contribution and towards the production of this research.

I would also like to extend my gratitude to the Unizulu staff, Dr Israel Mulaudzi, Dr Angeline Singo, Dr David Tshinetise Raphalalani, Mrs Arina Muremela, Mr Mpho Tshikororo as well as the Unizulu group for being pillars of support.

I would also like to thank my Principal Mr Mandiwana N.J, my colleagues for all the support they gave me to pursue my studies while still carrying out my daily teaching work. My words of thanks are also directed to the principals and HODs at schools were my study was conducted and Life Sciences teachers who participated in the interview I conducted, their valuable contribution to this study is greatly appreciated.

Finally, the greatest expression of gratitude goes to the Almighty Lord, who enable me to overcome all sorts of obstacles, hence completing my dissertation.

This work is based on the research supported in part by the National Research Foundation of South Africa (Grant Number: CPT160513164973 and 105246)

ABSTRACT

The challenge of underperforming learners undermines the intention of the government to see that each and every child is educated. Underperformance in some subjects, including Life Sciences, in Grade 12 in the Luvuvhu Circuit is still a problem. The aim of this study was to investigate the factors affecting performance of Grade 12 learners at Luvuvhu Circuit. The performance of the learners is not acceptable to the level of contributing to quality overall results. A qualitative research design was used in this study and data was collected through face-to-face semi-structured interviews. Interviews were tape-recorded and notes-taking done to add the interviews. Purposive sampling procedure was followed in selecting participants for this study. Data was collected from teachers who teach Life Sciences in Grade 12 at Luvuvhu Circuit. The results showed that learners' performance was due to lack of labs, late arrival of the common tasks, absenteeism, substances abuse, location of schools and others. It is recommended that the Department should make provision of laboratories at various schools within the circuit, common tasks to be distributed and administered simultaneously at various circuits. The findings provided recommendations that will be shared not only at Luvuvhu Circuit but also throughout the entire education system to reduce the high failure rate in Grade 12 learners in Life Sciences. Areas of focus identified might also be shared with the subject advisors at district level.

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CHAPTER I

BACKGROUND TO THE STUDY

1.1. INTRODUCTION

Department of Education and parents are raising concern regarding the Grade 12 learners at Luvuvhu Circuit that are not performing at a level that allow them to register at universities, this implies that the majority of them are performing below average. Therefore, the study seeks to identifies factors affecting the academic performance of Grade 12 learners in Life Sciences at Luvuvhu Circuit. Various factors such as school based, learner based, teacher based, home based and Departmental based factors affecting learners' performance has been identified in schools at Luvuvhu Circuit. The findings and recommendations of the study the Department of Education about the area of weaknesses that need to be addressed to improve the Grade 12 results in Life Sciences.

1.2: BACKGROUND

Since the new democratic dispensation in 1994 in South Africa, the nation in general raise a concern that the Grade 12 Life Sciences results have to be improved. Over the years, the Circuit Manager and the principals within the Luvuvhu Circuit, have devised intervention strategies to improve the Grade 12 academic performance, but the problem of high failure rate is still recurring. A study carried by Mutshaeni (2008) indicates that the Limpopo Province produced the worst Grade 12 results between 1994 and 2006 in all South African provinces.

Kyei and Nemaorani (2014) argue that there is still high failure rate of high school learners in some parts of South Africa. Other studies, as stipulated by Kyei and Maboko (2016), show that for years, there have been so many factors that affect

learner academic achievement of Grade 12 Life Sciences learners in South Africa. It seems as if there is a general consensus that Grade 12 Life Sciences results in some parts of South Africa are generally poor. Mutshaeni (2008) adds that Grade 12 results in some Provinces in South Africa reflect a challenge of underperformance in their academic area.

According to the Constitution, Chapter 2 of the National Education Policy Act 27 of 1996, education is accessible to all citizens. The challenge of underperforming undermines the intention of government to see that every child is educated. The problem of underperforming of Life Sciences Grade 12 learners in Luvuvhu is still occurring, the study sought to identify factors that affect learners' performance in Grade 12 at Luvuvhu Circuit.

1.3 PROBLEM STATEMENT

Over the years, the Circuit Manager and the principals within the Luvuvhu Circuit, have come up with intervention strategies to improve the Grade 12 performance in Life Sciences, but it is still a problem high rate failure. Learners continue to perform poorly while teachers in the subject remain under-supported and continue to perform poorly while in class. There is ongoing high failure rate in Grade 12 Life Sciences at Luvuvhu Circuit. The Department of Education often releases diagnostic reports per subject yearly at national level to be distributed up to the school level with the intention of improving the Grade 12 results. Literature is silent on why learners continue to perform poorly despite these reports, which could be recommending improvement strategies. The issues related to implementing the recommendations from the reports could not be established from literature reviewed. While there are studies showing causes of poor performance in Life Science (Lebata, 2014 and Ngema, 2016), literature does not identify how identified weaknesses contributing to poor performance in Life Sciences are being addressed in schools at the Luvuvhu Circuit.

1.4 AIMS AND OBJECTIVES

The aims and objectives of this study are discussed in the sub-sections that follow:

1.4.1 AIMS OF THE STUDY

The aim of the study was to investigate factors affecting Grade 12 learners 'performance in Life Sciences in schools at Luvuvhu Circuit.

1.4.2 OBJECTIVES OF THE STUDY

The study was guided by the following research objectives:

- To explore factors affecting learner performance in Life Sciences;
- To assess the strategies teachers in the Luvuvhu Circuit are using for teaching Life Sciences.
- To assess implementation of the recommendations regarding Grade 12 learner performance in Life Sciences in the Luvuvhu Circuit.

1.5. RESEARCH QUESTIONS

The research question reads: What are the factors affecting Grade 12 learners' performance in Life Sciences in Luvuvhu Circuit.

- What are the factors affecting Grade 12 learners' performance in Life Sciences at Luvuvhu Circuit?
- How are teachers at the Luvuvhu Circuit are teaching Life Sciences in Grade 12?
- To what extent are teachers' implementing the recommendations regarding Grade 12 learner performance in Life Sciences in the Luvuvhu Circuit?

1.6. RESEARCH DESIGN

The research design of this study was qualitative. De Vaus (2006) indicated that the function of a research design is to ensure that the evidence obtained enables the

researcher to address the research problem effectively and logically. This design was selected only to investigate factors affecting learners' performance from the participants' point of view

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1.6.1. RESEARCH PARADIGM

The research paradigm in this study is interpretivism. This paradigm is relevant to the study because the reality created by the participants is needed to get the underlying meaning of the data collected in the current study. In addition, each participant constructed his or her own realities.

1.6.2. RESEARCH METHODOLOGY

Qualitative approach was used in this study as it concentrates on the direct experiences of the participants. It provided information that allows the researcher to determine factors that affect academic performance of learner and obtain the information directly from the participants (Lebata, 2014). This method focuses on the research paradigm providing in-depth understanding of the problem. In this approach, I interacted with the social reality of the participants to produce meaningful interpretations. The current study obtained data in the form of words from interviews (Negumbo, 2016), this implies that data was collected through face-to-face individual interviews.

1.6.3. POPULATION

A population is a collection of individuals regarded as the main focus of the research project, as stated by Dhurumraj (2013). The population of the study consisted of ten Life Sciences teachers teaching Grade 12 learners in Life Sciences in schools within the Luvuvhu Circuit because factors affecting learners' performance was explored directly from them

1.6.4 SAMPLING PROCEDURE

Sampling is a technique in which participants are carefully chosen for the purpose of research (Babbie & Mouton, 2001). Purposeful sampling procedure was followed to select participants for this study. Purposively sampling method was deemed appropriate for this study because characteristics of the population are information-rich for purposes of the study. Participants who were sampled for the study were ten Life Sciences teachers within the school at the Luvuvhu Circuit.

1.6.5 DATA COLLECTION METHOD

I collected data using face-to-face semi-structured interviews where I engaged with the participants in a formal interview. The collected data was captured by means of tape-recording. Questions that were asked were clear, focused and encouraged open-ended responses to get rich information and a deeper insight into the phenomenon under study. For the researcher to get in-depth information, I develop and uses an interview guide which contains a list of questions that need to be covered during the conversation, usually in a particular order. The instrument was chosen because it enabled probing for more information and clarification of answers.

1.6.6 DATA ANALYSIS PROCEDURE

The collected data were analysed by using thematic analysis method to report experiences and realities of the participants. The researcher recollected data during an interview by listening to the audio-recording and reading transcripts repeatedly. While reading the data repeatedly, the researcher coded interesting features of the data in a systematic way across the entire data set to establish themes. After reviewing the themes, the researcher defined and named themes (Braun & Clarke, 2006). The researcher finalised the whole procedure by producing a report**.**

1.7 ETHICAL AND SAFETY ISSUES

I received permission from the District in the Department of Education to undertake this research. During the interview, the rights of the participants were taken into consideration. The participants were not forced to participate because is their democratic right to participate or not to. They were informed about the date, nature and purpose of the interview prior to commencement of the process.

They were also informed about the anonymity and confidentiality of the information provided during the interview process. Respect for dignity of Life-Sciences educators was prioritized and feedback of results would be given to the respondents (teachers).

1.8 CHAPTER DIVISION

This study is divided into five chapters as follows:

Chapter One

This chapter explains the background of the study, statement of the research problem, aims of the study, research questions, definitions of concepts, research methodology, significance of the study, delimitation and limitation of the study, analysis and the outline of the study's chapters.

Chapter Two

Chapter two provides the theoretical view of the study and the review of the literature on the sustainability of leadership styles towards school effectiveness.

Chapter Three

This chapter focuses on the design and the methodology of the study. The methodology includes population, sampling procedures of the study, data collection procedures and analysis.

Chapter Four

This chapter presents the results from the data collected and gives an interpretation of the results.

Chapter Five

Chapter Five presents the summary of the findings from the data collected, the model developed and the conclusions and recommendations.

1.9 SUMMARY

The current study seeks to investigate the factors affecting performance of Grade 12 learners in Life Sciences at Luvuvhu Circuit. Chapter one as the introduction of the study covers the background, problem statement, aims and objectives, research questions, research design, research paradigm, research methodology, population, sampling procedure, data collection method, data analysis procedure, ethical and safety issue and chapter division.

CHAPTER 2

LITERATURE REVIEW

2.1. INTRODUCTION

Chapter 1 presents the introduction to the study. This chapter outlines the theoretical framework which underpin the current study and it also presents literature reviewed on the factors that affect learner performance in Life Science. The literature reviewed was guided by the research objectives and research questions mentioned earlier in the previous chapter of this study. Related literatures based on factors affecting learners' performance provide directions in the construction of data collection requirements for the study to be conducted.

2.2. THEORETICAL FRAMEWORK

The study based its theoretical framework on a set of intertwined theories. First, is the critical thinking theory used and adopted by Thompson (2011) and the observational learning adopted by Craig, Chi and Valehn (2009). Observational learning theorists postulate that learners learn by watching the learning process, interpreting and evaluating peers carrying out a particular task (Groenendijk et al, 2011). This theory has been commonly used by most social scientists in modern research. Both social and behavioural theorists contend, "Behaviour, whether good or bad, is learnt". The focus of observational learning theory is to enhance creativity and independent thinking among learners, thereby promoting performance and motivation of the observing learner (Groenendijk et al., 2011). Observational theory allowed this study to analyse the learner's behaviour and responses during learning.

Second, the critical thinking theory provides the analytical framework (Sinyosi, 2015). Critical thinking theory builds the characterisation and properties from progressive movement that is dominant in the social sciences. According to Sinyosi (2015), critical thinking theorists believe that learners have to be assisted to achieve key fundamentals such as problem solving, conducting scientific inquiry, acquiring active

learning skills and achieving self-discipline, among others. These are skills needed in critical thinking.

Critical theory shifts from the theory of behaviourists who argue that learning could be mechanical, permanent and involves observable change in the behaviour of the learner as a result of emanating personal experience. Behaviourists argue that change is effected in the learner through a process of reward and reinforcement. Behaviourists emphasize mechanical and “conditioning” work such as learning through drill work (Thompson, 2011) and practice based on adherence to strict procedures, including memorization of formulae and use of one-way methods to solve mathematical problems rather than focusing on strengthening mental development and exercise widely adopted by critical thinking theorists such as John Dewey.

John Dewey and other critical thinking theorists postulated that critical thinking would define the role of the teacher in problem solving and conducting scientific inquiries among learners (Sinyosi, 2015).

2.3 FACTORS AFFECTING LEARNER PERFORMANCE IN LIFE SCIENCES

Several factors affect learner performance in Life Science. Learners in a Kenyan school are performing well in Life Sciences because they are not sharing textbooks; instead, each learner had his or her own textbook (Odhiambo,1983). Odhiambo (1983) further indicates that the availability of laboratory facilities helps the learners to understand concepts in Life Sciences learned theoretically in class. Since the school had well-equipped laboratories, learners and teachers are able to perform practical activities effectively and this promoted good results.

On the other hand, Ongano, Odingo and Omariba (2017) opine that learners are underperforming due to lack of resources. They do not have enough textbooks and other resources to be used during teaching and learning. The study concentrates on school-based, teacher-based, learner-based, home-based and Departmental-based factors that affect learners’ performance in Life Sciences. These are discussed in the sections that follow.

2.3.1. SCHOOL-BASED FACTORS

2.3.1.1. Availability of infrastructure

Life Sciences, as a practical subject, needs a proper and well organised laboratory with well administered practical lessons to improve learners' scientific thinking. To add, considerable studies (Legotlo et al. 2002; Makgato, 2007; Mji & Makgato, 2006; Muwanga & Zake, 2008) show that underachievement is caused by the lack of adequate Life Sciences resources like laboratories and apparatus. Similar findings were reported by Kaberia, Munda and Kaberia (2000), they point out that some learners indicated that their lower performance is due to lack of physical facilities like laboratories. Most schools in the district do not have well equipped laboratories; this affects teaching and learning of Life Science negatively (King'aru, 2014; Zenda, 2016).

Some topics in Life Sciences need to be taught through by conducting experiments in well-equipped laboratories; therefore, it is necessary for schools to have well organised laboratories. Dhurumraj (2013) came up with a similar opinion by indicating that laboratories in schools at Pinetown District in Kwazulu Natal Province are not well-equipped for practical activities in Life Sciences. This implies that Life Sciences cannot be taught in an ordinary classroom. Therefore, laboratories are needed to improve good performance in the subject. Lebata (2014) agrees and adds that lack of laboratories causes teachers not to demonstrate experiments for understanding of biological concepts.

Healthy learning may also be promoted by preventing overcrowding in classrooms, Nkanzela (2015) indicates that the majority of Grade 12 learners show that their classrooms are overcrowded, and this affects the quality of learning and teaching. This shows that many schools do not have infrastructure that promotes healthy learning. Similar findings based on overcrowding revealed large numbers of learners in one class, thus preventing them from participating effectively during class activities, and classroom management is not possible (Kyei & Nemaorani, 2014). In addition, Nghambi (2014) indicated that some learners were being taught under trees, which demonstrates the extent of the shortage of infrastructure in rural schools. This may

contribute to underachievement. Inadequate facilities have also been another challenge that teachers complain about.

Literature reveals that classrooms are not in good condition: windowpanes and ceilings are broken, there is noise during teaching and learning activities and teachers and learners cannot hear each other (Rammala, 2009). It is necessary to equip classrooms with proper chairs and tables to enhance teaching and learning activities. Kei and Maboko (2016) indicate that overcrowding is due to lack of classrooms and it affects learners' performance badly in terms of participation in class activities; this results in teachers not able to control, maintain discipline and teach effectively.

2.3.1.2. Availability of learning and teaching materials

Teaching and learning materials make teaching and learning more effective. Teachers can use numerous teaching aids to serve as a source of knowledge (Durdanovic, 2015). Teaching and learning activities would be meaningless without learning resources. In order to improve learners' performance, teaching and learning materials should be made available during lesson presentation. Research conducted based on learning and teaching materials in Life Sciences reveals that learners performed poorly because they are using textbooks with no examination related questions and examples for learners to practice. In addition, a class of about forty learners are compelled to share five copies of textbooks; as a result, learners depend on writing notes given by their teachers (Van der Westhuizen, et al. 1999). According to Dillion (2008), shortage of textbooks in Life Sciences affect educators negatively because it is impossible to finish the syllabus without textbooks.

Teaching and learning situation is meaningless without teaching and learning materials. Dhurumraj (2013) and Nkanzela (2015) opine that weak performance of learners is due to shortage of learning materials. This implies that the availability of relevant textbooks contributes to good results. In order to improve the quality of teaching and learning, each learner should have his or her own textbook during school hours and even after school. Nkanzela (2015) adds that the problem of high failure rate is not influenced by lack of study materials only, but also by the late delivery of textbooks to various schools. If textbooks are not delivered on time, teachers might

not be able to finish the syllabus and learners' educational rights would also be affected. In the study conducted by Wanjiru (2013), underperformance was reported to be due to inadequate learning resources. In other words, good results may not be produced if there are no adequate learning resources during teaching and learning activities.

Resources like computers and laboratories play a vital role in the teaching and learning process. Shortage of these resources may affect learners' performance negatively (Basco & Olea, 2013). Mangwaya, Mangwaya and Johnson (2016) support Kaberia et al. (2009) by pointing out that lack of suitable textbooks contributes to poor learner performance in Life Sciences.

The availability and use of suitable textbooks may promote good performance of learners. According Ayuba and Mahomed (2014), lacking functional computers within the school contributes to low learner performance because they cannot access study materials from the internet. These factors have an effect on learner performance in Life Science.

2.3.1.3. Availability of funds

The availability of funds makes a school to stand a better chance of producing good results. Lunenburg (2010) found that lack of funds promotes high failure rate. If the school has no adequate funds, it may be difficult to purchase learning and teaching materials and outsource expert Life Sciences teachers who might promote teaching and learning and help learners to improve their performance. In addition, a study in Zimbabwe has shown that teachers are not producing quality results because they could not go for field trips and seminars due to lack of funds (Pedzisai, Chiwana, Dondo, Tsvere & Munikwa, 2014). A school with adequate funds may stand a better opportunity of producing quality results.

2.3.1.4. Availability of Life Science teachers

In a study on poor performance in Life Science, some researchers found that lack of specialised teachers in the subject attribute to higher failure rate (Ardens, 2010 &

Kiadese, 2011). Similarly, Nyambura (2016) revealed that poor performance was due to inadequate staffing. Available teachers are not being able to teach or give tests and feedback to the learners regularly. According to Lebata (2014), poor learner performance is attributed to lack of human resources and transformation process. This implies that if schools are running short of resources, there might be no effective teaching. Nghambi (2014) found that in community secondary schools, teachers are not committed to effective teaching and caused learners to fail Life Sciences at the end of the year. Dikgale (2012) opine that learners are not performing well because teachers are not sharing challenging topics with their colleagues.

With regards to underqualified teachers, lack of pedagogical knowledge of teaching Life Sciences and lack of proper training results in poor Grade 12 results (Molla, & Muche 2018). Other factors which contribute to higher failure rate is that frequent replacement of Life Sciences teachers every year has a negative impact on the performance of the learners (Kyei & Maboko, 2016).

2.3.1.5 Location of the school

The location of the school has a direct impact on learners' performance. According to Ngema (2016), schools in rural areas are facing challenges of resources like water and electricity. Kyei and Nemaorani (2014) discovered that underachievement is caused by the location of the school; the implication is that if the school is near the town, learners are distracted by entertainment activities. Rammala (2009) also find that some schools are located near facilities that are selling drugs to learners, and learners are tempted to go there. This act of misbehaviour leads to poor learner performance in Life Sciences.

2.3.1.6. Monitoring and support by the school managers

School managers are failing to put other mechanisms of disciplinary measures in place; one may conclude that this results in poor Grade 12 results (Dikgale, 2012). Due to lack of monitoring and support by the school managers, teachers do not do their work properly, and this contributes to poor performance of the learners also (Lebata, 2014).

2.3.2. TEACHERS-BASED FACTORS

2.3.2.1. Methods of teaching

According to Ayuba and Mahomed (2014), lecture method impacts learners' performance and learners into passive participants during teaching and learning. Teachers were compelled to use other methods such as demonstration and self-discovery to engage learners in the learning process. The findings based on the methods of teaching from the study conducted by Ngema (2016) differs with that of Ayuba and Mahomed (2014), which indicates that Life Sciences teachers are competent and able to use multiple methods. One could deduce that this subject cannot be taught using one or two methods. Ondieki and Orodho (2015) opine that sketchy syllabus coverage due to inappropriate teaching strategies results in poor learner performance.

Various methods of teaching used by the teachers during teaching and learning activities and the teachers' qualifications in the subject are contributory factors to underachievement (Ogorode & Ochonogo, 2011; Hausiku, 2015). Teaching-learning is mostly affected by the learning style of the learners. Teachers' instructional materials affects the achievement of the learners. Different learning styles should be taken into consideration during the teaching and learning process as it promotes good results (Gonzales & Reyes, 2016).

2.3.2.2. Lengthy syllabus

For learners to produce quality results, teachers need to finish the syllabus on time. However, Lebata (2014) indicated that low performance in Life Sciences is due to a lengthy syllabus. This implies that teachers are failing to finish the syllabus on time, and this contributes to poor learner performance. Similarly, literature by Ngema (2016) confirmed that time allocated to each lesson is not enough; this implies that teachers are unable to cover the syllabus because the subject content is more than the allocated time, so learners will not be able to absorb information at once; this leads to poor performance in Life Sciences. Akiri, Nkechi and Jackson (2009) as well as Dillion

(2008) highlighted that under-achievement is due to teachers who are failing to complete their syllabus on time because of a lengthy syllabus.

2.3.2.3. Absenteeism

One other thing is that Life Sciences teachers do not have enough time to teach nor to help their learners due to their absenteeism (Lebata, 2014). Other findings revealed that teachers absent themselves in class while attending union activities during working hours; this results in reducing their contact teaching time with learners and this shows less commitment to their duties (Dikgale 2012). In other words, Dikgale reveals that a very small number of learners absent themselves from school, although these learners may be few, but they tend to be affected negatively because teaching and learning continues while they are absent and they end up missing out on lessons taught in their absence.

2.3.3. LEARNER-BASED FACTORS

2.3.3.1. Learners' attitude towards learning

A study carried out by Dikgale (2012) shows that underachievement of learners is based on the negative attitude of learners towards Life Sciences and in this regards they need to be motivated. Learners' negative attitude towards Life Sciences contributes to unsatisfactory achievement in Grade 12 (Nyambura 2016; Mbugua, Kibet, Muthaa & Konke 2012; Rammala, 2009). Similarly, Mandima and Zacharia et al. (2012) showed that learners had negative attitude towards practical subjects like Life Sciences. Underachievement, according to Hijazi and Naqvi (2006), is associated with learners' attitude towards class attendance and time allocated to their studies. Glover and Law (2002) and Malan et al. (2012) found that girls show negative attitudes towards Life Sciences, which contributes to their poor performance in the subject.

Tracy (2002) observed that poor performance in Life Sciences Grade 12 is caused by many learners who lacked confidence in their educators. This attitude shows that they do not trust their teachers during lesson presentations, which in turn affect them

academically. Mavhungu (2004) warns that learners should not be forced to do Life Sciences as this may cause those who were not interested to fail at the end of their final examination. Van der Westhuizen et al. (1999) observed that promotion of learners impacts the performance of learners in Grade 12 badly. Learners were being promoted each year without actually meeting the pass requirements of the specific grade; as a result, they are not coping with the Grade 12 work. Learners with a positive attitude are able to grasp subject content effectively; however, findings in a study conducted by Dikgale (2012) and Nyambura (2016) pointed out that learners failed because due to negative attitude towards Grade 12 Life Sciences. Learners also do not want to write tests and do homework; these tasks allow them to revise content learnt at school (Lebata, 2014).

2.3.3.2. Gender differences in Life Sciences achievement

It has been observed by various researchers that poor performance in the field of Science is attributed to gender differences in Life Sciences: girls used to do better than boys in the subject because they give themselves time to study than boys (Riegle-Crumb, Farkas & Muller, 2006; Chambers & Schreibres, 2004). Research in the level of importance attached to Life Sciences learning, self-efficacy and cognitive strategy reveals that girls outperformed boys in the subject (Ongowo & Hungi, 2014), This shows that girls have more confidence in their academic activities than boys.

In addition, other studies based on gender reveal that girls registered better performance when instructed through the constructivist learning approach (Mwanda; Odundo; Midingo, Owino & Mwanda, 2016) but are affected when taught through the traditional method, which shows that learners are unable to interpret questions. However, it was also indicated that there are no differences between the performance of girls and boys in Life Sciences (Nyambura, 2016). Moreover, other studies highlighted that the high failure rate is due to a great number of young female learners who become pregnant and developed learning problems, and this affect their academic performance in Life Sciences in Grade 12 (Grant & Hallman, 2006). The studies were also conducted in other countries outside South Africa, one may conclude that the problem of high failure rate is all over and not in South Africa only

and it needs to be taken into consideration. Contextual factors may play a role in determining the extent to which gender affects academic performance in Life sciences.

2.3.3.3. Motivation to learning

Mbugua, Kibet, Muthaa and Konke (2012) argue that lack of motivation is another factor that hinders high achievement of learners in Life Sciences at the end of each year. In some studies, based on poor performance, low performance in the subject is directly linked to poor study habits and lack of motivation. Furthermore, poor preparation of the final examination impacted learners' performance in Life Sciences (Mann, 1985; Ballantine, 1993). According to Hassana, (2013) low self-concept affects learners' performance; they claim that Life Sciences is too difficult for them and as a results they pay little attention to it, thereby causing them to fail the subject. Mbugua et al. (2012) argue that lack of motivation towards studying Life Sciences contributes to poor performance. A study conducted by Dikgale (2016) shows that poor performance is due to lack of motivation; this implies that learners are not motivated during lesson presentation in such a way that they are unable to grasp the subject content effectively.

2.3.3.4. Absenteeism

According to a study conducted by Ejere (2010), absenteeism occurs when a person is not found in a place where he or she is expected to be. This implies that teachers and learners may be absent from school, and absenteeism affect the performance of the learners. A study conducted by Dikgale (2012) reveals that, in most schools, absenteeism contributes negatively to learners' performance in Life Sciences and it affects learners who attend the school on a regular basis because they have to wait for the educator to help the truants to catch up. These findings are similar to those of Ngema (2016) showing that absenteeism is due to illness and socio-economic factors. Therefore, learner performance is affected negatively as they do not attend lessons on a daily basis. Similarly, Lebata (2014) shows that learners come to school as they wish, so it becomes difficult for the teacher to produce quality results with such learners.

2.3.3.5. Substance abuse

Substance abuse by learners is identified as the most dangerous factor that disturbs learners in their learning process, causing them to fail in their examinations. Findings further revealed that learners using dagga and liquor tend to be unruly and not teachable (Rammala, 2009) Furthermore, Rammala indicated that participants are reporting that there is a problem of drinking liquor and smoking cigarettes during lunch break, and this disturbs the smooth running of the lesson so if that is the case, the performance of the learners are affected seriously.

2.3.3.6. Learners' discipline

Legotlo et al. (2002) suggested that under-achievement is due to learners who are ill-disciplined and uncontrollable; they are just there to intimidate other learners and educators. Since corporal punishment is no longer administered to learners, they do not do the work assigned to them. This implies that they are not disciplined and affects their performance because they behave the way they wish. Learners leave classes while teachers are busy teaching content and end up missing the lesson (Lebata, 2014). Dikgale (2012) indicated that learners are not conducting themselves in an acceptable manner, and their misbehaviour contributes to poor performance in Life Sciences.

2.3.4. HOME-BASED FACTORS

2.3.4.1. Parental involvement

Norlin (2009) linked learner under-performance to parents who are unable to support their children in their schoolwork financially; they are failing to play their role as expected. This finding goes hand in hand with the findings of Dikgale (2012) which states that parents are not involved in the education of their children. Learners with parents of low socio-economic status suffer setbacks that deny them access to resources to improve their performance. It was also observed that parents' level of education prevents learners from obtaining high marks in Life Sciences because they

are unable to purchase extra study material to support their children academically (Michael, 1998; Bonga, 2010; Hijazi & Nagvi, 2006). Similarly, Kirkup (2008) as well as Kahlenberg and Garzon (2006), suggested that learners whose parents are of low level of socio-economic status perform poorly than those whose parents who are of high level of socio-economic status. This implies that if parents are not working and not educated, they may not support their children' education. Regarding parental involvement, it was revealed that learners' parents who are illiterate or migrant labourers, they are unable to assist their children in their school work. Ngema (2016) agrees with these findings and adds that learners do not have luxury resources to improve their knowledge at home. This implies that they only depend on their Life Sciences teachers while they are at school.

Poor parental participation results in poor academic performance of learners in Life Sciences (Negumbo, 2016). Mushtag and Khan (2012) attributed learners' high failure rate in Life Sciences to family stress. If parents are stressed, they cannot support their children effectively and gender roles in both rural and urban schools contribute to poor performance. Similarly, Rammala (2009) confirmed that female learners tend to perform poorly and even drop out due to household chores, and they end up not coping with their schoolwork. Jackson (2009) observed that high failure rate is due to older children heading families because of the death of their parents.

2.3.4.2. Family size

Family size affects learners' performance as they have to compete for limited resources (Rammala, 2009). This implies that the fittest member of the family might outcompete the weaker ones; the latter may end up not concentrating in their school work and perform poorly. Ngema (2016) added that learners who are living in overcrowded homes are unable to study and do their homework effectively because of limited space for studying.

2.3.4.3. Distance travelled by learners to school

The distance travelled by learners from home to school causes them to perform poorly (Bonga, 2010). Ngema (2016) states that if learners walk longer than five kilometres

to school, they might become very tired when they reach their school, and this will affect their performance in class negatively.

2.3.5. DEPARTMENTAL-BASED FACTORS

2.3.5.1. Medium of instruction

The issue of English language as a medium of instruction affects the performance of learners in Life Sciences. It has been observed by several researchers that learners are unable to communicate and understand questions during teaching, learning and assessment activities. In addition, poor language proficiency and language background results in poor grasping of concepts in Life Sciences; eventually, this leads to high failure rate in the subject (Khan, 2012; Rammala, 2009; Harb & El-Shaarawi, 2006; Bonga, 2010; Negumbo, 2016; Malan, Ackerman, Cilliers & Smit, 1996).

Rammala reports that teachers are complaining about learners who can neither read in their mother tongue nor read questions papers in English during examinations and tests. The Ministry of Education added that learners are getting low marks because they are unable to understand how action verbs are used in the phrasing of questions and their specific meaning in context (National Senior Certificate Diagnostic Report, 2016). Learners are not performing well because they do not understand English, and this forces them not to answer examinations questions as expected, and on top of that, they are unable to communicate in English. One other thing is that during lesson presentation, teachers explain concepts in the learners' home language, which is totally wrong because during exam time, there would be no one to explain the questions to them.

Therefore, code switching influences the performance of the learners negatively because the invigilators are not allowed to explain anything to the learners in the exam room except the rules and regulations of the examination (Ngema, 2016). Similar findings based on English as a medium of instruction reveals that underperformance in Life Sciences is due to learners failing the subject because they could hardly speak and understand English (Dikgale, 2016).

2.3.5.2. Monitoring and support by subject advisor

In Tanzania, Mhonyiwa (2016) pointed out that subject advisors are not performing their duties of monitoring and supporting their teachers at school level as expected. This affects learners' progress on a yearly basis. National Senior Certificate Diagnostic Report (2016) indicated that continued reference to previous reports is essential since the area of weaknesses identified in previous years may still be applicable in certain cases. With regards to monitoring and support, the findings in a study conducted by Dikgale (2012) points out that Departmental officials are not strengthening monitoring and support; this implies that these officials are neglecting their duties of supervising teachers and the end results of this is poor learner performance in the subject.

2.3.5.3. Monitoring and support by the Circuit Managers

According to Dikgale (2012), Circuit managers are not supporting the teachers at school level even though others are saying that there were monitoring and support on the side of circuit manager. Those who were not getting support from the circuit managers indicated that the results are poor because of circuit managers who are incompetent. In addition, findings revealed that most Departmental officials did not know what is exactly happening in schools within their circuit.

2.3.5.4. Promotional posts

Teachers who are well supported by the Departmental officials produce good results. According to Dikgale (2012), appointment of promotional posts is based on favouritism. Negumbo (2016) added that properly trained teachers need to be appointed by the Education officers to improve Grade 12 results in Life Sciences.

2.3.5.5. Curriculum change

The constant change of curriculum does not allow Life Sciences teachers to adapt and leaves them being confused and unable to implement it because they are not well trained (Ngema 2016); if teachers get confused, learners would not grasp the new

curriculum altogether and this leads to low performance. Malambo (2012) pointed out that the underperforming by the learners is due to curriculum change by the Department of Education as it changes year after year, without preparing learners and educators. Curriculum advisors are also a contributory factor when it comes to learners' performance because they are failing to unpack and apply the new contents of their manuals during their workshops. In this case, teachers would not be able to apply recommendations in real classroom situations, therefore, the whole process may cause learners to fail their examination continuously (Rammala, 2009).

2.3.5.6. Examination leakage

Mashanyare and Chinamasa (2014) define examination leakage as an illegal filtration of an examination question paper from its system before the paper is officially open in the examination room. Mashanyare and Chinamasa indicate that examination leakage is a serious problem because it affects learners negatively within the whole country. If the paper leaks, learners become restless; if that is the case, they no longer study their books. In a recent study, Jairam (2018) added that learners have seen how the process of examination leakage has affected them; this implies that learners know how their academic performance is affected negatively.

In Malaysia, Khan and Pathan (2014) found that leaked question papers affect learners. Alhasnat (2018) and Mahtab (2017) agree with Mashanyare and Chinamasa that learners cannot concentrate on their studies when they know that question papers are available on the social media. Similar findings revealed by Onyibe, Uma, Uma and Ibina (2015) indicated that examination malpractice discourages learners from hard work and causes low productivity. Due to examination leakage, leaked question papers reach homes of learners; this practice has encouraged learners to be criminals rather than intellectuals (Hossain, 2014).

2.4 STRATEGIES THAT TEACHERS ARE USING FOR TEACHING LIFE SCIENCES

Due to lack of textbooks, Lebata (2014) reveals that teachers used to give learners notes to prepare themselves for tests and one other thing is that teachers question

papers with learners in order to improve learners' results. It was also shown that during teaching and learning process, drilling of questions papers is being done to help teachers to have a picture of how learners will perform in their final examinations (Lebata, 2014). In order to improve the performance of the learners, good learners who excel in their studies are being awarded at their respective schools (Kyei & Maboko 2016).

2.5. IMPLEMENTATION OF THE RECOMMENDATIONS REGARDING GRADE 12 LEARNERS' PERFORMANCE IN LIFE SCIENCE

2.5.1. School-based factors

The Minister of Basic Education in South Africa released the 2016/2017 National Senior Certificate Diagnostic Report on Learner Performance which includes highlighted areas of weaknesses and remedial measures that should be effected at school level to improve learners' achievement. However, the utilisation of this report at school level is monitored by the subject advisors. It has been recommended in Vhembe District by Kyei and Maboko (2016) that the School Management team and the Department of Education ensure that teachers group learners according to the level of their abilities. This is so that underachievers may be given individual help or extra support based on the subject in order to produce quality results in Life Sciences.

However, the program has been implemented in some best performing schools and it improved learners' overall achievement. This program needs to be implemented in underperforming schools because it might be useful to those learners who are not performing well. It was recommended that school should make provision of expert teachers to improve learners' performance based on Departmental common tests. They could also show measures to be used to solve the problem of underachievement. It was further recommended that teachers should not just teach, but need to revisit their teaching and assessment methods to promote good results.

Another recommendation of the School Management Team was that teachers should identify learners who are not performing well and assist them during study time because they lack parental assistance (Kyei & Maboko, 2016). Stakeholders

concerned did not implement recommendations made by researchers. Therefore, there is a need to do further research on this topic to close the gap (Rammala, 2009). Many researchers made recommendations, but learners are still not performing well in the subject. However, further research needs to be conducted to find out whether the recommendations were implemented or not by various stakeholders. Literature is silent about the implementation of the report, so further research needs to be done to find out whether the recommendations were implemented at school level or not.

2.5.2. Teaching and learning materials

It is the responsibility of the government to see to it that teaching and learning materials are distributed to schools (Mbugua et al. 2012). It was recommended that the government should distribute textbooks in rural area as soon as possible. In Vhembe District, textbooks are distributed immediately before the academic year begins so that teaching and learning may take place right the beginning of the academic year (Kyei & Maboko, 2016).

2.5.3. Learners' related factors

A study conducted by Nyambura (2016) in Kenya showed that entry behaviour and negative attitudes towards Biology affect the performance of the learners. This implies that learners are lacking prerequisite knowledge attitudes or skills which the learners have before they are being taught the new content. Further research needs to be done to find out other causes of low academic achievement in the subject at country and national level in secondary schools. Based on in structural methods, learners register better achievement in the subject if they are instructed through the constructivist approach. This implies that learner achievement is also influenced by the instructional method in Kenya (Mwanda et al. 2016). This shows that further research has been done based on factors affecting learners' performance in Life Sciences in Kenya. However, it has been shown that learner support teams should be formed to help underperforming learners at school level. Recent studies did not reveal the program of action based on the recommendations that need to be implemented by the concerned stakeholders. Based on teaching and learning process, older learners are encouraged to assist teachers to improve their teaching professional skills by making

use of tablets to improve learners' performance in Life Sciences (Montrieux; Vanderlinde; Schellens, & Demaxez, 2015).

2.5.4. Language related-factors

Poor language skills of most learners was a serious factor causing poor performance in Life Sciences. The Department of Education introduced a manual based on the teaching of English as a means of strengthening Language of Learning and Teaching (LoLT) in all grades, but there is no school-based language strategy that aims to improve learner performance (National Senior Certificate Diagnostic Report, 2016). Rammala (2009) highlighted that further research should be conducted to find out if the implementation of the language policy (mother tongue) could promote quality results. This recommendation is totally different to those that was released by the National Senior Diagnostic Report (2016/17), which stated that teachers need to focus on the aspect of language competence in the classroom situation because some learners could not understand action verbs used in the phrasing of questions and their specific meaning in the context. If learners are to be taught using their mother tongue, the results would be worse than before.

The South African Department of Education has introduced a manual based on the teaching of English to be utilised by all teachers from lower Grades up to Grade 12. A study conducted by Ngema (2014), add that learners do not understand the language of teaching Life Sciences, and the results recommend code switching as it promotes good results for underperforming learners. The issue of code switching would become problematic to learners because code switching cannot be done during examination as exams are only written in English (Ngema, 2016). Similar findings by Kyei and Nemaorani recommended that learners should read English literature books and English magazines, and also to listen to English programs in order to improve their skills and knowledge of English. This implies that introduction of English programs is highly supported as it improves English knowledge in learners.

2.5.5. Teacher-related factors

Poor leadership resulting in poor staff relationships have a direct effect on learners' performance. It has been recommended that the Ministry of Education should make

provision for in-service for training for school principals on leadership skills reduce high failure rate. The Department of Education should approve and implement an instructional school leadership training workshops, which will be monitored by the departmental officials. It has been revealed that the Department of Education has implemented a number of educational programmes to improve learners' progress. The plan was well accepted by all the school principals despite some challenges in the implementation progress (Hausiku, 2015).

There is no program of action, which shows that the school principals were trained because learners are still not performing well even now. Properly trained Life Sciences teachers need to be appointed by the education officers to improve the performance of Grade 12 results (Negumbo, 2016). Research conducted on the effects of Vee Heuristic Teaching Approach on achievement of boys and girls has indicated that school administrators, Life Sciences teachers and other stakeholders need to implement this approach in teaching and learning, irrespective of gender, as they make the transition from a traditional to modern methods of teaching biology. Traditional methods of teaching cause the learners not to relate biological knowledge to real life (Magana & Njue, 2016).

2.5.6. Curriculum-based factors

Based on learners' performance, Lebata (2014) suggested that teachers need to attend in-services training organised by subject advisors and form teams with other Life Sciences teacher to improve teaching and learning activities by attending workshops frequently. However, there was no timeframe that indicates when the training should be done. The Ministry of Education and Training (MOET) was advised to train school principals so that they would be able to promote good performance in Life Science. The researcher further added that poor performance goes hand in hand with poor management. This implies that if the principal is lacking in good management skills, learners would keep on performing poorly each year. Teachers are also encouraged to conduct and integrate the diagnostic analysis based on the performance of the learners into their everyday teaching done by the subject co-ordinator. Various studies did not reveal any monitoring on the side of the department.

2.5.7. Inadequacy of teaching/learning material and equipment

The findings obtained by Aloovi (2016) indicated that some teachers are lacking Life Sciences documents for implementing Namibian Senior Secondary Certified Curriculum (NSSC) effectively. These important documents, like textbooks, were distributed to the teachers to facilitate teaching and learning activities effectively. The study concluded that subject advisors need to be retrained in order to assist teachers in the implementation of NSSC in Namibia. Retraining of teachers is needed to promote learners' achievement in the subject.

Teaching and learning activities cannot be effective without textbooks. Learners are not performing well because they are unable to purchase textbooks due to their family background. However, Lebata (2014) suggested that the Ministry of Education and Training introduce a book rental scheme to solve the problem of shortage of Life Sciences textbooks.

2.5.8. Availability of funds

Mbugua et al. (2012) pointed out that loan facilities and bursaries will be given to schools with learners from poor families in order to get rid of the problem of low academic achievement

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2.5.9. Lack of motivation

Hausiku (2015) pointed out that the Ministry of Education provided a one-week or two-week instructional principals' training workshop to equip them with necessary leadership skills and knowledge. In addition, educational programs are approved and implemented by the government to improve the performance of the learners. It was indicated that the program is monitored by the Ministry of Education. According to the South African Diagnostic Report (2017), teachers are encouraged to conduct and integrate the analysis of this report during the teaching and learning activities at school level, but there is no follow-up on the distributed and the utilisation of the report. It is

the responsibility of the Head of the Department and the subject advisors to do the monitoring process.

Another factor that affects learners' performance is based on the subject being taught by underqualified teachers. Learners would not perform well if they are taught by teachers with adequate knowledge in the subject. Therefore, the government through the Ministry of Education and Training, ought to organise in-service training for teachers (Lebata, 2014). If teachers are well-trained, they will teach learners proper content before getting into their final examination, and this will also be reducing examination phobia.

2.5.10. English as a medium of instruction

English as a second language affects performance of learners. A study by van Wyk, Mostert and Fai Hui (2016) highlighted that learners should be assessed not only in English but that their mother tongue should also be taken into consideration during assessment tasks. In addition, for learners to build confidence in English, they should be allowed to participate in discussions with other learners using this language. This will make them to be familiar with the language. In a related study conducted by Kwabena, Kyei and Nemaorani (2014), English is one of the factors that contributed to learners' underachievement. However, in order to address this problem, learners are expected to engage themselves in English discussions and debates. To improve their skills and knowledge in English, they ought to read English literature books and other English books. For teachers to produce quality results, the Department of Education and school managers should go an extra mile in motivating teachers after the Grade 12 results by promoting and giving them house subsidies (Mbugua et al., 2012).

2.6. SUMMARY

This current chapter dealt with literature review on factors affecting the academic performance of learners. Related literature from various researchers was used to collect data. Factors that are: school-based, teacher-based, learner-based, home-

based and departmental-based were provided and explained. This chapter also discussed the observational learning theory, critical learning theory and critical thinking theory as theoretical framework of the current study. In addition, it also touched on strategies that by teachers for teaching Life Sciences. The implementation of the recommendations regarding Grade 12 learners' performance in Life Sciences was also discussed in this chapter.

CHAPTER 3

RESEARCH DESIGN AND METHODOLOGY

3.1. INTRODUCTION

Chapter 2 presented literature reviewed on the factors which affect Grade 12 learners' performance in Life Sciences. This chapter describes the research design and methodology followed when conducting this study that explored factors affecting Grade 12 learners' performance in Life Sciences at Luvuvhu Circuit. In more detail, the chapter addresses the research paradigm, research design, research methods, research approach, method of data collection, selection of the sample, research process, data analysis procedure and ethical considerations.

3.2. RESEARCH DESIGN

De Vaus (2006) indicates that the function of a research design is to ensure that the evidence obtained enables the researcher to address the research problem effectively and logically. The research design of this study is qualitative approach as it focused on face-to-face interview to explore factors affecting learner performance from the participants 'perspectives. This design was considered relevant for this study because it deals with human experiences from their point of view. This design has also helped me to get relevant data to achieve the objectives this study.

3.3. RESEARCH PARADIGM

The research paradigm in this study is interpretivism. Bassey (1995) indicated that interpretive research paradigm views realities and meaning is constructed socially; it further that people make their own sense of social reality by interpreting and describing it in this paradigm. This paradigm was relevant to the study because reality created by

the participants was interpreted to get the underlying meaning of the study. In addition, each participant constructed their own realities. A research study conducted by Chowdhury (2014) confirmed that interpretivism is a dominant philosophical approach that helps our understanding of the social world through meaningful interpretation of the world inhabited by people**.**

3.4. RESEARCH METHODOLOGY

Qualitative approach was employed in this study as it concentrated on the direct experiences of the participants and also provided information that allows the researcher to gain information into the factors that affect academic performance of learners. Through qualitative approach, I obtained information directly from the participants using individual face-to-face interview. Through this interview, I collected more information based the factors which lead to poor Grade 12 results at Luvuvhu Circuit. I interacted with the social reality of the participants to produce meaningful interpretations. This research paradigm provided me with an in-depth understanding of the problem. The current study also employed inductive reasoning, which started from a particular situation to a general one. The methodology followed in this study is discussed in detail in the sections that follow.

3.5. POPULATION

A population is a collection of individuals regarded as the main focus of the project, as stated by Dhurumraj (2013). The target population for this study consisted of Life Sciences teachers who are teaching Grade 12 Life Sciences learners at Luvuvhu Circuit. The teachers targeted were from public schools only.

3.6. SAMPLING PROCEDURE AND SAMPLE

Babbie and Mouton (2001) indicate that sampling is a technique in which participants are carefully chosen for the purpose of research. Purposive sampling procedure was

used to select the sample to provide rich and relevant data because of teachers teaching learners who are doing Life Sciences in Grade 12. Ten participants teaching Grade 12 Life Sciences learners were sampled. Out of eight schools in the Luvuvhu Circuit, I sampled ten participants, one participant from each one of the first six schools and the remainder from the last two schools.

During the selection of the participants I was interested in the more experienced teachers as they were able to give me rich and in-depth data needed. Since this study focuses on the depth and the richness of the data, qualifications, age and gender were not taken into consideration during sampling. Sampled participants gave relevant information concerning poor performance of the Grade 12 learners in Life Sciences.

3.7. DATA COLLECTION METHOD

Data was collected through face-to-face semi-structured interviews to explore the lived experiences of the Grade 12 Life Sciences teachers. This type of interview allowed me to probe the participants for additional information. A series of open-ended questions were asked based on the topic areas that I wanted to cover. The open-ended nature of questions of this method defines the topic under investigation. This type of an interview gave me the freedom to probe in order to gather more data for my study. The collected data was captured through a Samsung voice recorder and by taking notes. An interview schedule that I developed was had a list of four research questions based on the objectives under study. This guided the conversation between the participants and I through the interview process. The instrument was chosen because it enabled probing for more information and clarification of answers. Questions asked were clearly and encouraged open-ended responses. In the same manner, I got rich information and a deeper insight into the phenomenon under study.

3.8. INTERVIEW SCHEDULE

The interview schedule consisted of four research questions based on the objectives of the study. It was approved by Faculty Research Ethical Committee and the

supervisor. Ten participants were interviewed separately. Four research open-ended questions based on the objectives of the study were directed to the ten participants during an interview process, followed by probing questions that allowed each participant to give more information for the study. Time allocated for each interview was between twenty to thirty minutes. The interview schedule (see ANNEXURE A) was first sent to colleagues to ensure that the research questions formulated collected valid data for the study. This was then sent to the supervisor to be reviewed. After all the suggestions were incorporated, the interview schedule was reproduced.

3.9. DATA COLLECTION PROCEDURE

A permit to conduct the study was granted by the District Senior Manager in the Department of Education, the school managers within the Luvuvhu Circuit and sampled participants. Permission was granted verbally by the school managers to visit their schools and participants allowed recording during the interview process. I conducted the interview in different places, depending on the venue chosen by each participant. Finally, the arrangements for conducting semi-structured interviews were made. I personally administered the interview process. Data was collected by means of face-to-face semi-structured interviews

All the participants were asked the same research questions in the same sequence, and follow-up questions were asked to probe for further information about the participant's experiences in teaching learners who are doing Life Sciences in Grade 12. I recorded all the interview questions in order to keep the data safe. The transcriptions consisted of *verbatim* written information from the voice recorder. Each interview was designed to be thirty minutes long.

3.10. DATA ANALYSIS PROCEDURE

The collected data was analysed by using thematic analysis to report experiences and reality of the participants. The goal of thematic analysis is to identify themes. The interview was audio taped and transcribed *verbatim*. I became familiar with the data collected during an interview by listening to a voice recorder and reading the transcripts repeatedly and transcribed them into a master file. Initial data were

generated. While reading the data many times, I was able to code interesting features of the data in a systematic way across the entire data set to search for themes. Themes were read in order to find out as to whether they make sense or they are in line with the research questions of the study reviewing the themes, I defined and named the themes, in other words, I wanted to know exactly what the themes were saying and to know how these sub- themes were related to each other and the main themes of my study (Braun & Clarke, 2006). Then I finalised the whole procedure by producing a report.

3.11. ETHICAL AND SAFETY ISSUES

I received permission from the District Senior Manager in the Department of Education to collect data. Permission was granted (ANNEXURE C) in writing. I familiarized myself with relevant ethical principles and guidelines. The following guidelines were forwarded to the participants prior to the interview: the purpose of the interview; assurance of anonymity and confidentiality; information to be used only for the research purposes; privacy; freedom to participate; because it was their democratic right whether to participate or not.

They were informed about: the date, nature and the purpose of the interview prior the commencement of the process and anonymity and confidentiality of information they provided. Respect for dignity of Life Sciences teachers was prioritised and feedback of results were given to the participants (teachers). Reliability was achieved in this study by conducting interviews with more than one participant within the same school and using the same instrument for two different participants. The results were validated by finding out whether data collected from the participants matches with the research objectives of the study.

3.12. SUMMARY

In this chapter, the research design for this study was represented and methodology of this study were outlined and why this methodology was used in this study.

Participants were selected purposely. Semi-structured face-to-face individual interview as it allowed me to ask open-ended questions based on the areas that I wanted to cover. Data were organised in a meaningful and systematic manner. The process of data analysis was discussed in this chapter. Ethical issues were discussed with each participant prior the interview process for privacy.

CHAPTER 4

RESULTS AND DISCUSSION

4.1. INTRODUCTION

Chapter 3 presented the research design and methodology of this study. The purpose of this chapter is to provide the findings and an analysis of the collected data from the ten Life Sciences teachers interviewed from ten schools within Luvuvhu Circuit. The interviews were based on how Grade 12 learners' performance in Life Sciences and strategies used by Life Sciences teachers in teaching the subject and the recommendations regarding Life Sciences that will assist both the teachers and learners to improve the Grade 12 results. It also presents the evidence from the previous literatures and the arguments based on the collected data. Participants and their schools were given the following abbreviations for purposes of anonymity: PI=Participant no.1 from School A, that is, P1-A; P2-B; etc.

4.2. INTERPRETATION AND ANALYSIS OF DATA.

The main purpose of this study was to investigate factors that affect Grade 12 learners' performance in Life Sciences in the Luvuvhu circuit. Themes and sub-themes associated with a specific research question that were important within the collected data were pinpointed and examined using thematic analysis method to report experiences, meanings and the realities of the participants.

4.3. DEMOGRAPHIC INFORMATION

4.3.1 Gender of participants

There were ten participants made up of seven males and three female teachers who took part in the interviews.

4.3.2 Age of participants

The ages of these ten participants ranged between 41 and 61 years, and they all teach Life Sciences in Grade 12.

4.3.3 Qualifications

The findings of this study revealed that participants were all from different educational backgrounds. There were eight teachers with diplomas were and the remaining two had Bachelor of Arts Degrees (BA).

4.3.4 Teaching experience

All the participants that were purposively selected to participate in this study had different teaching experiences of Life Sciences in Grade 12. All of them were coded from P1 to P10, and their schools were coded: School A to School J (A to J). Their teaching experiences were coded: P1-29 years; P2-8 years; P3, P7 and P9-31 years; P4-35 years; P5-25 years; P6-36 years; P8-5 years and P10-22 years.

4.4. ANALYSIS OF CONTEXTUAL QUESTIONS

Questions based on how learners are performing and why learners are they performing poorly in Life Sciences were posed to the participants in order to establish factors that affect Grade 12 learners' performance in Life Sciences in the Luvuvhu circuit.

4.5. THEMES AND SUB-THEMES

4.5.1. THEME 1: Factors affecting learners' performance

The results indicated that poor performance in the schools within the Luvuvhu Circuit was due lack of laboratories, learning materials, late arrival of common tasks, leakage of common tasks, inexperienced /underqualified teachers, English as a medium of instruction, location of the school, absenteeism, discipline, substance abuse, learners'

written work, promotional posts and parental involvement. These are discussed in detail in the sections that follow:

4.5.1.1. Availability of infrastructure

The availability of proper classrooms and well-equipped laboratories promote good learner performance. Similar results concerning infrastructure indicated that buildings, classrooms, laboratories, and equipment are crucial for effective teaching and learning activities (Teixeira, Amoroso & Gresham, 2017). Sub-themes are discussed in the sub-sections that follow:

4.5.1.2. Lack of laboratories and equipment

The results obtained from two participants revealed that the schools are lacking laboratories for conducting experiments and equipment for practical tasks. Life Sciences has topics for practical activities; therefore, without practical activities or experiments, learners would not produce good results in this subject. This is because Life Sciences content has a portion of practical activities that needs to be performed in a laboratory. Therefore, in the absence of labs, learner performance would be affected negatively. Life Sciences, as a practical subject, cannot be taught in an ordinary classroom. However, lack of laboratories in schools within the Luvuvhu Circuit worsen the bad performance of Grade 12 learners in Life Sciences.

The following participants' response confirm this:

> P1-A: ‘’we do not have laboratories and equipment that will help us to do practical activities’’

> P9-I: ‘’ most schools in our circuit do not have laboratories where in learners can conduct their practical activities and experiments.’’

This view was shared by King'aru (2014) and Zenda (2016) who pointed out that most schools in the district do not have well equipped laboratories. The participants think that their schools are lacking laboratories. Laboratories are not like ordinary classes, as

these are classes where experiments are being conducted. Similar findings were also obtained by some researchers (Legotlo et al., 2002; Mji & Makgato, 2006; Makgato, 2007; Muwanga & Zake, 2008) indicating that underachievement is due to lack of adequate Life Sciences infrastructure like apparatus.

Experiments are part of Life Sciences syllabus and this implies that they should be conducted practically in a proper laboratory. However, if teachers are failing to conduct experiments, learners too will fail to answer questions based on this section. it is very clear that they would not be able to get marks on that particular section, obviously they will definitely be affected at the end.

4.5.1.3. Teaching Life Sciences without practical work

The participants indicated that there is no practical activity conducted during lesson presentation because it is time consuming. Practical work is done theoretically or not conducted at all. Learners are shown videos instead of practical work. This implies that learners are assessed without being taught the practical part of a Life Sciences syllabus.

P3-C: ‘’ I do not do practical part because it is time consuming’’

Science Community Representing Education (2008) added and agreed that teachers were not confident in carrying out practical work. This shows that teachers are not considering practical work as fundamental and prevalent to their teaching of Life Sciences. In support of the current findings, Zaid, Friesen and Ezzah (2014) revealed that teachers spent their time covering the curriculum, which leaves learners without being taught practical work. Lesson presentation in Life Sciences should be done according to the examination guidelines. No section should be left out; otherwise learner performance would be affected negatively.

Omission of practical activities by teachers during teaching and learning activities contributes to poor learner performance in the said subject because teachers do not perform the practical portion required by the examination guidelines. In line with

practical activities, the Science Community Representing Education (SCORE) (2008) indicated that practical work increases learners' ownership of their learning as this can also increase their motivation.

Based on the issue of the shortage of labs, one of the responded said:

> P4-D: ''There is no laboratory and equipment in our school, learners are conducting practical and experiments theoretically which in turn causes learners to fail Life Sciences''

The findings by Jorikanta (2014) revealed that learners learn practical activities effectively than just learning them theoretically because, practically, learners might be able to recall during assessment time. Based on factors affecting learners' performance, the results in this study suggest that the performance in this circuit is attributed to practical activities not conducted practically; learners tend to forget easily, and this results in learners not producing good results in Life Sciences. Results indicate that learners are not performing well because they easily forget practical activities that were performed theoretically. Therefore, it becomes clear that if for example, the paper is out of hundred and fifty marks and the practical part is twenty marks, learners have failed the exam already before they even write it. To enhance learners' understanding and knowledge, practical work should be conducted practically as it forms part of the curriculum.

The following is the response from the participant:

> P10-J: ''This time we don't have laboratories; we play videos as practical experience that they will see''

Similar findings by Jorikanta (2014) confirm that learners cannot learn practical work by just watching videos or teachers' demonstrations; they have to perform practical themselves in order to develop their understanding in Science education. This is an indication that learners are performing poorly because of not conducting experiments practically. Some teachers indicated that they do not have laboratories in their schools and therefore find it difficult to conduct experiments. One of the participants remarked

as follows, which confirmed that lack of laboratories negatively affects the teaching of Life Science:

> P5-E: ‘’Our schools has no laboratory, so it is difficult to conduct experiments in this subject, we are compelled to conduct practical activities without having apparatus and learners are not getting marks when it comes to practical tasks.’’

The participant is trying to show the difficulties in presenting lesson without practical activities; when it comes to practical questions during examinations, learners fail. Thus, if teachers are not conducting experiments, the performance of learners would be affected. However, it is very clear that the issue of not conducting experiments is also a contributory factor to learners’ poor performance in Life Sciences. In line with this result Said et al. (2014) confirm that teachers are working under pressure to raise the academic achievement of learners but are unable to implement high quality practical, work that learners should experience to produce good results.

4.5.1.4. Availability of learning and teaching material

Based on the questions regarding performance of learners, the majority of the teachers responded that lack of guides, teaching aids/ relevant textbooks and Wi-Fi, contributes to poor performance in Life Sciences; these are major factors that play a role in producing unsatisfactory results. Participants were concerned about the distribution of textbooks or irrelevant textbooks in their circuit, which results in poor learner performance. These are the responses of some of the participants:

> P1-A: ‘’another factor is the shortage of teaching aids: we don’t have teaching aids or appropriate teaching aids available to improve the performance in Life Sciences”

Durdanovic (2015) agreed with the current study that teaching aids are used in teaching and learning process as a source of learning and can largely contribute to good performance in the said subject. The results were also supported by Dhurumraj (2013) and Nkanzela (2015), who opined that weak performance of learners is due to

the shortage of learning material. On the other hand, Nkanzela added that failure rate was influenced by lack of study materials. However, teaching aids in class stimulate interest in learners during the teaching process, which boosts their morale to become actively involved in learning process. Therefore, if learners are actively involved, they will be able to realize their own potential and grasp the subject content effectively. One can conclude that lack of learning materials contributes to poor performance in Life Sciences.

Participant's response:

> P3-C: ''Learners are also affected because learners do not have study guides, and parents were not supportive to buy for their children"

Based on the above participant's response, Dhurumraj (2013) confirmed that learners are unable to buy study guides due to the financial status of their parents. This suggests that not every learner is able to purchase a study-guide that costs hundred rand. Study guides contain a summary of all the Life Sciences topics relevant to the examination guidelines. Therefore, if learners do not have these guides, they will not produce good results. It is very clear that Grade 12 learners are performing poorly because their parents cannot afford to buy study guides for their children.

Regarding textbooks, one of the participant said:

> P6-F: ''Another factor which plays a major role for Grade 12 learners is that learners are not performing very well because we have a shortage of resources like textbooks''

The participant above indicated that learners are performing poorly because they are lacking textbooks. These results are in line with the findings of Aloovi (2016), who pointed out that teachers are spending more of their teaching time preparing notes for the learners instead of teaching them because of the shortage of textbooks. In addition, Aloovi highlighted that teachers spent much time writing classwork and homework on the chalkboard due to lack of textbooks. Another similar research results by Lebata (2014) revealed that most learners come from disadvantaged families and are unable to buy textbooks due to financial problems.

The availability of textbooks assists the teachers to finish the syllabus in time, and learners might be able to get practice questions to revise the content taught while they are at home. However, if that is the case, learners will be very dependent on what their teachers have given them only, which might affect their performance negatively; on the other hand, teachers will not finish the syllabus on time, which also causes the learners to write their final examination without being taught the whole syllabus.

Participant 8 stated as follows:

> P8-H: Another factor is that, every time teachers used to make requisitions based on Life Sciences textbooks, the Department supplies incorrect textbooks not requested by the subject teacher, they just supply irrelevant textbooks which do not contain relevant examination content''

According to the result highlighted by the above participant, Life Sciences teachers received irrelevant textbooks that they did not request. The textbooks that were supposed to be distributed to various schools, need to be in line with the examination guidelines. However, the ones that the participants are referring to are very irrelevant to the prescribed syllabus; learners are expected to purchase relevant ones. Similar findings by Aloovi (2016) showed that the introduction of new or irrelevant textbooks results in learners spending more money buying the relevant textbooks. This suggests that if learners cannot purchase them, they might not be able to produce quality results in Life Sciences.

Therefore, one can conclude that these irrelevant textbooks are contributing to poor learner performance in Life Sciences because the majority of learners are from poor families who cannot afford to buy the relevant textbooks. This might lead to learners entering exams with limited knowledge of subject content, which may cause them to fail the subject terribly. It seems that the Departmental officials are just distributing textbooks without considering the requisitions made by Life Sciences teachers. They please the publishers by distributing incorrect textbooks, while relevant textbooks that cater for all learners, regardless of their financial background, need to be supplied to various schools. Therefore, this implies that learners are performing poorly because

the textbooks distributed have no examination related practice questions in line with the examination guidelines.

During the interviews, participant 9 responded in this way:

> P9-I: Parents are not buying them resources such as more textbooks and guides to assist them and even social media to access interment is not available for them to use at schools and they are not getting new information at times"

Similar results were highlighted by Ayuba and Mahommed (2014) showing that lack of functional computers contributes to low learner performance because learners might not get information from the internet. From these results, one can conclude that unavailability of adequate learning and teaching materials contributes to under-achievement because learners would not be able to get additional information from the guides and internet. For quality results, learners should not rely on textbooks only; they ought to get additional information from the internet. It is the responsibility of the school to provide internet access for the learners so that they get additional information to improve their results. Therefore, learners are not performing well due to limited information that they are obtaining from the textbooks.

4.5.1.5.Late arrival of Life Sciences common tasks and common tasks leakage

When participants were asked about factors affecting learner performance in Life Sciences, the majority responded that most times, they receive common tasks late than other circuits had written the tasks already. Sometimes they would be having both tasks and the memorandum before they even write that particular task. Participants' responses were as follows:

> P1-A: "the documents that we get from the Circuit, arrives at my school very late, we used to get practical task very late. You find that learners would be having the task plus its memo from other schools before they even write the task''.

> P3-C: "When it comes to common tasks, learners get the question papers and the memorandum before they even write the tasks, this makes them not to study

their books instead they spend most of their study time busy memorising those leaked tasks''.

P5-E:'' Common tasks are not to our working place in time; we get them after the other circuits has written them, and sometimes you would find that learners have already got the memorandum before the question papers were even distributed to our schools''

P6-F: ''One other thing that also contribute to failure rate is that, learners got the'' memorandum before they could even write the exam.''

The research findings in this study are related to research findings by Mashanyare and Chinamasa (2014), who opined that examination leakage is a serious problem because it affects candidates in the whole country. On the other hand, similar findings related to examination leakage reveal that examination malpractice discourages the learners from hard work and productivity (Onyibe, Uma & Ibina, 2015).

Common tasks leakage affects learners' performance at Luvuvhu Circuit because learners are no longer concentrating on their studies; instead, they focus on the leaked question papers and memoranda rather than studying their books. In other words, learners spend much of their time memorising the leaked task, leaving no time for study. Those without access to the leaked question paper or task would become discouraged and stop studying, hoping that they too would end up having access to that leaked task. This results in poor performance in the subject and learners are affected even in their final examination.

Common tasks leakage needs to be addressed because the whole circuit is producing a degraded future generation instead of producing intellectually graded future generations. One can conclude that learners perform poorly because they enter the examination with limited knowledge of the subject. Late delivery of common tasks in this study contribute to a high failure rate at the end of the year in Life Sciences.

4.5.1.6. Underqualified/ Inexperienced teachers

When participants were asked about the inexperienced Life Sciences teachers, the results revealed that out of ten participants interviewed, five teachers indicated that some teachers are inexperienced or are underqualified as they are unable to impart knowledge to their learners effectively; they do not even attempt to teach topics that are challenging them. They also indicated that teachers are unable to teach certain topics like Genetics and experience challenges in mastering Life Sciences concepts. On top of that, they indicated that teachers who are not qualified to teach the subject are teaching them. This implies that learners will not be able to answer questions on such topics, and this results in poor learner performance.

Based on factors affecting learners' performance, one of the participant responded as follows:

P1-A: ''Learners in the lower grades are being taught by inexperienced teachers''

Similar results by Aloovi (2016) indicated that Life Sciences teachers are experiencing problems with the implementation of the Life Sciences curriculum. In addition, Lebata (2014) agreed that inexperienced teachers lack skills to impart the subject matter to the learners. Mupa and Chinooneka (2015) added that some teachers have low level of training that influence effective teaching and learning. This means that learners are failing due to teachers who are not having enough knowledge of the subject. Findings of this study revealed that if teachers are not well qualified to impart knowledge effectively to learners, teachers who are knowledgeable are able to impart the content to learners effectively. A teacher who is not qualified or experienced to teach the subject cannot teach the subject very well and does not have deep content knowledge of the subject. Therefore, in order to improve learners' performance, it is advisable not to allow any teacher to teach the subject except those that are well pedagogically knowledgeable and trained Life Sciences teacher. From the findings presented above, learners are performing poorly because of inexperienced teachers who are lacking adequate skills and Life Sciences knowledge to help learners to pass their Grade 12 with bachelors, as remarked by one of the participants:

P6-F: ‘’ Coming to teachers themselves, you find out that they have difficulty in mastering Life Sciences concepts’’

The findings in this study indicated that teachers are experiencing problems in mastering Life Sciences concepts. Sinyosi (2015) found that teachers’ ability to teach the subject was highly questionable because they were unable to master concepts in Life Sciences. If the teacher is unable to master the Life Sciences concepts well, he or she might not be able to deliver the subject content to the learners effectively. It is evident that the teachers’ competence levels in teaching the subject might automatically affect performance of the learners negatively.

P7-G: ‘’ Genetics is the most difficult topic to the teachers’’

From the findings presented above, one of the participants indicated that some topics like Genetics in Life Sciences are too difficult to teach. Rammala (2009) agreed with the current study and revealed that teachers are not conversant with the learning content and are unable to unpack or teach challenging topics like Genetics. However, if teachers are struggling with Genetics, learners would not be taught this section and would not get marks. Therefore, under-achievement in the subject is attributed to teachers who are unable to teach Genetics in Grade 12, as mentioned by some of the participants below:

P9-I: ‘’ Teachers may at times not well conversant with imparting knowledge in Life Sciences’’

Y10-J: ‘’ You may find that teachers are under-qualified or either the teacher who is not qualified to teach Life Sciences is teaching and at the end he/she only teach what he/she understands and leave out those challenging topics and that will have a negative impact on the learners’’

Recent literature agrees that lack of pedagogical knowledge and skills result in poor performance while lack of proper training contributes to underachievement (Molla & Muche, 2018). This finding was also supported by Jackson (2009) indicating that underqualified teachers in this subject were experiencing many problems with regards to imparting subject content, and that leads to poor performance.

This implies that learners are not performing well at Luvuvhu Circuit because teachers teaching Life Sciences are underqualified. In other words, these teachers have inadequate knowledge of the subject content and knowledge of teaching Life Sciences in Grade 12. Therefore, they are not qualified to teach this subject. This results in learners not performing well in the said subject because teachers are not teaching all the topics as prescribed.

4.5.1.7. English as a medium of instruction

Concerning poor performance, half of the interviewed participants indicated that English, as a medium of instruction, affects learners during the process of teaching and learning. Four participants responded that learners are unable to understand and express themselves in English. This factor has a direct negative impact on learners' performance.

The following participants responded as follows:

> P4-D: "Learners are having language problem, in other words, they are unable to understand and express themselves in English"
>
> P6-F:" Learners also have language barrier. They experience problems in mastering Life Sciences concepts"
>
> P7-G: "Language barriers is also affected learners' performance especially in genetics"
>
> P8-H:" The issue of language barrier is also affecting learners seriously; they don't understand English as the medium of instruction''

The results in this study are supported by the Ministry of Education, adding that learners get low marks because are unable to understand action verbs used in phrasing questions and their specific meaning in the context (National Senior Certificate Diagnostic Report, 2016). Rammala (2009) also added that teachers were

complaining about learners who are unable to read question papers in English during examinations and tests. Therefore, this means that most learners are not fluent in English, and this affects their performance negatively as they cannot express themselves when answering the questions.

If learners are not proficient in English, they might not be able to grasp the subject content and fail to understand exam questions. This becomes a problem because invigilators are not allowed to clarify for candidates during their examination period. Therefore, this results in learners not answering questions as expected, leading to poor learner performance in Life Sciences.

4.5.1.8. Location of the school

The results from the three participants indicated that their schools are located in the bushes or in rural areas. The effects of the rural location of schools include: learners hiding in the bushes while smocking dagga and going home for drinking water. This learners' performance during their final examination. The responses from participant revealed that there is no drinking water within the school premises.

> P2-B: "Sometimes learners used to dodge classes in order to hide in the bush"

> P4-D: ''Our school is located near the bushes, learners used to hide there and come to the schoolyard during break after the other learners that were in the class were taught already. They used to dodge classes in order to hide in the bushes while smocking dagga and some students went home because there is no drinking water within the school yard"

The results of the current study were supported by Rammala (2009) who revealed that some schools were situated near facilities selling dagga to earners, and this affected performance of the learners. The location of the school was also highlighted by a study conducted by Ngema (2016) showing that the location of the school in rural areas has its own implication such as shortage of water within the school premises. This implies that schools in rural areas lack water; teaching cannot occur effectively in the absence of drinking water and this results in poor learner performance because learners might not concentrate during teaching and learning while they are thirsty. Kyei and

Nemaorani (2014) came up with another version based on the location of the school, indicating that when schools are located near a town, learners may be distracted by entertainment activities.

The findings of the current study show that the location of the schools in bushes or rural areas has a direct impact on the performance of the Grade 12 Life Science learners. The results of this study revealed that schools in such areas experience challenges such as the admission of rejected learners from performing schools, which automatically increases the number of underperforming learners. It was also indicated that learners dodge classes and hide in the bushes to smoke dagga. This is a positive indication that shows that indeed, learners are performing poorly because schools at Luvuvhu Circuit are located in bushes where learners hide. One can conclude that hiding in the bushes during teaching time contributes to poor performance in Life Sciences.

4.5.1.9. Learners' written work

Based on the amount of learners' written work, three participants indicated that learners are not doing classwork and homework because of laziness. Other participants showed that there is not enough written work given to the learners because teachers are teaching more subjects. Below are the responses from the participants:

> PA-1: "There is not enough written work given to the learners"

> P10-J:''You may find that there are is little written work because teachers have so many subjects such that they lack written work''

The current research finding is similar to findings by Lebata (2014). The researcher revealed that learners were given few written tests per year. More written tasks promote good performance. Therefore, it is the responsibility of teachers to give tests, classwork and homework to learners to assess learners' understanding. The participants responded said that learners are failing this subject because they themselves do not want to write written work:

P3-C: “I used to give my learners exercises and homework but learners are reluctant to write the task given to them, they are too lazy”

P4-D: “Learners are too lazy to write given homework and exercises; I am also failing to give learners enough work because of the lengthy Life Sciences syllabus’’

P8-H: ‘’Learners are lazy, they don’t want written work, we as teachers are not giving learners enough written work, we only concentrate on formal tasks issued by the Department’’

Lebata (2014) in his findings agrees with the current study and adds that learners are not tested as required. In other words, the study indicated that learners were given few tests, which affects their performance. To add, Lebata and Mudau (2014) indicated that learners had a gap in tests and internal examinations and do not do work assigned to them. They further showed that most teachers did not give tests and quizzes to learners.

The findings in this study revealed that learners are too lazy to do written work, and some teachers are also too lazy to give learners classwork, tests and homework. This is a major factor that contributes to poor learner performance in Life Sciences. If both teacher and learner are not carrying out their tasks as expected it would not be easy for them to detect the area of weaknesses as soon as possible. This implies that learners are performing poorly due to lack of written work. In addition, one can deduce that learners cannot pass if they are not given added written work. Learners should be given more written work in order to improve their performance in Life Sciences. With regards to written work, if the teacher is failing to give written work to learners, this may result in poor learning and poor learner performance.

4.5.1.10. Absenteeism

Most participants did not say anything about on absenteeism, but four out of ten indicated that indeed, teachers and learners absent themselves from school. This

implies that performance at Luvuvhu Circuit is low due to absenteeism. To answer the questions based on absenteeism, three participants respond as follows:

> P1-A:'' Learners have a tendency of staying home and only come to school during term tests''
>
> P3-C: ''We are also experiencing challenges such as absenteeism, bunking of classes and staying away from school by the learners''
>
> P9-I: ''Some learners do not come to school because they are being bullied by others''

With regards to learner absenteeism, Clement (2015) added that non-attendance of classes by learners affects learners' achievement. Participants indicated that most learners are failing because they dodge classes. Obviously, they will end up getting lower marks.

Participant 'response:

> P8-H: ''Teachers absent themselves during school hours while attending their own personal issues, they attend memorial services almost all Thursdays every month, leaving learners behind; this makes them not to finish the syllabus''

Similar research findings by Dikgale (2012) revealed that high failure rate is caused by teachers who attend union meetings during working hours, which shows less commitment to their duties. Absenting themselves from classes leaves leaners unattended, and this makes them not to finish the syllabus on time. This results in poor performance by the learners of Life Sciences because excessive absenteeism reduces the amount of instructional time.

4.5.1.11. Discipline

Most of the participants did not say anything concerning discipline, but three out of ten said discipline was not administered effectively and had direct impact on learners. The

challenge, according to the current findings, is that learners are not taking any instructions from their teachers and do as they wish.

When they respond during the interview process, two of the participant responded as follows:

> P4-D: “Lack of discipline is also affecting learners’ performance in my school. There is no alternative form of discipline; that is why these learners are failing’’

> P10-J: ‘’Learners are delinquent because of disciplinary problems. They do not mind if they do not write the task. If you give them tasks like homework, they fail to write it because they know that there is nothing that could be done to them’’

The results of these findings are similar to the findings by Lebata (2014), which reveals that since corporal punishment is no longer administered to the learners, learners do not do the work assigned to them. This implies that they are not disciplined and this affects their performance. Dikgale (2012) indicated that learners were not conducting themselves in an acceptable manner, and their misbehaviour contributes to poor performance in Life Sciences.

A disciplined learner follows instructions given by their teachers, but the current study reveals that learners are performing poorly because they deliberately fail to do written tasks given to them knowing that there will be no consequences. If learners are doing as they wish, they will never see where they experience difficulties, and this will negatively impact on their performance.

4.5.1.12. Substance abuse

Participants indicated that poor performance in Life Sciences was due to learners being drug addicts. They further indicated that they even dodge classes in order to hide in the bushes to take drugs. The findings revealed that legalization of dagga was also a contributory factor to poor performance in Life Sciences.
Participants’ response are as follows:

P4-D: “Learners used to dodge classes in order to hide in the bushes while smoking dagga, this substances influences learners’ behaviour in such a way that they no longer concentrating in their school work’’

P8-H:’’ These learners (boys and girls) are addicted to drugs, because the current government has legalised dagga, therefore learners are no longer hiding while taking drugs’’

P9-I: ‘’some of the problem encountered by learners, which contribute to poor performance are social problems such as drugs and alcohol abuse’’

Similar findings by Rammala (2009) concur with the current study; they showed that schools situated near facilities selling drugs to learners have a direct impact on learners’ performance. Substance abuse by learners was identified as the most dangerous factor that disturbs learners in their learning process; it also causes them to fail in their examinations. This finding revealed that learners influenced by dagga and liquor tend to be unruly and unteachable (Rammala, 2009). Kyei and Nemaorani (2014) added that if learners on drugs become distracted.

Such learners distract those who are sober minded. This implies that the whole class would be affected. It becomes discouraging to teach such a distracted class, and performance of learners would be affected negatively.

4.5.1.13. Promotional posts

Two participants revealed that the Department of Education also contributes to high failure rate because they fail to fill posts on time; parents influence the shortlisting process when it comes to vacant post.

Here is the response from participant 7 and 8:

P7-G: “The Department of Education is always failing to fill the vacant of promotional post in time; this results in teachers sharing subjects of the one who is no longer working, which of course increases teachers’ workload and hence teaching and learning could not take place effectively. Teachers need a lot

of time to prepare their lessons and this leaves them with little time to teach the learners''

P8-H: ''Parents or School Governing Bodies (SGB) are influencing the panel members to shortlist teachers from their own communities for promotional post even if their members do not qualify''

This study concurs with findings of Negumbo (2016) indicating that properly trained teachers should be appointed by Education Officers to improve results. Another similar finding which concurs with the results of the current study is by Dikgale (2012) that appointment of promotional post was based on favouritism.

The responses above make it clear that teachers and learners are affected by the way in which the parents and the Department of Education is handling promotional posts. The Department is failing to fill vacant post on time, and this forces the School Management Team to distributes extra loads to teachers. If they are overloaded, they are unable to impart knowledge effectively to the learners, which results in poor learner performance. The same applies to the School Governing Bodies; their influence in promotional posts discourages teachers. This also leads to high failure rate in Life Sciences because they hire incompetent teachers who are not knowledgeable with regards to the subject content.

One may therefore conclude that these learners within the Luvuvhu Circuit are not performing well due to SGB members and the Department of Education officials who employ incompetent teachers. Such teachers also lack technical and non-technical knowledge in Life Sciences, which prevents learners from obtaining good results in the said subject.

4.5.1.14. Parental involvement

Parental involvement in teaching and learning plays a very important role the performance of the learners. When asked about factors affecting learners' performance, five participants indicated that learners are not performing well because parents are not involving themselves in the education of their children. This is

concerning the following: they no longer want to purchase anything for their children because of free education, learners are not staying with their parents and their parents are illiterate and not buying study guides for their children. The participants responded as follows:

> P2-B: ‘’One other factor is that there is no support and encouragement from the parents’’

The participants above responded that parents are not supporting and encouraging learners' education. Based on the results of the current study, Lebata (2014) confirmed that parents play a very important role in their children's education. If they are not supporting their children fully, this may result into poor performance in Life Sciences. Another similar finding by Nghambi (2014) revealed that most parents do not encourage and guide their children to concentrate on their books and are to blame for poor performance.

One may conclude that learners are failing to perform at their best level to obtain entrance to university because their parents are not encouraging them to study at home. It is the responsibility of parents to see to it that their children are getting all the necessary support regarding to their education in their home environment in order to produce good results. However, parents are not encouraging their children to pursue goals at the home environment by getting them information for school assignments previous question papers and memoranda. Therefore, these learners perform poorly due to their parents who are not assisting them with their school work.

> P3-C:’’You may find that this notion of no school fees is also influencing parents because you will find that parents do not even want to pay in order to assists may be with extra tutors that the learners can get so that they may help them and support from parents to teachers is not up to scratch”

The findings of this study revealed that parents do not assist their children financially because they have concluded that their children are getting free education and they are no longer allowed to assist their children financially. The current research findings are supported by Rammala (2009) who indicated that learners are not producing good

results because most parents are experiencing financial hardship that they cannot pay for extra classes for their children. Therefore, these learners rely on assistance from teachers during school hours. Without extra lessons after school due to lack of funds, they may fail at the end of the year.

The following participants stated that:

> P5-E: ‘’One other contributing factor is that parents are not involved in the education of their children’’

> P6-F: ‘’One other problem is that parents are not involving themselves in their learners’ school activities may because they are illiterate but we only see very few parents coming to school just to require about their learners’ performance, and these learners are not staying with their parents and they do not have guidance and eventually it affects their performance”

Most participants indicated that parents are not supervising their children’s education. It was also revealed that learners’ parents were illiterate or migrant labourers, unable to assist their children in their school work (Kirkup, 2008; Kahlenberg & Garzon, 2006). Norlin (2009) linked learners’ underperformance to parents who were unable to support their children in their school work.

Children whose parents are actively involved tend to do better in school. The current study agrees with literature that indicates that if parents are not supporting their children educationally, this contributes to learners’ poor performance. This implies that when you engage yourself as a parent in your child’s education, you advocate your child’ future. In my opinion, one can conclude that parental involvement is crucial in the sense that it promotes the culture of learning in our schools and quality results in Life Sciences.

Participant 9 also indicated that:

> P9-I: ‘’At times parents are not even buying them resources such as guides which may assist them to get more information from various sources’’

For learners to produce quality results, more learning material is needed. Bonga (2010) and Michael (1998) support the current study by indicating that learners from parents in a low-economic status are hindered from getting necessary resources that will help them to improve their performance in Life Sciences. One may conclude that parents' socio-economic status has a direct impact on learners' performance. Therefore, if parents are not buying extra resources like study guides and data to get more educational information from various sources, they will prevent learners from getting suitable marks for entering into universities.

4.5.2. THEME 2: Strategies for teaching Life Sciences

Participants were asked to mention different strategies that they use in teaching Life Sciences learners in Grade 12. Their responses were as follows: they organise Saturday classes, but the challenge was that they stay far away from the school. They also organise morning studies. They group learners according to their abilities. Others said that they revise past examinations question papers with learners; they indicated that they do not have Saturday classes due to lack of transport. They also outsource expert teachers to assists learners. They indicated that they form Circuit clusters in different venues within the circuit. Learners are divided into three groups and participants introduced WhatsApp groups to assist the learners. The underachievers were given a chance to be taught challenging topics that they did not understand. Others indicated that they outsource subject specialists to assist learners. The study revealed that learners are encouraged to buy study guides and even went to centres where practical activities are conducted.

4.5.2.1. Awarding performing learners

During an interview process, some of the teachers says that the Department and school teachers used to awards best performing learners and neglect the underperforming ones.

The following participants responded as follows:

P1-A: '' we award learners who are doing well in Life Sciences''

P2-B;'' Learners who are performing well are being taken for camping during holidays as a strategy to improve their performance and the Department is neglecting those who are not performing well''

A study conducted by Kyei and Maboko (2016) agreed that learners who are performing well are awarded in order to improve their performance, but the question is: What are they doing with those learners who are not performing well? Awarding learners motivates them to study harder than before; even those who are not willing to study their books might become motivated and be serious with their schoolwork. Those who are already motivated become more serious with their schoolwork. However, the school management team and the Department concentrate on learners who are performing well but neglect the under-achievers. This strategy is implemented incorrectly; how could they award top achievers only? they should come up with another alternative that might motivate other learners to improve results.

4.5.2.2. Conducting extra classes

The process of outsourcing knowledgeable and skilful teachers enables the learners to obtain strong academic knowledge that improves their performance. Parents, on the other hand, commit themselves in the education of their children by employing home teachers to improve the performance of their children (Olajiire, 2017); however, the majority of learners are not assisted financially by their parents, which indicates that there is no improvement in their performance.

Participants' response:

P6-F: ''Underperforming learners are taught during Saturdays.

P3-C: '' We outsource during weekends in order to help learners, I gave my learners more written work during the first quarter and then from there I start to teach without giving them written work''

P7-G: I also invite subject specialist to assist me in topics that are too difficult to me but learners are saying they cannot attend the lesson because

they have already committed themselves in Mathematics and Physical Sciences extra lessons''

P9-I: ''I group learners, teaching them on weekends but some of the learners are not attending such class because of household duties''

The challenge is that only few teachers are outsourcing skilful Life Sciences teachers, but the majority of them are doing nothing about it. This may be because of other reasons: some learners were not attending these classes, which means that the issue of poor performance is still occurring. Lebata (2014) added that Life Sciences teachers or School Management Teams need to outsource skilful Life Sciences teachers who will teach difficult topics to improve Grade 12 results in the said subject. If any Life Sciences teacher discovered that there are certain topics that are too difficult to teach, a more knowledgeable Life Sciences teacher needs to be called as a strategy to treat that topic; this will result in improving the performance of learners in Life Sciences.

P4-D: ''We as Life Sciences teachers organise clusters in different venues within our Circuit whereby a teacher from school A will go and teach learners in school B, and best performing Life Sciences teachers are invited to teach my learners, and some learners are not able to attend due to lack of transport''

P5-E: ''We used to do team teaching in our Circuit in order to teach the grade 12 Life Sciences learners and I have tried to ask them to buy Life Sciences study guides as a strategy to improve the result''

The imparting of knowledge to learners is not a one-man show. Getting academic assistance from expert teachers promotes good results in Life Sciences. With regards to team teaching, Olajiire (2017) confirms that subject specialists help learners to overcome learning difficulties in the subject they are learning. In addition, Lebata (2014) indicated that in team-teaching, teachers reteach concepts that learners did not grasp in internal examination and doing corrections with the learners aiming at improving their performance. Another finding showed that the Life Sciences teacher organised extra lessons with the aim of improving the Grade 12 results in the subject (Ngema, 2016).

Therefore, in order to produce quality results, it is very important to invite expert teachers to assist where teachers are having challenges rather than letting learners to sit for examinations without being taught all the topics. One may deduce that the majority of teachers in schools within the Circuit were not outsourcing because only two participants indicated that did. Bonga (2010) stated that walking distance affects learners' performance. The finding reveals that learners walk a big distance to attend extra classes. This implies that if learners have no transport to go to school every day, they get tired and lose concentration during teaching and learning process, and this eventually leads them to poor performance in the subject.

4.5.2.3. Revising previous question papers

Learners need to be familiar to the structure of the Life Sciences question papers. It is the responsibility of the subject teacher to drill previous question papers with learners and to encouraged learners to revise as many questions papers as possible.

Participants responded that:

> P9-1: I used to revise previous question papers with them''
>
> P7-G: ''I group learners according to their abilities in order to drill past exam question papers"
>
> P8-H: '' We treat previous questions papers''

The majority of the teachers are not drilling previous question papers as others. However, similar strategies showed that during teaching and learning, drilling of questions papers was done to help teachers to have a picture of how learners will perform in their final examinations (Lebata, 2014). Therefore, it seems as if the majority of teachers are neglecting revision of past exam question papers with the learners. This results in learners writing the examination without the knowledge of the structure of a question paper and the type of questions asked during the final examination and perform poorly.

4.5.2.4. Improvising on experiments

Life Sciences is a science subject, and at some stage, there are certain topics that need to be taught practically. The Circuit is running short of laboratories with adequate equipment. One of the participants indicated that they improvise when it comes to practical activities, which is a good strategy to employ when one wants to improve learners' results. Instead of not conducting experiments completely, they play videos and conduct some experiments in order to improve learners' performances, but it seems as if it is not working because the results are still low in this circuit.

Participant 10 and 8 mentioned that:

> P10-J: ''We use videos to show them practical activities and we even do practical at a certain centre in another circuit''

The findings of the current study are supported by Lebata (2014) that there must be development of a resource centre whereby schools in this circuit may rent apparatus very cheaply.

> P8-H: '' We conduct afternoon and morning studies with learners''

Findings similar to the current study emphasised that learners who are not attending morning studies obtained the lowest performance in Life Sciences Clement (2015). This implies that those attending are producing good results. This means that learners in this Circuit are failing to produce quality results because most teachers and learners are not attending morning studies; this may be because of laziness or any other reason or it is because they stay far away from the school.

4.5.3. THEME 3: Assessing the implementation of the strategies for teaching Life Sciences.

When participants were asked whether the implemented strategies are improving the results or not, they responded thus: most learners are not attending classes; the department is concentrating on best performing learners while neglecting the most

important learners (underperforming learners) who are pulling results down each year. One participant indicated that there is no school moderation at school level.

> P1-A: ‘’ Most of the learners are not attending the extra lessons because of transport problem, parents are letting us down because they are not organising transport for their learners’’

> P7-G: ‘’Learners are not attending extra classes due to other commitments in other subjects and they stay far away from the school’’

> P4-D: ‘’The process of teachers who are moving from one school to another is useful during extra lesson because learners are not using transport for the program, they are found in their respective schools, but the challenge in on our side because we are lacking transport fee’’

Schools in Luvuvhu Circuit decided to go an extra mile by organising extra lessons at various centres to improve the academic performance of the learners. However, the implementation was not effective because learners were unable to attend those lessons due to lack of transport; this resulted in poor performance in the subject. Parents fail to organise transport for their children. Clement (2015) revealed that learners who did not attended extra classes have lower performance. The results in this Circuit are still poor because only those who are performing well are taken into consideration. The department awards learners who are performing well only, so performance will still be poor because the it is neglecting the majority of the learners who are not performing well.

Participant said:

> P2-B:’’Although the Department is organising camping for the gifted ones, the challenge is that the Department is not concentrating on the underperformers, so the problem of high failure rate is not being solved’’

Regardless of efforts made by the department, the results at Circuit level are still poor because only those who are performing well are taken into consideration. This study

correlates with the findings of Kyei and Maboko (2016) who indicated that they only award learners who produce good results.

> P3-C: ‘’I decided to stop giving learners written work because there is no Head of Department (HOD) who is monitoring my work, and most of the learners are lazy to write classwork and homework’’

> P6-F: ‘’I do not give learners more written because and I do not have any drafted policy based on written work at school level and my principal does not support us due to lack of leadership skills’’

According to this study, teachers give learners written work, but have stopped because there is no HOD responsible for monitoring processes. Learners also are lazy to write tasks that will make them to pass at the end of the year. This suggests that strategies meant for improving results are not working. Therefore, Grade 12 results in this Circuit are not improving because learners are not doing their homework. On the other hand, teachers are no longer giving learners classwork, which also results in poor learner performance. Research findings that support the current study confirmed that learners do not want to do work assigned to them, and this results in teachers not giving them homework anymore. To make the matter worse, there is no policy based on written work (Lebata, 2014).

When probed by the interviewer, participant 5 pointed out that:

> P5-E:’’I requested my learners to buy study guides that are in line with the Examination guide lines but not all of them has managed to buy those guides because they were not having money for purchasing the books, their parents are not working’’

Previous literature indicated that learners with parents in low socio-economic status suffer setbacks that prevent them from accessing suitable resources to help them improve their performance. It was observed that parents’ level of education prevents learners from obtaining higher marks in Life Sciences because they are unable to purchase extra study material to support their children academically (Michael, 1998; Bonga, 2010; Hijazi & Nagvi, 2006).

This finding supports the current study. The results of the current study indicated that learners are failing to purchase study guides because their parents have no money to purchase study guides. In the absence of these learning resources, the performance of these learners will remain very low.

4.5.4.THEME 4: Implementation of the recommendations regarding Grade 12 learner performance in Life Sciences.

Teachers were asked if there is any implementation of the recommendations they received from departmental officials or from the HODs. Most participants revealed that they are not implementing any recommendations because they got them once in January this year during workshops; there is no follow up on the side of the subject advisors. They do not have time to implement them because of the lengthy Life Sciences syllabus. The findings indicated that Diagnostic reports based on the performance of the learners is kept in the principal's office, and they do not have access on it. It has been stated that teachers receive recommendations based on the report but did not implement anything. They did nothing about it because there is no Head of Department in Life Sciences, and there are not enough subject advisors in the circuit.

4.5.4.1. Recommendations by School Management Team

When the participants were asked about implementation of the recommendations made by the School Management Team, one responded that they were unable to implement the recommendations because the syllabus is too long. Another recommendation was that learners should be given more homework and classwork.

The following participants responded as follows:

> P2-G: ''The school managers has recommended that as teachers we must give learners more homework and classwork but I didn't have enough time to implement recommendations because of lengthy Life Sciences syllabus''

P4- D: ‘’ During early January this year our principal has indicated that learners must be given more informal task but he is failing to make follow-up’’

PH-8: ‘’ During clusters meeting, the committee has recommended that leaners who perform well must be awarded’’

The Minister of Basic Education in South Africa released the 2016/2017 National Senior Certificate Diagnostic Report on Learner Performance which includes highlighted areas of weaknesses and remedial measures that should be done at school level to improve learners’ achievement. However, the utilisation of this report at school level has not been monitored by the subject advisors. Based on learners’ performance, Lebata (2014) suggested that teachers need to attend in-services training organised by subject advisors and forming team work with other Life Sciences teachers to improve teaching and learning activities by attending workshops frequently.

The results revealed that recommendations are made at school level during subject meetings at circuit level and workshop meetings. The recommendation was aiming at improving the performance of all learners at Circuit level.

4.5.4.2. Recommendation by the Subject Advisor

During Life Sciences workshops, subject advisors encourages teachers to give learners more classwork and homework in order to improve the Grade 12 results.

The participants pointed out that:

P1-A: ‘’During workshops, the subject advisors recommended that learners must be given more written work, but I have only given them few written work during the first quarter’’

Aloovi (2016) confirms that teachers are lacking support from their subject advisors; there is no follow-up to ensure that teachers are implementing what they have been told during their previous meeting. There is also no follow-up on the recommendations

made by the subject advisors, so teachers tend to relax and forget the implementation of these recommendations. The departmental officials are quiet with regards to the implementation, and there is no improvement in terms of learners' performance.

> P2-B: '' The department used to encourage us to have subject policy based on written work, but our principal is always postponing the staff meeting and subject committee meeting''

Based on the findings of the current study, subject policy has been drawn, but principals are failing to establish whether teachers are giving written work as stipulated by the subject policy. The results show that the principals are not doing follow-ups based on written work. Lebata (2014) supports the views of the current study that there is lack of follow-up to manage schools effectively.

Participant 3 stated that:

> P3-C: ''The school do receive the recommendation based on the learners' performance, we heard this during workshops early this year but we as teachers we did not see that reports. You are lucky if you see this report because you find that it is received by the principal and it is put at the principal's office. As teachers we do not have access to that''

According to the recommendations in the National Diagnostic Report (2016/2017), the report must be distributed from the province to the district level to the school, which is the desired destination. The principal is not supposed to keep the report in the office. It is there to be used by teachers in their everyday teaching and learning. Therefore, there is no implementation of the recommendations at school level, however, one can conclude that learners are not performing because the report is not considered at all during teaching and learning situation and this results in learners producing poor results every year instead of improving their performance.

4.6. SUMMARY

In chapter four, various factors affecting Grade 12 learners' performance in Life Sciences at Luvuvhu Circuit were discussed. Presented data were gathered through semi-structured interviews. During data analysis, themes and sub-themes were identified and used to address the research questions under study. The findings regarded as factors which affect Grade 12 learners' performance were discussed in detail. The following chapter provides a summary of the findings followed by the conclusion and recommendations for future studies with the aim of addressing poor learner performance in Life Sciences.

CHAPTER 5

SUMMARY, CONCLUSION AND RECOMMENDATIONS FROM THE STUDY

5.1. INTRODUCTION

The purpose of this chapter is to summarise the findings of the study and draw conclusions based on the research findings of the current study which was linked to the objectives of the current study. The findings of the study were reported and discussed in this chapter. The chapter also makes recommendations for further research based on factors affecting learners' performance in Life Sciences.

5.2. SUMMARY OF THE MAIN FINDINGS

The findings of this study sought to answer the research questions in the first chapter. The findings revealed factors behind the poor performance of Grade 12 learners doing Life Sciences. The findings presented in Chapter 4 were analysed and interpreted. The main findings aimed at to answer the main research question of the study: 'What factors are affecting Grade 12 learners' performance in Life Sciences at Luvuvhu Circuit? The main findings indicated in Chapter 4 were analysed and presented in order to give rise to recommendations based on the conclusions.

5.3. MAJOR FINDINGS OF THE STUDY

Discussions of the major findings of this study are as follows:

5.3.1. Lack of laboratories and equipment

The findings from interviews reveal that schools lack laboratories with adequate equipment for conducting experiments. This in the absence of practical activities, learners would not be able to pass with bachelors because there is a portion of questions based on practical knowledge that needs to be answered by learners during their examination. The findings also revealed that practical activities ought to be taught in a well-resourced lab; if not, learners' performance would be affected. The findings

also revealed that experiments are conducted theoretically, which contributes to the high failure-rate because learners easily forget practical activities performed theoretically. Experiments are critical in the Life Sciences syllabus. They should be conducted for teaching and learning to take place effectively. However, if learners fail to answer questions in this section, they would get nothing on that particular section, which negatively affects their performance. Teachers indicated that they are not performing experiments because this is time consuming. However, the omission of practical activities contributes to poor learner performance.

5.3.2. Learning and teaching material

The results indicated that the Department is distributing textbooks that are not required by subject teachers; the very same textbooks are not in line with the prescribed examination guideline. This means that the majority of the learners would not be able to buy relevant textbooks due to financial challenges. If that is the case, this might lead the learners to enter the exam with limited knowledge of the subject, which affects their performance negatively. The findings also revealed that teachers are teaching without appropriate teaching aids that may improve the performance of the learners. Using teaching aids in class arouses the interests of the learners during teaching process, which ultimately boosts their morale to become actively involved in the learning process.

Therefore, if learners are actively involved, they will be able to realize their own potential and grasp the subject content. One can conclude that lack of learning materials contributes to poor performance in Life Sciences. The availability of textbooks assists teachers to finish the syllabus on time and learners might be able to practice questions to revise the content taught while they are at home. On the other hand, learners might be totally dependent on what their teachers have given them, and this may affect their performance negatively.

5.3.3 Late arrival of Life Sciences common tasks and common tasks leakage

The study found that most of the time, common tasks and memos are distributed to schools very late after the other circuits have already written those tasks. This results in learners having them before they even write those tasks. The performance of the learners is affected negatively because they spend time on memorizing the leaked tasks instead of studying, and this leads to poor performance in the subject. Common tasks leakage also affects learners' performance at Luvuvhu Circuit because they focus on the leaked question papers and memoranda in other words, learners spend much of their time memorising the leaked task, leaving no time for study. Those who did not get the question paper become discouraged and stop studying; this results in poor performance in the subject and they are also get affected even in their final examination.

5.3.4. Underqualified/ Inexperienced teachers

The findings of this study revealed that if teachers are not well qualified they might not be able to impart knowledge effectively to the learners. A teacher who is not qualified or experienced to teach the subject cannot teach the subject very well and does not have deep content knowledge of the subject. Therefore, in order to improve learners' performance, it is advisable not to allow any teacher to teach the subject except a well pedagogically knowledgeable and trained Life Sciences teacher.

From the findings presented above, learners are performing poorly because of inexperienced teachers who are lacking adequate skills and pedagogical knowledge to help learners to pass their Grade 12. This implies that learners are not performing well at Luvuvhu Circuit because teachers teaching Life Sciences are underqualified. In other words, these teachers have inadequate knowledge of the subject content and knowledge of teaching Life Sciences in Grade 12. Therefore, they are not qualified to teach this subject. This results in learners not performing well in the said subject because teachers are not teaching all the topics as prescribed.

5.3.5. Absenteeism

The study revealed that teachers used to absent themselves from schools during school hours in order to attend memorial services of their colleagues almost every Friday, and learners absent themselves from school without any valid reasons. This results in learners getting lower marks. They issue of absenting themselves from classes leaves learners unattended, and this make them not to finish the syllabus on time. This results in poor performance of learners in Life Sciences because excessive absenteeism reduces instructional time.

5.3.6. Location of the school

The findings of the current study found out that the location of the schools in the bushes or in rural areas has a direct impact on the performance of the Grade 12 Life Science learners. The results of this study revealed that schools in such areas experience challenges such as admission of the rejected learners from performing schools, which automatically increases the number of the underperforming learners.

It was also indicated that learners dodge classes and hide in the bushes to smoke dagga. This is a positive indication that shows that indeed, learners are performing poorly because schools at Luvuvhu Circuit are located in bushes where learners hide. One can conclude that hiding in the bushes during teaching time contributes to poor performance in Life Sciences.

5.3.7. Learners' written work

The findings in this study revealed that learners are too lazy to do written work, and some teachers are also too lazy to give learners classwork, tests and homework. This is a major factor that contributes to poor learner performance in Life Sciences. If both teacher and learner are not carrying out their tasks as expected it would not be easy for them to detect the area of weaknesses as soon as possible. This implies that learners are performing poorly due to lack of written work.

This implies that learners are performing poorly due to lack of written work. In addition, one can deduce that learners cannot pass if they are not given added written work. Learners should be given more written work in order to improve their performance in Life Sciences. With regards to written work, if the teacher is failing to give written work to learners, this may result in poor learning and poor learner performance.

5.3.8. Discipline

The result under the study show that learners are not conducting themselves in an acceptable manner, and their misbehaviour contributes to poor performance in Life Sciences.

The results show that learners are performing poorly because they deliberately fail to do written tasks given to them knowing that there will be no consequences. If learners are doing as they wish, they will never see where they experience difficulties, and this will negatively impact on their performance.

5.3.9. Substance abuse

The findings in this study revealed that legalization of dagga was also a contributory factor to poor performance in Life Sciences. Learners influenced by dagga and liquor tend to be unruly and unteachable. Such learners distract those who are sober minded. This implies that the whole class would be affected. It becomes discouraging to teach such a distracted class, and performance of learners would be affected negatively.

5.3.10. Promotional posts

The responses above make it clear that teachers and learners are affected by the way in which the parents and the Department of Education handle promotional posts. The Department of Education also contributes to high failure rate because they fail to fill posts on time, and this forces the School Management Team to distribute extra loads to teachers. If they are overloaded, they are unable to impart knowledge effectively to the learners, which results in poor learner performance. The same applies to the School Governing Bodies; their influence in promotional posts discourages teachers.

This also leads to higher failure rate in Life Sciences because they to hire incompetent teachers who are not knowledgeable with regards to the subject content.

One may therefore conclude that these learners within the Luvuvhu Circuit are not performing well due to SGB members and the Department of Education officials who employ incompetent teachers. Such teachers also lack technical and non-technical knowledge in Life Sciences, which prevents learners from obtaining good results in the said subject.

5.3.11. Parental involvement

One may conclude that learners are failing to perform at their best level to obtain entrance to university because their parents are not encouraging them to study at home. It is the responsibility of parents to see to it that their children are getting all the necessary support regarding to their education in their home environment in order to produce good results. This implies that parents are not encouraging their children to pursue goals at the home environment by getting them information for school assignments previous question papers and memoranda. Therefore, these learners perform poorly due to their parents who are not assisting them with their school work.

Children whose parents are actively involved tend to do better in school. The current study agrees with various literature that indicated that if parents are not supporting their children educationally, this contributes to poor learner performance. Therefore, when you engage yourself as a parent in your child's education, you will be trying to advocating your child's future. In my opinion, one can conclude that parental involvement is crucial as it promotes the culture of learning in schools and producing quality results in Life Sciences.

5.4. STRATEGIES FOR TEACHING LIFE SCIENCES

Strategies for teaching Life Sciences such as awarding performing learners, having of extra lessons, improvising experiments and revising previous question papers were used at schools within the Luvuvhu Circuit.

5.4.1. Awarding performing learners

The results of the study indicated that awarding learners motivates them to study harder than before. Even those who are not willing to study their books might become motivated and serious with their schoolwork. However, the school management team and the Department were concentrating on learners who were performing well but neglecting the underachieving ones. This strategy was implemented incorrectly; how could they ward top achievers only? They should come up with another alternative that might also motivate other learners to improve their results.

5.4.2. Conducting extra classes

The challenge is that only few teachers are outsourcing skilful Life Sciences teachers, but the majority of them are doing nothing about it. This may be because of other reasons: some learners were not attending these classes, which means that the issue of poor performance is still occurring. However, one may deduce that the teachers in schools within the Circuit were not outsourcing because only two participants indicated that they outsource skillful teachers, and this causes poor performance. The finding reveals that learners walk a big distance to attend extra classes. This implies that if learners have no transport to go to school every day, they get tired and lose concentration during teaching and learning process, and this eventually leads them to poor performance in the subject.

5.4.3. Revising previous question papers

The results of the study revealed that the majority of teachers are neglecting revision of past exam question papers with the learners. This results in learners writing the examination without the knowledge of the structure of a question paper and the type of questions asked during the final examination and perform poorly.

5.4.4. Improvising on experiments

The results of the study showed that there are certain topics that need to be taught practically. but the Circuit is running short of laboratories with adequate equipment. One of the participants indicated that they improvise when it comes to practical activities, which is a good strategy to employ when one wants to improve learners' results. Instead of not conducting experiments completely, they play videos and conduct some experiments in order to improve learners' performances, but it seems as if it is not working because the results are still low in this circuit.

5.5. ASSESSING THE IMPLEMENTATION FOR THE STRATEGIES FOR TEACHING LIFE SCIENCES

According to this study, teachers give learners written work, but have stopped because there is no HOD responsible for monitoring processes. Learners also are lazy to write tasks that will make them to pass at the end of the year. This suggests that strategies meant for improving results are not working. Therefore, Grade 12 results in this Circuit are not improving because learners are not doing their homework. On the other hand, teachers are no longer giving learners classwork, which also results in poor learner performance.

5.6. IMPLEMMENTATION OF THE RECOMMENDATIONS REGARDING GRADE 12 LEARNERS IN LIFE SCIENCES

In summation, the finding showed that, teachers were asked if there is any implementation of the recommendations they have received from the departmental officials or from the HODs. Most of the participants revealed that they are not implementing any recommendations because they got them once in January this year during workshop and there is no follow up on the side of the subject advisors. They do not have time to implement them because of the lengthy Life Sciences syllabus. The findings indicated that Diagnostic reports based on the performance of the learners is kept in the principal's office, and they do not have access on it. It has been stated that teachers receive recommendations based on the report but did not implement

anything. They did nothing about it because there is no Head of Department in Life Sciences, and there are not enough subject advisors in the circuit.

5.6.1. Recommendations by the School Management Team

The results revealed that recommendations are being made at school level, during subject meetings at circuit level and during workshop meetings. The recommendations aimed at improving the performance of all learners at Circuit level.

5.6.2. Recommendations by the Subject advisor

According to the findings of the study, there is no follow-up to ensure that teachers are implementing what they have been trained on by subject advisors. Teachers tend to relax and forget the implementation of these recommendations. The departmental officials are quiet with regards to the implementation, and there is no improvement of learners' performance.

Based on the findings of the current study, subject policy has been drawn but principals are failing to follow up whether teachers are giving written work as stipulated but the subject policy. According to the recommendations in the National Diagnostic Report (2016/2017), the report must be distributed from the province to the district level to the school, which is the desired destination. The principal should not keep the report in the office. It is there to be used by teachers in their everyday teaching and learning. Therefore, one may conclude that there is no implementation of the recommendations at school level.

5.7. SUMMARY

The current study intends to identify factors which affect Grade 12 learners' performance in Life Science at Luvuvhu Circuit. The study has discovered that school based, learner based, teacher based, home based and departmental based factors affect the performance of the Grade 12 learners in Life Sciences. It was concluded that the following recommendations should be taken into considerations by all stake holders in the education system as a whole.

5.8. RECOMMENDATION FROM THE STUDY

This section provides the following recommendations of the current study:

- The Department of Basic Education should make provision of laboratories with an adequate equipment for conducting practical activities within the schools at Luvuvhu Circuit in order to improve the Grade 12 results.

- In order to improve the results at Luvuvhu Circuit, the Department of Education should see to it that they distribute textbooks in line with the examination guideline, as requested by subject teachers. Thus, relevant textbooks will cater for every learner regardless of their financial background.

- The Department Education should see to it that common tasks are distributed simultaneously at all Circuits to allow the schools at Luvuvhu Circuit to write tasks exactly at the same time with other learners in other Circuits in order to prevent high failure rate.

- The school managers should not allow underqualified teachers to teach Life Sciences because they do not have deep content knowledge on the subject. These teachers are also lacking skills to impart the subject matter to the learners. Therefore, they are contributing to poor performance of the learners.

- The School Management Team should ensure that learners are given more written work to enable them to detect the area of weaknesses at early stages. This would help the learners to pay attention to the most difficult topic before they even write the final examination.

- The Department of Education should fill vacant posts immediately and not allow parents to influence or to recommend appointments of teachers at school level. This should be done by top Educational Officials.

- Based on strategies for teaching Life Sciences, the Department of Education should award top achieving learners only. They should also come up with mechanism to motivate learners who are not performing well at various schools to improve the results at Circuit level.

- School Management Teams and subject teachers should hire expert Life Sciences teachers to assist teachers who are not able to teach some challenging topics.

- Teachers should revise previous question papers in order to have a clear picture of how learners will perform in their final examinations. This allows learners to enter into the examination room with the knowledge of how the structure of the paper will be.

- The Department of Education should ensure that a resource center is developed whereby schools at Luvuvhu Circuit may rent apparatus cheaply.

- Based on the assessment of the implementation of the strategies for teaching Life Sciences in Grade 12, the HODs and subject advisors should ensure that School Based Moderation is done at school level.

- The Department of Education should ensure that the National Senior Certificate Diagnostic Report of each current year is distributed to and utilized by teachers in their everyday teaching and learning process instead of being kept at the principals' offices as it provides classroom practitioners with insight into learners' performance.

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ANNEXURE A

INTERVIEW SCHEDULE

1. **How are the Grade 12 learners performing in Life Sciences at Luvuvhu Circuit?**

   -Why are they performing poorly/good?

2. **A. What are the factors affecting Grade 12 learners' performance in Life Sciences at Luvuvhu Circuit?**

   B. Are these factors still influencing learner performance in Grade 12?

3. **How are teachers at Luvuvhu Circuit teaching Life Sciences in Grade 12?**

   a. What strategies are you using in teaching life Sciences in Grade 12?
   b. Are these strategies improving your Grade 12 learners' performance? How?
   c. How often do you implement these strategies?
   d. Are these strategies working for other grade 12 learners within the whole circuit?

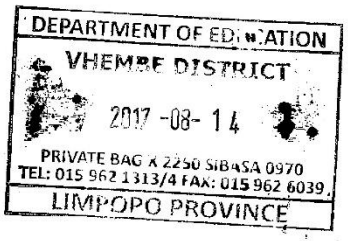
4. **To what extent are teachers implementing the recommendations in Life Sciences in the Luvuvhu Circuit?**
   a. Did you receive recommendations regarding learners' performance in you school? How?
   b. How do you implement these recommendations?
   c. Are there challenges with implementing them? If YES, how do you solve this?
   d. How often do Hod's asses the implementation of the area of weaknesses?
   e. How often do Subject advisors asses the implementation of the area of weaknesses in Life Sciences.

ANNEXURE B

ENQ: MUKHETHONI N.G
CELL: 0796099499

P.O Box 3195
THOHOYANDOU
0950

13 August 2017



THE DISTRICT SENIOR MANAGER
Limpopo Department of Education (Vhembe District)
Private Bag x 2250
Sibasa
0970

Dear Sir/Madam

REQUEST TO COLLECT DATA FOR RESEARCH

1. I am presently attached to the School of Education at the University Of Zululand working on a thesis titled **"FACTORS AFFECTING GRADE 12 ACCADEMIC PERFORMANCE IN LIFE SCIENCES IN LUVUVHU CIRCUIT".**

1. I would like your permission to conduct my research in schools in Vhembe District at Luvuvhu Circuit.
2. Teachers from secondary schools under Luvuvhu Circuit will be required to participate in data collection processes.

4. I wish to inform you that there will be no risk involved in the research and that special care will be taken to ensure that there is no any form of disruption in the day-to-day running of participating schools. I shall conduct myself with great professionalism throughout the data collection process.

5. These are my particulars:
   MUKHETHONI N.G
   Institution: University of Zululand
   Student no: 201759994

Thanking you in anticipation.

Regards

.....
MUKHETHONI N.G (MrS)

ANNEXURE C

LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF
EDUCATION
VHEMBE DISTRICT

CONFIDENTIAL

DEPARTMENT OF EDUCATION
VHEMBE DISTRICT
2017 -08- 28
PRIVATE BAG X 2250 SIBASA 0970
TEL: 015 962 1313/4 FAX: 015 962 6039
LIMPOPO PROVINCE

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

MRS MUKHETHONI N.G
UNIVERSITY OF ZULULAND
KWADLANGEZWA CAMPUS
PRIVATE BAG X 1001
KWADLANGEZWA
3886

REQUEST TO COLLECT DATA FOR RESEARCH

1. The above matter refers.
2. You are hereby informed that your request for permission to conduct research on *"Factors affecting grade 12 academic performances in life sciences in Luvuvhu Circuit"* 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 managers and School Principals of selected schools prior to commencing your data collection.
5. Wishing you the best in your study.

DISTRICT DIRECTOR

2017-08-28
DATE

ANNEXURE D

: CONSENT

I agree to participate in the research entitled, Professional development of teachers for promoting teaching and learning in rural primary schools as outlined in the consent letter. I understand that my participation is voluntary and that I may change my mind and refuse to participate or withdraw at any time without penalty.

NAME:.....
SIGNATURE:.....
DATE:.....

ANNEXURE E

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: MangeleS@unizulu.ac.za

ETHICAL CLEARANCE CERTIFICATE

Certificate Number	**UZREC 171110-030 PGM 2017/465**						
Project Title	**Factors Affecting Grade 12 Learners' Academic Performance in Life Sciences at Luvhunu Circuit in Vhembe District**						
Principal Researcher/ Investigator	NG Mukhethoni						
Supervisor and Co-supervisor	Mr. T Chinaka		Mr. S Mokoena				
Department	Human and Social Science						
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
19 February 2018

CHAIRPERSON
UNIVERSITY OF ZULULAND RESEARCH ETHICS COMMITTEE (UZREC)
REG NO: UZREC 171110-30
01-03-2018
RESEARCH & INNOVATION OFFICE

23 Elfin Glen Road, Nahoon Valley Heights, East London, 5200

Professional EDITORS Group

To whom it may concern:

This document certifies that the dissertation whose title appears below has been preliminary edited for proper English language, grammar, punctuation, spelling and overall style by Rose Masha, a member of the Professional Editors' Group whose qualifications are listed in the footer of this certificate.

Title:

FACTORS AFFECTING GRADE 12 LEARNERS PERFORMANCE IN LFE SCIENCES LUVUVHU CIRCUIT FACULTY OF EDUCATION

Author:

NTAMBUDZENI GRACE MUKHETHONI

Date Edited:

21 January 2019

Signed

Dr. Rose Masha

B. Library & Inf. Sc.; HDE; Hons. ELT; M. Phil. Hyll.; PhD Ed.