

University of Zululand

Factors Influencing Learners' Performance in Geography in the National Senior Certificate Examination in Selected Public High Schools within uThungulu District

By

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201200018

**Submitted in accordance with the requirements for the degree of
Master in Education with specialisation in geography**

**FACULTY OF EDUCATION
(Department of Social Sciences)**

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September, 2016

Declaration

I declare that, except for the references to other peoples' work which have been duly acknowledged and referenced, this thesis: Factors influencing learners' performance in geography in the national senior certificate examination in selected public high schools within uThungulu District, is the result of my personal research work carried out in the Department of Social Sciences under the supervision of Prof. M.A.N Duma and Dr. D. W Mncube

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Dedication

This thesis is dedicated to my lovely wife Evelyn Awo Ahiaku and my children Ms Setutsi, Masters Nukunuku and Malike Ahiaku for their steadfast love and encouragement during this trial moments of my life.

Acknowledgements

Nothing is done without Him, in Him there is knowledge and wisdom. I acknowledge the love and power of God for seeing me through completion of this thesis. My heartfelt appreciation and thanks go to my supervisors Prof. Martin Anthony Nkosinathi Duma and Dr. Dumisani Wilfred Mncube for their demonstration of scholarly sprawls that enable me to understand the main issues involved in completing this thesis.

I am very grateful to Dr H. P. Mazibuku- Khuzwayo from the examination unit at uThungulu Department of Education for providing me with the national senior certificate geography results for the district from 2009-2014. I am also grateful to the geography subject advisor and educators who availed themselves and took time of their busy schedule of work to respond to the questionnaires and the interviews.

I am highly indebted to my wife, Mrs Evelyn Awo Ahiaku and my children, Setutsi, Nukunuku and Malike Ahiaku for their unconditional support. My heartfelt appreciation goes to you for the love and support and sacrifice made to support and the sleepless nights that we share together to enable me complete this programme.

However, the responsibility of omissions and errors in this thesis is the sole prerogative of the researcher and not anyone above.

Abstract

The purpose of this study was to identify factors that influence the low academic performance of learners in geography during the National Senior Certificate examination within the uThungulu District. The study made use of the national and district matriculation results from the examination directorate of the Department of Basic Education. The conceptualisation developed from the contemporary literature was used to develop instruments for data collection. A questionnaire was developed to collect views from Grade 12 geography educators on factors influencing learner performance in the district. It also solicited ideas about what should be done to improve learner performance in the subject. The second phase of data collection was qualitative study, which was conducted to augment the quantitative findings, which took place at the same time. Fifty (50) questionnaires were issued and only forty (40) educators responded and ten (10) other educators were taken through an interview. The district geography subject adviser was also interviewed. The results indicate that there are various factors that impede learner performances in geography in the district. The results from both descriptive and inferential statistics reveal factors such as educator characteristics, school management and resource availability, parental involvement in education and learner characteristics as emerging factors influencing the performance of learners in geography. Learners' average matriculation (matric) results from the schools were estimated against educators' characteristics such as qualifications, experience in teaching the subject, approaches used in teaching, and matric marking experience. The relationship between the independent and the dependent variables was determined using the t-test at 0.05 level of significance. The result indicated that in the uThungulu District learners' performance in geography is strongly influenced by educators' qualifications, and experience in matric marking. Findings from the this study were compared with the existing contemporary literature to enable the researcher to make recommendations to stakeholders to remedy deficiencies found to impede learners' performance in geography in the National Senior Certificate in public high schools within the uThungulu District.

Keywords: Performance, geography, National Senior Certificate, uThungulu, learners.

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List of acronyms

APA	ASSOCIATION OF AMERICAN PSYCHOLOGIES
ANA	ANNUAL NATIONAL ASSESSMENT
ANOVA	ANALYSIS OF VARIANCE
BA	BACHELOR OF ARTS
BED	BACHELOR OF EDUCATION
BICS	BASIC INTERPERSONAL COMMUNICATION SKILLS
CALP	COGNITIVE ACADEMIC LANGUAGE PROFICIENCY
CAPS	CURRICULUM ASSESSMENT POLICY STATEMENT
DBE	DEPARTMENT OF BASIC EDUCATION
DOE	DEPARTMENT OF EDUCATION
ELLS	ENGLISH LANGUAGE LEARNERS
FET	FURTHER EDUCATION AND TRAINING
GET	GENERAL EDUCATION AND TRAINING
GIS	GEOGRAPHICAL INFORMATION SYSTEMS
IDP	INTEGRATED DEVELOPMENT PLAN
LER	LEARNER-EDUCATOR RATIO
LPG	LEARNING PROGRAMME GUIDELINES
MCAS	MASSACHUSETTS COMPREHENSIVE ASSESSMENT SYSTEM
MED	MASTER IN EDUCATION
NCS	NATIONAL CURRICULUM STATEMENT
NQF	NATIONAL QUALIFICATION FRAMEWORK
NRF	NATIONAL RESEARCH FOUNDATION
OBE	OUTCOMES-BASED EDUCATION
OLS	ORDINARY LEAST SQUARE
PCK	PEDAGOGICAL CONTENT KNOWLEDGE
RNCS	REVISED NATIONAL CURRICULUM STATEMENT

SACMEQ QUALITY	SOUTH AFRICAN CONSORTIUM FOR MONITORING EDUCATION
SAFCERT	SOUTH AFRICAN CERTIFICATE COUNCIL
SAG	SUBJECT ASSESSMENT GUIDELINES
SAQA	SOUTH AFRICAN QUALIFICATION AUTHORITY
SBA	SCHOOL BASED ASSESSMENT
SCK	SUBJECT CONTENT KNOWLEDGE
STAT SA	STATISTICS SOUTH AFRICA
TIMSS STUDY	TRENDS IN INTERNATIONAL MATHEMATICS AND SCIENCE
UNESCO ORGANISATION	UNITED NATIONS EDUCATION SOCIAL AND CULTURAL
UK	UNITED KINGDOM
USA	UNITED STATES OF AMERICA

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CHAPTER ONE

INTRODUCTION

1.1 Background to the study

Learners' performance attracts the attention of all those involved in the teaching and learning profession. The researcher feels that stakeholders are concerned with learners' performance as it reflects their various areas of interest. These stakeholders include, among others, the Department of Education, curriculum planners, subject advisers, parents, teachers and learners. The improvement of learners' performance has always been the main goal of education and training (Department of Basic Education (DBE), 2014). In South African schools, learners' performance is measured by the Grade 12 final matriculation examination results [National Senior Certificate] (matric), although the final result is that of the progressive learning throughout the 12 years' academic work from Grade 1 to 12 (DBE, 2014).

Geography as a subject in the school curriculum is taught throughout the school system, from the foundation phase to the Further Education and Training (FET) phase. It is being taught in most high schools in both the General Education and Training (GET) and the FET phases. In the GET phase, geography is a mandatory subject, taught together with history as social sciences (DBE, 2011). The social sciences prepare learners for either geography or history in the FET phase. At the FET phase geography becomes an elective subject. The FET phase offers physical and human geography. Physical geography examines natural processes and features, including geomorphology and climatology. Human geography is made up of people and places and their needs, and geographical tools, i.e. map skills, including geographical information systems (DBE, 2011). In Grades 10-12, geography remains an optional subject for the science and general arts streams (DBE, 2011).

In Grade 12, geography is tested in a four-hour external examination conducted at the national level (the National Senior Certificate). The examination consists of two papers written at different sittings. Paper 1 consists of physical and human geography, and Paper 2 tests learners in geographical tools and skills. Three of the four hours are spent on Paper 1, and the remaining hour on Paper 2.

In recent years there has been some decline in performance in the matriculation examination in the subject. The NSC examination results have demonstrated this trend in the last few years. The trend of learners' performance in the last five years (2009-2014) has shown a pattern of considerable increase and decrease, which leaves much to be desired. Although this phenomenon is consistent with other optional subjects, and the percentages are higher than for mathematics and the sciences, it has raised the concern of both parents and government over the years. The major concern of the geography fraternity has been the quality of performance of learners in the subject (Magi, 1981; Innes, 2012). However, many scholars believe that this situation is not unique to South Africa. The United Kingdom (Weeden, 2011), Ethiopia (Madiwalar, 2012), Kenya (Kimathi, 2014), and Nigeria (Adeyemi, 2009; Akintade, 2011; Mohammed, 2014) have experienced similar trends in the past. Conversely, Adeyemi (2009) reported a sharp rise in learner performance and the choice of geography in Botswana.

The decline in learner performance in recent years raises serious concerns for the researcher. It is even more concerning to stakeholders, especially geography teachers, parents and the Department of Basic Education. Though there are studies confirming the decline of academic performance in general, there is a shortage of comprehensive studies on factors that influence performance in geography, particularly in the Grade 12 final matriculation examination in South Africa. The researcher will be investigating the relevant factors responsible for this decline, as others have already done.

1.2 Statement of the problem

This study seeks to investigate learners' performance in geography in the NSC examination, and factors influencing such performance within uThungulu District schools. It is worth noting that geography is one of the optional subjects in South Africa, and a considerable number of learners enrol in it for the final NSC examination. In 2014 the discipline was described as one of the healthiest high school subjects (DBE, 2014). The performance figures made the subject the fifth most popular school subject in 2013, ahead of its counterpart, history (DBE, 2014). However, a careful analysis of the level of performance in the NSC examination reveals a different picture. In 2010, of the 209 854 learners who wrote the examination, 69% passed with the minimum pass mark (30%), while only 40% of them scored more than 40%. In 2013, of the 239 657 learners who wrote, 80% achieved the minimum mark, with only 53% achieving more than 40% (DBE, 2014). In spite of the rise in the number of passes the quality of performance declined learners' performance at the

national level in geography during the period 2009 to 2014 is of great concern to this subject's fraternity. Learners achieving distinctions (80% or more) declined marginally from 1.7 % to 1.5 % of learners (DBE, 2015).

Table 1.1: The National Geography Matric Results from 2009-2014.

Year	No. wrote	No. achieved at 30% and above	% achieved at 30% and above	No. achieved at 40% and above.	% achieved at 40% and above
2009	215 120	155 481	72.3	84 279	39.2
2010	209 854	145 187	69.2	85 241	40.6
2011	199 248	139 405	70.0	84 169	42.2
2012	213 735	162 046	75.8	99 760	46.7
2013	239 657	191 726	80.0	127 976	53.4
2014	236 051	191 966	81.3	127 358	54.0

Table 1.1 (DBE, 2014)

The reviewed literature suggests a number of factors that might be responsible for this performance level: school environment and resources (Fairhaust, 2003; Iyamu, 2005; Adeyemi, 2009; Omoro & Nato, 2014; Rilwani, et al., 2014), socio-economic characteristics of parents (Hassan, 2009), and non-academic factors (Pintrich, 2003; House, 2008; Credal & Kunal, 2009; Weeden, 2011;). Weeden (2011) suggests that these factors affect learners' performance differently at national, regional and district levels.

UThungulu being a microcosm within the macrocosm, the learners' performance in geography is of great concern to stakeholders in education. Apart from the performance of learners, it has been observed that some schools are dropping the subject, resulting in a number of schools in UThungulu District no longer offering geography as an elective in grades 10-12. This has resulted in poor subject combination among both science and arts subjects. Hence it becomes necessary to unravel the factors influencing the performance of learners in geography within UThungulu District schools. The problem which is paramount

important here, is what are the factors influencing the learners performance in geography in NCS examination within uThungulu district. In dealing with the statement above it is important to sub divide the question into the following questions:

- What is the learners' performance level in geography in the NSC examination within selected public high schools in UThungulu District between 2009/2010 and 2013/2014?
- What factors influence learners' performance in geography in the NSC examination within selected public high schools in UThungulu District? .

1.3 Aim and objectives of the study

The general aim of the study is to establish relevant factors influencing learners' academic performance in geography in the NSC examination in public high schools in the uThungulu District.

1.3.1 Specific research objectives

To investigate factors influencing the performance of learners in geography in the NSC examination in selected public schools in the uThungulu District, the following specific objectives were formulated in achieving the general aim of the study:

- To identify the performance level of learners in geography in the NSC examination in public high schools in the uThungulu District
- To identify educator characteristics that influencing learners' performance in geography in the NSC examination in the uThungulu District.
- To find out education institutional factors responsible for learners performance in geography in the NSC examination in the uThungulu District and
- To investigate the socioeconomic characteristics of parents and their contribution to learners performance in geography in the NSC examination in the uThungulu District.

1.3.2 Research questions

The following research questions were formulated in order to achieve the main purpose of this study:

- What was the performance level of learners in geography in the NSC examination in selected public high schools in the uThungulu District?

- What educator characteristic influence learners' performance in geography in the NSC examination in the uThungulu District?
- What education institutional factors are responsible for learners' performance in geography in the NSC examination in the uThungulu District?
- What socioeconomic characteristics of parents contribute to the learners' performance in the NSC examination in the uThungulu District?

1.4 Methods of investigation

Different research methods were used in order to accomplish the above objectives. Non-empirical and empirical studies were conducted to gather valid and reliable data. In the non-empirical study, the researcher made use of a comprehensive literature review on factors that influence academic performance among learners in general, and specifically in geography. The empirical study was conducted using both quantitative and qualitative data collecting approaches.

1.4.1 Empirical research

This research is intended to look at learners' performance in geography in the NSC in public high schools in the uThungulu District. A careful and systematic planning of design was followed to a successful result. According to Delpont and Fouché (2012), a research design is necessary to the researcher as an overall plan for the conduct of the research from the beginning till the findings and implementation of results.

Different approaches were available to this research – the qualitative and quantitative – but the mixed method design was followed. According to Creswell and Plano Clark (2007), mixed method design links both quantitative and qualitative data in a way that provides a unified understanding of a research problem. The collection of the quantitative and qualitative data in the single study (Creswell & Tashakkori, 2007) was to lend credibility to the data, and the reliability and validity of the result. Though seen as time- and resource-consuming (Delpont & Fouché, 2012), the triangulated mixed method design (Delpont & Fouché, 2012) was followed to reduce wastage in time and resources. In order to achieve the desired method the researcher employed a descriptive survey with the use of a questionnaire, unstructured interviews and an inventory to collect both primary and secondary data for analysis.

1.4.2 Sample and sampling techniques

The population is considered as a pool of cases from which a researcher draws a sample. Sampling is a process of systematically and carefully selecting respondents to be included in research (Neuman, 1997). It is necessary because it is often impossible and extremely expensive to collect data from all potential units in the research problem (Neuman, 1997).

The target population in this research was all 147 public high schools where geography is offered as an optional subject, and all Grade 12 geography educators in the uThungulu District. Since all schools where geography is offered cannot be investigated owing to lack of time and resources, a segment was selected. The selection was done to represent the homogeneity of the entire population. The entire population was represented fairly in the selected segment.

The selection process was done using both probabilistic and non-probability sampling methods. Non-probability sampling deliberately avoids representing the wider population. It seeks only to represent a particular group or a particular named section of a wider population (Delpont & Fouché, 2012). First of all, schools were clustered into six educational circuits by means of cluster sampling. Within these circuits, schools offering geography were identified by purposive sampling. 10 schools were then selected from each cluster by means of the systematic random sampling technique. A total of 60 schools was therefore included in the survey. Educators were then selected by identifying the Grade 12 geography teachers from these selected schools. In all 40 grade 12 geography educators out of the selected 60 schools participated as respondents. The subject adviser from the Department of Basic Education was interviewed as well.

1.4.3 Instrumentation

Three types of instrument were used to collect data for the study. These were the structured questionnaire, unstructured interview schedule and inventory. The questionnaire was the main instrument used to collect quantitative and primary data eliciting personal information and the views of respondents on the teaching of geography in their schools. The questionnaire was categorised into two sections: Section A elicited biographical information, including the age, sex, academic qualifications and teaching experience of the geography teachers; Section B elicited information on the teaching and learning of geography from teachers, which included learners' interest in the teaching and learning of geography, the availability of

teaching materials, teaching methods, and challenges or difficulties associated with teaching geography.

An interview schedule was also used to collect primary data eliciting information from the geography subject adviser and another 10 educators who were not part of the respondents to the questionnaire. Inventory comprised designed documents used to collect secondary data available in the uThungulu District Department of Basic Education and schools with information on the location of schools, learners' enrolment, number of classes, number of geography educators, and learners' results in geography for the past five years (2009/10-2013/14).

1.4.4 Data analysis

The quantitative data were analysed statistically, using the SPSS programme. Descriptive statistics such as means, percentages and standard deviation were used in the data analysis. Relationships were established between the dependent and independent variables by means of inferential statistics. Depending on the distribution of the data, the t-test, either the Spearman rank correlation coefficient or the Pearson product-momentum correlation technique, was used to specify the relationships between the variables. A 95% confidence level with p-value smaller than, or equal to, 0.05 was used for statistical significance.

A thematic analysis was used to analyse the qualitative data from the semi-structured interview. The thematic analysis is a method of identifying, analysing and reporting patterns within data (Braun & Clarke, 2006). Transcription of interviews was done from the audio tapes, read and then coded. Data were transferred to Excel spreadsheets for further classification.

1.4.5 Pilot study

In order to strengthen the validity and reliability of the research, a pilot study was conducted on the measuring instruments before distribution to respondents. A pilot study serves as a trial of the proposed procedures that will be followed during the research. It is a mini-scale trial to detect any possible problems arising from the main research, and is to be corrected before the main study is embarked on (McMillan & Schumacher, 2001). De Vos, et al. (2012) agreed that the aim of a pilot study is to allow for inclusion of positive comments from specialists in order to improve the efficiency of the main study. The authors explain that a

piloted study is necessary to provide the researcher with information about possible responses and answers, timing and other efforts needed to administer the questionnaires and complete the interviews to enable the researcher to meet the requirements of the study (De Vos, et al., 2012). Four educators who were not part of the research respondents participated in the piloting.

1.4.6 Ethical considerations

The purpose of fair and ethical research within an educational paradigm is very important in modern-day research. The absence of such endeavour could lead to dire consequences such as the exploitation of the participants, researchers overstepping the ethics laid down by legislation and bodies such as the APA, the NRF and the University of Zululand, and the law being broken, consequently violating the protection of the participants in the research. Ethical standards are developed not only to ensure that social, legal and statutory requirements are met, but also to provide guidelines on the type of behaviour to be expected from the researcher, and what the consequences of any deviant, unprofessional or negligent behaviour will be. In short, the essence of ethics is the protection and fair treatment of research participants. According to Denzin and Lincoln (2000), this treatment must be reflected in the obligations of society, funders, colleagues, participants, ethics committees, legislation and institutional review boards.

To uphold these obligations, the researcher put the participants' safety and security first. In order to establish trust the entire research was discussed with the participants through writing. The project was outlined, and participants were allowed to ask questions for clarification before participation. The participants were informed that participation in the project was voluntary, and they could withdraw if not comfortable. A consent form was distributed stating the purpose of the research, and that information from the research would be used only for educational purposes, and would in no way be used to their detriment. This was duly signed.

1.5 Significance of the study

In order to have well-established educational establishment and management practices for addressing various educational issues, there is a need to have a core understanding of the various ways in which different development practitioners and stakeholders participate in and influence the educational management practices in this country. The study will therefore generate knowledge and understanding that will enable stakeholders to influence the

development of geography as a subject in the school curriculum. The findings from this study will also increase understanding of various policies, and assist decision-makers and planners in realising the various factors influencing the schools' performance in geography. These factors and their influence may not be limited to geography, but apply to all subjects in the curriculum, both elective and core. The findings will influence the development, planning and implementation of educational practices. Finally, this study is significant in that it will assist geography teachers in the high schools to adopt measures to encourage and keep learners performing in the subject.

1.6 Definitions of concepts

This section defines some key concepts that have been used in the study. It is important to clarify the concepts by defining them within the context of the study.

1.6.1 High school

High school education in South Africa comprises Grades 8-12 (DBE, 2005). According to the National Qualification Framework (NQF), high school education includes two grades from the GET band (Grades 8 and 9) and three from the FET level (Grades 10-12). The focus of this research project is on the performance in geography at the FET level, where geography is taught as a separate subject. The GET band is not considered because at this lower level geographical knowledge has been integrated into different knowledge areas (CAPS, 2011). In the South African context, 'high school' means 'secondary school'.

1.6.2 Learner

The terms 'learner' and 'educator' are used in official documentation to mean student and teacher. The term 'educator' generally includes all school-based personnel, and is used to focus on those who teach in public schools. The official term in use for a student is 'learner'. The two terms, 'student' and 'learner', are used interchangeably.

1.6.3 Academic performance

Performance determines an outcome of learning, i.e., learning is measured by performance. And for learning to be observed it must be demonstrated through taking on a task (assessment). The performance at the end of the task can be described as either low or high. However, Bandura (2001) stated that learning can take place, yet performance will be low. That is to say, low performance may not necessarily reflect inadequacy in learning; other factors might influence performance in the tasks.

Performance in high schools can also be referred to as academic performance or academic achievement. In South Africa the performance of learners at the end of the 12 years of learning is demonstrated by using the NSC examination scores. The scores from this examination are rated from 0-100%. Scores obtained by learners are categorised into levels ranging from 1-7, with 7 as the highest achievement, and 1 the lowest. Table 1.2 shows the rating according to CAPS (2011).

Table 1.2: Performance rating in National Senior Certificate examination scores

Scores (%)	Codes	Rating
80-100	7	Outstanding achievement
70-79	6	Meritorious achievement
60-69	5	Substantial achievement
50-59	4	Adequate achievement
40-49	3	Moderate achievement
30-39	2	Elementary achievement
0-29	1	Not achieved

Source: Department of Basic Education (2011)

1.6.4 The National Senior Certificate examination

The National Senior Certificate examination is a public examination in South Africa, introduced in 2008. It replaced the Senior Certificate administered by the provincial examination boards, which was awarded by the South African Certificate Council (SAFCERT). It is a three-year qualification obtained after completing Grades 10, 11 and 12 (DBE, 2013), and administered by the Department of Education.

The NSC is an exit qualification, enabling learners to exit high school and proceed to higher education. There are minimum requirements for admission into higher education institutions, i.e., NSC pass levels that designate a learner as entitled to study for a degree, diploma, or higher certificate.

1.7 The study area

The uThungulu District Municipality is located in the north-eastern part of KwaZulu-Natal Province in the Republic of South Africa. It comprises approximately 8213 square kilometres. The area is bounded to the south by the Indian Ocean, to the north by uMkhanyakude and Zululand, and by uMzinyathi, uMzinyathi and iLembe District Municipalities, all to the east. There are six local municipalities making up the district: uMhlathuze, Ntambanana, uMlalazi, uMthonjaneni, Nkandla and uMfolozi. Notable towns in the district include Richards Bay, Empangeni, Gingindlovu, uMtunzini and Eshowe, with Melmoth, Ntambanana, Buchanana and Kwambonambi forming administrative towns (see Map 1).

The uThungulu District Municipality has a population of 907 513 (Stats SA, 2011), which is the third highest in the province. The population is predominately (80%) rural. It is also notably young, with children under 19 years old forming over 50% of the population (Stats SA, 2011). The female population is no doubt significantly higher than the male population, a phenomenon associated with the province which can be attributed to the high rate of migration. The uMhlathuze local municipality has more than one-third of the total population, making it the biggest local municipality in the district in terms of population. This is because the Richards Bay-Empangeni corridor is the economic and service hub in the district, thus attracting people from the rural areas. The adjoining towns of Eskhaleni and Ngwelezane are the most densely populated areas in the district.

The topography of the area can best be described as undulating. It ranges from the flat coastal plain to the escarpment of about 900m above sea level. This topography, coupled with varied climatic conditions and good annual rainfall, has made the area an agricultural hub. Commercial agriculture such as sugar cane, fruit and forestry cultivation dominates the economy of the district. However, these economic activities are restricted to the coastal plain, leaving the interior with less economic activity and abject poverty. Moving inland one is faced with traditional activities such as farming and animal husbandry on tribal lands at subsistence level.

Apart from agricultural activities, manufacturing activities dominate the Richards Bay hub. The establishment of one of the largest deep-water ports in Africa has encouraged the development of manufacturing, which contributes hugely to the local economy of the area. Mining activities also dominate the local economy, although it degrades and pollutes the

environment. It is the third-highest contributor to the local economy after community services, banking and finance.

The uThungulu District Municipality, with a large population (53%) under 19 years old, is faced with providing social services, key amongst which is education. The district has approximately 665 institutions of learning ranging from pre-schools to tertiary. Of concern are the high schools and the tertiary institution. There are 188 high schools scattered all over the district – village, farm, township and town schools, with the largest number being village schools. These schools are grouped under six circuit managements headed by circuit managers. There is only one tertiary institution, Zululand University, serving all the appropriately qualified matriculants. Despite the high number of institutions there are still about 20% of children of school going age who are out of school (Stats SA, 2011), most of them in uMthonjaneni and Nkandla Circuits. This development indicates that much needs to be done for education, especially in the rural areas.

1.8 Organisation of the chapters

An orderly research work leads to successful research findings. This study is organised into five chapters.

Chapter One begins with the introduction and presentation of the background of the study, with key issues such as the statement of the problem, research objectives and questions, a summary of the methodology followed, ethical considerations, definitions of terminology, and the chapter organisation of the entire research work.

Chapter Two forms a vital part of this study. An extensive literature review has been done on factors influencing learner performance in geography. The chapter begins with learners' performance in geography in the NSC examinations from 2009 to 2014, both at the national and district levels. This is followed by factors reviewed, which include educator characteristics, school environment, availability of resources, parents' characteristics and learners' characteristics.

Chapter Three focuses on empirical research by providing justification for the design and data collection techniques. The mixed-method research methodology, and probabilistic and non-probabilistic sampling techniques are discussed. Data sources and methods of collection,

ethical concerns and data analysis are also discussed, along with details of the validity and reliability of the study.

Chapter Four discusses the statistical procedures that were used in the analysis of the hypothesis in detail. Findings are also discussed and compared with recent literature for a conclusion to be drawn.

Chapter Five summarises the findings from the literature reviewed and compared to the empirical investigation. The conclusion from the findings is presented, including the recommendations of the study.

1.9 Conclusion

This chapter has presented an overview of the study on factors influencing learners' performance in geography in selected public schools in the NSC examination in the uThungulu District. The introduction to the study made reference to the performance of learners in geography in South Africa, which has been described as healthy, with a rise and fall. The consulted literature was briefly outlined, and explanation given on how the empirical research was conducted and the findings arrived at. The study area was also described in terms of its location, population, economics and education. The chapter ends with a statement of the organisation of the entire research work.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This study investigates factors influencing learners' performance in geography in the National Senior Certificate examination in public high schools in the uThungulu District of KwaZulu-Natal. The first section of this review discusses assessment and its principles in South Africa, since performance is only determined through assessment. The second section discusses the subject of geography and its importance in the curriculum. The national curriculum has undergone a number of changes since the dawn of democracy in this country. The performance of learners in geography is discussed in terms of the three curricula: the National Curriculum Statement (NCS), the Revised National Curriculum (RNCS) and the Curriculum Assessment Policy Statement (CAPS). The third section discusses the curriculum changes and learners' performance under the chosen cohort years of 2009 to 2014. The fourth section gives a detailed review of the curriculum changes and learners' performance in geography. The final section of this literature review is focused on the factors influencing learners' performance in general and geography in particular. These factors includes availability of educators, educator qualifications, educator teaching experiences, availability of teaching and learning materials, methods of delivering lessons, the effect of using the English language, the learner-educator ratio and parents' involvement in their children's education.

2.2 Assessing academic performance

One of the basic aims of the educational reforms in South Africa has been to ensure credible, high quality and efficient assessment for all learners throughout the country (DoE, 2003). The implementation of outcomes-based education (OBE) and the National Curriculum Statement (NCS) requires some new approaches to planning, teaching and assessment. This is necessary because the new government inherited a very weird educational assessment. The apartheid government presided over unbalanced and biased assessments under each of the 19 ex-departments, resulting in different standards across them (DBE, 2013). The assessments were conducted on the basis of ethnicity, with two different kinds of certificate being awarded, the higher and standard grades. Assessment of learning achievement has taken a new, worldwide

turn, owing to the global view on assessment and its impact on learner performance. Assessment is therefore viewed as an important part of education, which, according to Dreyer (2008), can lead to identification of problems, resulting in changes to the educational system in South Africa.

Assessment can be defined as a method or action that is intended to gather information about the knowledge, attitudes or skills of a learner or group of learners (Kellaghan & Greancey, 2001). McMillan (2008) defines assessment as a structured process of gathering information about an individual performance in relation to national unit standards and certifications.

The NCS defines what should be assessed. According to the NCS, in order to determine the outcome of the assessment process, the learners' ability, knowledge, values and skills are key factors. That is, any acceptable and appropriate assessment should be designed to promote the development of skills, attitudes and values. According to Dreyer (2008), assessment should not be limited to completing school, but should go beyond schooling. In order to achieve the goals of assessment, the NSC examination has been developed to ask questions relating to learners' problem-solving, critical thinking and analysis, knowledge and attitudes, skills and interests. After successful assessment, learners should be able to function more effectively in their societies.

The assessment at high schools is not limited to the NSC but is continuous in all grades, and focused on the main domains of the NCS which includes knowledge, skills and values. (DoE, 2003). The institution of the school-based assessment (SBA) was to promote learners' understanding, competence and ability. The DoE therefore implemented various assessment opportunities which are focused on the classroom and school-based assessments. The accomplishment of learners in these assessments may help to improve the quality of assessment, and achieve the desired outcomes.

2.2.1 Principles of assessment

According to the South African Qualification Authority (2001), credible and quality assessment practices are crucial for granting credible certifications. Therefore any assessment to achieve quality must adhere to assessment procedures and practices which are guided by fairness, validity, reliability and practicability. These four principles guide both the NSC examination and school-based assessments in South Africa:

2.2.1.1 Fairness

In defining fairness, McMillan (2011) refers to it as a process where all learners are given an equal opportunity to demonstrate achievement during any assessment. No learner should have an advantage over another through ethnicity, gender, age, disability, or social class (McMillan, 2011). All learners must be given an equal opportunity to demonstrate achievement during the NSC examination and school-based assessments. This means that all learners must be assessed equally according to a given national standard. It also means that learners must be accommodated in multicultural classrooms enabling each learner to receive equal opportunities in terms of resources and instruction. It is only then that the examination can promote the opportunity for all learners to succeed.

The question is this: is it possible to have fair assessment for all in South Africa? Unfortunately, the answer is both negative and positive. The answer is negative because the academic playing field is not level. There are still schools in South Africa without good sanitation, or electricity, and in some cases learning takes place in dilapidated classrooms, if not under the trees, which cannot be used during bad weather. Some schools have insufficient and unqualified educators, especially the previously disadvantaged ones. The answer is also positive because at the national level some degree of fairness has been achieved, especially in setting the final examination papers. For example, special examination papers are set for blind and deaf learners. In the November 2013 and March 2014 NSC examinations, 66 papers were set for all non-official languages, 55 question papers for the blind, and 49 question papers for the deaf. Those learners with partial sight had papers printed in a large font size (DBE, 2014: 30). There is also fairness in that examination papers have equal instructions and equal set of questions throughout the country regardless of race and social class. In the past, questions were based on standard grade and higher grades.

2.2.1.2 Reliability

According to McMillan (2011), for assessment to be reliable it must demonstrate similar performance at different times under different conditions. Reliability in any assessment is affected by the difficulty of the examination, the environment, the interpretation of the learners' responses and the formulation of the marking guideline.

According to McMillan (2011), any assessment that is not reliable cannot be consistent. Unreliable and inconsistent results do not provide a good foundation for any further assessment.

In order to have a consistent and reliable examination, the NSC examination paper is set by qualified experts who are competent in their subjects and are selected to provide clear, consistent and unambiguous instructions for learners (DBE, 2013). Various internal and external moderators are employed to check the consistency and reliability of the examination. The moderators assess questions covering a wide range of skills including critical thinking and problem-solving skills required by the NSC.

2.2.1.3 Validity

Validity has been defined by SAQA (2001) as the measure of assessment processes in terms of knowledge, understanding of subject content, proficiency and information, among others. Assessment procedures, methods and instruments must all be in line with the curriculum.

2.2.1.4 Practicability

Practicability of assessment refers to the execution of assessment methods, instruments and tasks which include financial resources, facilities, equipment and sometimes time.

2.3 Post-apartheid education and learners' performance

The era of democratically elected government of South Africa was heralded by radical educational reforms. The reformation was needed to correct the huge inequalities inherited from the apartheid government and its educational systems and policies. The inequalities provided the African communities with under resourced and very ineffective education. A considerable number of African communities suffered from deprivation including poor facilities such as buildings, telephones, electricity and water, resources such as textbooks, and even qualified educators. Lack of these facilities and resources produced poor matriculation results.

These inequalities and poor performance necessitated the resolve to reform teaching and learning. A number of curricula were provided to indicate the direction for a new South Africa. The first of these curricula was the National Curriculum Statement (NCS), also known as Curriculum 2005 (C2005). The underlying principle of C2005 was the famous outcomes-based education (OBE), with a learner-centred approach as its main feature. OBE

was introduced to address various educational, social and economic needs of the country, especially the skills, knowledge and values of previously disadvantaged learners. The introduction of the new curriculum was accompanied by the new national examination known as the National Senior Certificate examination. The NSC became the exit point for Grade 12 learners, and also a benchmark for further education, especially in the tertiary institutions (DBE, 2013: 30).

The introduction of OBE was heavily criticised by academics and stakeholders (Lawack, 2009; Malada, 2010; Lansdowne, 2011). They cited lack of resources to embark on the implementation of OBE. According to Lawack (2009), the newly elected government did not have the manpower to manage the new educational reforms under the new curriculum, and cited the failure of the programme in the most advanced economies. The huge number of underqualified educators in the country was also cited. They were described as ill-prepared and inadequately trained (Malada, 2010). The heavily learner-centred approach of OBE was thought to have compromised learners' ability to read and write (Malada, 2010). However, the performance of learners under OBE was described as better than that during apartheid (Lansdowne, 2011). The implementation went ahead with Grades 1 and 2 in 1998 and 1999 respectively. Grades 3 and 7 followed in 2000, Grades 4 and 8 in 2001, and 5 and 9 in 2002.

The institution of C2005 revealed the weaknesses and the problematic nature of the new system, thus exonerating the critics. The overburdened C2005 was subsequently revised to give birth to the Revised National Curriculum Statement (RNCS). Lack of departmental support, insufficient educator training, lack of learning and teaching materials and lack of general resources were some of the reasons for the revision (Chisholm, 2000). But most of the elements of C2005, especially OBE, were retained, the changes made being structural (Chisholm, 2000). The RNCS was launched in 2002, with the first batch of learners completing in 2008.

2.3.1 Learners' performance during the national senior certificate under NCS

As part of the educational reforms under the new democratically elected government, the 19 ex-departments were integrated into one national department of education for common standard assessments. The NSC examination replaced the Senior Certificate Examination, the first being written under the NCS in November 2008 (DBE, 2013). The assessment was conducted and supervised by the national Department of Education, with Umalusi and SAQA as the watchdogs (DBE, 2013).

The NSC as an exit point for Grade 12 learners is to:

- i. equip the learners with knowledge, skills, values and attitudes,
- ii. act as a benchmark for further training and studies,
- iii. facilitate the transition of learners from educational institutions into the world of work and
- iv. provide sufficient evidence of learners competencies (DBE, 2012).

Since the inception of the NSC in 2008, the results have shown a general improvement in the South African educational system in terms of learners' performance as compared to the 2007 results inherited from the previous apartheid curriculum. This speaks volumes about the new NCS which introduced the NSC. There has been a steady improvement in overall learner performance from 60.6% in 2009, to 70.2% in 2011, and in 2013 a significant 8% increase was recorded, making the overall performance 78.2% (DBE, 2013: 17). The 2013 performance was the highest ever recorded since the dawn of democracy. The performance by subject also improved.

Not only has the overall national pass rate been lauded, the performance of learners in geography has been slightly above the national average. The performance of learners in their cohort years (2009-2013) has been steadily and slightly above the national figures. The overall performance in geography has improved from 2009 to 2013, especially for learners achieving 40% and above (DBE, 2013). The 2010 performance of 69.2% was slightly lower than that of 2009, when there was a marginal decline of about 3.1%. However, between 2011 and 2012 there was a significant leap of 5.8%. Similarly, the 2013 class recorded 80%, which was an improvement over 75.8% in 2012. This significant improvement in performance in geography made it regarded as one of the healthiest subjects in the curriculum. The small percentage decrease between 2009 and 2010 might be due to implementation problems experienced in OBE by both learners and educators (DBE, 2013), as evident in the national performance as well. The improved matriculation pass rates in both the national average and geography assume the improvement of educators' understanding and teaching of OBE. The Department of Basic Education attributes the improved performance to hard work and

numerous intervention initiatives by the Department (DBE, 2013). This assertion has been disputed by Taylor (2010), for whom interventions have very little effect on performance.

The question whether the rising performance in the NSC examinations reflects an improvement in the quality of schooling in the country has been much debated. A number of academicians and stakeholders argue that the general improved pass rates are not a true reflection of the final Grade 12 examination results and general standard of education in the country (Ramphele, 2009; Jansen, 2011; Simkins, 2013). According to Ramphele (2009) and Jansen (2011), the improved performance in the NSC over the cohort years described above was believed to have been doctored. Ramphele (2009) indicates that the pass rate for 2008 was actually 36.2%, not 62.6%, as indicated by Umalusi. Jansen (2011) agrees that the results were politicised to achieve political ends, especially when OBE was heavily criticised as a failed educational policy at birth.

The discrepancies between the NSC and other national and international benchmark performances have generated such debates. The critics raise the issue of other national and international assessments as barometers of learners' performance in the country (Jansen, 2011; Lansdowne, 2011; Simkins, 2013). The analyses of the results of the Annual National Assessment (ANA) and the Trend in International Mathematics and Science Study (TIMSS) were cited. According to Simkins (2013), the performance in the ANA for Grades 1 to 6 and 9 in English First Additional Language and mathematics shows a constant poor performance trend. Simkins reveals that in Grade 1, the average pupil mastered 68% of the curriculum, but the average in Grade 9 was 13%. The performance shows that only 8.1% of those tested achieved 30% and above, and 2% achieved 50% and above (Simkins, 2013). Simkins's assertion corroborates the work of Jansen (2011). According to Jansen (2011), the performance of South African pupils in comparative international benchmark trends in literacy and numeracy took a nosedive. A benchmark test in 2011 revealed that 65% of learners in Grade 3 were not competent in literacy, 72% were not meeting the standard in language, and 70% failed to do basic mathematics (Lansdowne, 2011). According to Lansdowne (2011), the poor performance of South African learners in the TIMSS is the direct opposite of the matriculation pass rate in the country.

Although the Department of Basic Education attributed the improved performance in the NSC examination to the hard work and dedication of educators and other stakeholders, the critics think otherwise. A number of reasons have been put forward as being responsible for

producing such an improved performance, but not those provided by the Department of Basic Education. The first reason has been attributed to Umalusi's concept of the standardisation process. According to Umalusi (2013), the standardisation is a tool used to make adjustments to the Grade 12 results. Naidoo (2014) contended that standardisation of Grade 12 results makes a difference between original results and adjusted results. Critics believe that the standardisation process improves the NSC results.

Another reason advanced for the improvement in performance in the NSC rather than that given by the Department of Basic Education is the promotion process in Grade 11 referred to as 'gate-keeping'. The selection of learners to register for the NSC examination in Grade 12 is a major factor responsible for the improved results (Stats SA, 2013). According to the author, a large number of Grade 11 learners could not be promoted because of fear of reducing the pass rates for the NSC. The figure of 43.9% for the high school completion rate (DBE, 2011) lent some credence to Stats SA assertion. According to the report, the percentage of repeaters in Grades 10 and 11 is very high as schools attempt to keep the number of failures in the NSC examination results low (DBE, 2011). This gatekeeping is evident in the decline in the number of learners writing the final examination. Subjects such as mathematics and physical sciences are hard hit by the decline, and as the numbers have decreased the performance has improved (DBE, 2013).

2.3.2 Curriculum Assessment Policy Statement (CAPS) and performance

Perhaps it was the criticism of learners' performance by academics and stakeholders that forced the Minister of Basic Education, Angie Motshekga, to make a change to the curriculum in 2010. The policy was to reduce the administrative burden that was imperative in the implementation of the NCS, and provide educators with clear guidance on what should be taught and how assessment should be conducted (DBE, 2014). The contradictions in the two documents (NCS and RNCS), coupled with the general dissatisfaction expressed by stakeholders, especially teachers, about the workload of assessment linked with OBE, gave birth to a new curriculum called the Curriculum Assessment Policy Statement (CAPS). The CAPS was initiated in 2009 to unify all the relevant documents, including the Revised National Curriculum Statement (SRNCS), the National Curriculum Statement (NCS), the Learning Programme Guidelines (LPG), the Subject Assessment Guidelines (SAG), and other related documents of the Department of Basic Education, and was implemented in Grade 10 in 2012 (DBE, 2011).

The most visible feature of the CAPS is the adoption of the content-based approach as opposed to that of OBE. The focus is on content knowledge rather than general knowledge. Each subject area is well taken care of, outlining what is to be taught and how it should be taught. Geographical contents are to be studied as interrelated, with the physical and human processes linked to the social world. Emphasis has been laid on sustainable development and environmental issues. The new concepts of information communication technology (ICT) and geographical information systems (GIS) as tools for learning geographical concepts and knowledge are emphasised. The methodology for teaching geography is slightly inclined towards an enquiry-based approach, favoured by many (Adeyemi, 2008) to increase learner activity and autonomy, and reduce teacher dominance. The first NSC examination under the CAPS was written in November 2014.

The 2014 results saw a steady percentage increase in the following subjects: accounting, agricultural science, geography and life sciences. The rest of the eleven gateway subjects recorded a decline, but geography went up by 1.2% from 80% in 2013 to 81.2% in 2014.

There was a steady improvement in learners' performance from 60.6% in 2008 to 78.2 % in 2013. However, the 2014 national average performance declined from 78.2% to 75.8% in 2014 under CAPS. The quality of the performance has been heatedly debated since the inception of the NSC examination in 2008. The issues of debate centred on the decline in the number of learners taking certain subjects, especially mathematics and physical science. The issue of gatekeeping by schools and standardisation by Umalusi as a means of controlling performance are of great concern to scholars and stakeholders.

Despite its deficiencies, the NSC examination has remained the measure of quality in schooling, and the main output indicator of the schooling system in high schools throughout the country.

2.4 Factors influencing learners' performance

This section enumerates which factors influence learners' performance in geography in the uThungulu District. The literature shows that there are diverse factors influencing learners' performance in general, and in geography in particular. This section discusses literature on performance in the classroom, national examinations and international benchmark tests.

The available literature addresses performance in terms of the availability of educators, their qualifications, experience and methods of teaching. Other factors such as the availability of

teaching and learning materials, the influence of language, the learner-educator ratio and the involvement of parents in their children's education were among those reviewed.

2.4.1 Availability of educators and learners' performance

The employment and retention of teachers with higher academic degrees have dominated the current literature (Chevalier, 2007; Mastekaasa, 2011) and how this has direct effects on the performance of high school learners (Hanushek & Rivken, 2004; Shen et al., 2004; Mji & Makgato, 2006; Mohammed, 2014). Improvement of learners' performance in general, and specifically in geography, depends largely on the quality and quantity of educators deployed in the classrooms. According to Mastekaasa (2011), recruitment and retention of highly qualified educators in the classrooms have a high turnover. Mastekaasa (2011) attributes the absence of these quality teachers in high schools in Norway to two factors. Firstly, the entering salary level of educators in public schools is lower than that in other economic sectors. Secondly, educators have found teaching at high schools unchallenging. In contrast, there was a positive relationship between high quality academic degree holders and classroom teaching in Britain (Chevalier, 2007).

Similar studies in developing countries have revealed that young and highly qualified graduates are likely to be in teaching. However, the trend in South Africa is different. Welch (2002) identifies the challenges in South Africa as the ability of the profession to attract enough young people. The current inflow is far less than the outflow. The Department of Education (DOE, 2006) reports an intake of 6000 graduate educators in 2006, and in that same year about 20 000 educators left the service. According to the Department of Education report (2006), the shortage of educators is worse in the rural areas, especially in the sciences, mathematics and technology. The DoE has also identified a shortage of educators teaching economics and management sciences in rural as compared to urban schools. Fairhurst, et al. (2003) report a rapid decline in the availability of geography teachers in the country. This was also observed by Innes (2012) as a trend in the number of students taking geography as a teaching subject in the country's popular universities.

Mohammed (2014) identifies inadequate teaching staff as a factor in retaining learners' choice of and performance in geography in Nigeria. Learners perform better if they have teachers in front of them teaching. Most schools had only one geography educator teaching

all aspects of geography in all grades, and in some schools there were no geography educators at all (Mohammed, 2014).

The shortage of educators has led to the deployment of what Hanushek and Rivken (2004) describe as hidden educators. According to them, the presence of an educator in the classroom and teaching does not mean that teaching and learning is taking place. Educators must be trained to impart the subject. Educators significantly influence learners' performance through their pedagogical content knowledge (PCK). According to Mji and Makgato (2006), PCK is the ability of the educator to deliver a lesson on a particular topic which is understood by learners. The educator must be able to address difficulties and misconceptions faced by learners in certain topics, using the right strategies for addressing them. Darling-Hammond (2006) opined that this has to do with desirable teacher qualities, which include good subject knowledge, teaching skills and classroom management.

The focus here is on the impact that pedagogy has on teaching. According to Mji & Makgato (2006), pedagogical content knowledge (PCK) is another form of shortage that schools face. As stated earlier, there is growing evidence of relationship between educators' qualifications and learners' performance. At the heart of this relationship is the link between educators' subject knowledge and learners' academic performance. In the South African context the poor performance of learners in mathematics and science as measured by the matric results has largely been attributed to the lack of mathematics and science educators, and even where they existed the quality of their subject knowledge or pedagogical skills is problematic (Mji & Makgato, 2006). According to the authors, educators' knowledge of a subject affects their preparation and delivery of lessons, which contribute to learners' academic performance.

To state that educators' knowledge directly and positively affects classroom practices and subsequently learners' performance is logical enough. But with the exception of studies among high school mathematics educators (Goldhaber & Brewer, 2000; Rice, 2003) reveals an inconsistency with these findings. According to Goldhaber and Brewer (2000), the findings are inconsistent perhaps because of reliance on proxy measures for educator knowledge such as completion of degrees. According to these authors, there is no significant relationship between educators' qualifications and learners' performance in mathematics and science.

2.4.2 Teacher's qualifications and learner performance

Studies have suggested that graduates with high academic qualifications are likely to teach better than those of less academic quality. The teacher qualification-quality debate has been longstanding in both the developed and the developing world. Hanushek (1999) developed an in-depth econometric analysis that compares educator qualifications with other factors influencing learners' performance, and found a highly significant relationship between educators' qualifications and learners' performance. According to Hanushek and Rivkin (2004), learners taught by highly qualified educators perform and progress faster than those taught by unqualified educators.

In a study conducted in the USA on what makes a difference in learners' academic performance, Darlington-Hammond (2006) suggests that high school learners learn more from educators with higher qualifications in their teaching subjects, especially those with bachelor's and master's degrees. She concludes that what most learners learn is what their educators know. Rice (2003), Darling-Hammond (2006), Hattie (2009), and Hinton and Fischer (2010) found that excellent teachers positively influence learners' performance. According to these authors, an excellent teacher has the ability to teach and has a sound knowledge of the subject, develops positive relationships with learners, has strong classroom management skills, and works with other members of staff to improve overall school performance.

A number of researchers (Magi, 1981; Mji & Makgato, 2006) have supported the call for high quality educators in South African high schools. The authors state that desirable teacher qualities include good subject knowledge, teaching skills and classroom management, sound relationships with learners, dedication, accessibility and hard work. A study conducted by Mji and Makgato (2006) on factors associated with high school learners' poor performance in mathematics and physical sciences in South Africa shows that teacher qualifications and quality are crucial in learners' performance. The authors agree with earlier findings that an "educator who was taught in an incompetent manner will have learnt bad practices and is likely to use them in teaching". Magi (1981) identifies excellent teaching as a factor that influences the performance of black learners in geography in South African schools. He attributes the high failure rate in geography among South African learners to poor teaching by poor educators,

Akinsolu (2010), writing on teachers and learners' performance in Nigeria, shows a positive and significant relationship between the quality and quantity of teachers and learners' performance in high schools. He found that schools with poor performance lacked qualified teachers. Adeyemi (2009) earlier linked the importance of excellent teaching, and attributes high quality to teacher qualification and years of experience. He considers that a well-qualified geography teacher promotes teaching and learning, and the lack of one leads to a decline in learners' performance.

However, not all studies on the relationship between educators' qualifications and learners' performance have been seen as positive. A study conducted in the USA by Goldhaber and Brewer (2000) revealed otherwise. According to these authors, there is no significant relationship between educators' qualifications and learners' performance in mathematics and science. A statistical investigation conducted in Ghana by Betts (1999) revealed a similar trend. Nonetheless, it is conclusive that educators' qualifications affect learners' performance in both developed and developing countries.

2.4.3 Educators' experience and learners' performance

'Experience is the best teacher' goes the English maxim. Studies have shown that educators' years of teaching experience in certain subjects is a determinant of learners' academic performance. Experience can be seen as a reliable predictor of a person's ability to perform a certain task. According to Akinsolu (2010), a teacher's years of experience is a measure of the quality and experience that are needed to improve learners' academic performance. Studies conducted in both developed and developing countries, including South Africa, attest to the fact that teachers' experience in teaching a particular subject enhances learners' learning capability.

A study was conducted in California on teacher experience and learners' performance in mathematics by Darling-Hammond (2006). It was conducted at a time when aged teachers were being replaced by newly trained ones, and revealed that learners' test scores in mathematics were badly affected after the replacement of the aged educators. Darling-Hammond's study concurred with an earlier study done by Rivkin, Hanushek, & Kain (2005) in Texas. The authors concluded that less experienced teachers perform significantly worse than more experienced ones.

The findings from the developing world, especially Africa, are in agreement with those from the USA. In selected public schools in Osun State in Nigeria, teachers' years of experience

and learners' performance were found to be positively related (Akinsola, 2010). Out of 991 teachers sampled for the study, over 80% had more than five years' teaching experience. A significant test conducted on the teachers' years of experience and learners' performance using questionnaires, ANOVA and the Spearman Rank correlation coefficient revealed a positive correlation, indicating that teachers' years of experience are important for learners' academic performance (Darling-Hammond, 2006; Akinsola, 2010). In a similar study carried out in Nigeria by Adeyemi (2009), teachers' years of experience was found to be a determinant of learners' performance in geography. Two groups of geography teachers with different teaching experience were sampled. The first group were teachers with fewer than five years of teaching experience, and the second group were teachers with five and more years. The findings of chi-square correlation analysis and t-test statistics concluded that teachers with five and more years of teaching were a positive influence on learners' performance in geography. Ewetan and Ewetan (2015) studied the influence of educators' teaching experience on the academic performance of public secondary school learners in mathematics and English in the Ado-Odo/Ota and Ifo local government area in Nigeria, using questionnaires and inventory to collect data. Regression analysis and a t-test were applied to the data, and the result revealed that educators' years of teaching had a statistically significant influence on learners' academic performance in mathematics and English in the senior secondary certificate examination.

In South Africa, Bhorat and Oosthuizen (2006) investigated what factors determine the Grade 12 pass rate in the public school system. The study employed the Ordinary Least Square (OLS) regression and quantile regression techniques for analysis of the data. The results indicated that educators' characteristics were predictors of Grade 12 performance in the NSC examination. The authors therefore advised that educators' characteristics, especially the years of teaching, are a key focus for policy if there is a need to improve learners' performance in Grade 12. A study on the state of the Eastern Cape schools in the second decade of democracy revealed a positive relationship between educators' experience and learner performance (Ncanywa, 2014). 'Educator experience was found to be positive and significant in all specifications, indicating a strong positive effect on learner performance' (Ncanywa, 2014: 13).

In Cambodia, Chhinh and Tabata (2003) conducted a study on the effects of selected teachers' characteristics on the mathematics performance of urban primary school learners. Questionnaires and achievement tests were used in the data collection. The stepwise

regression analysis revealed that teachers' teaching experience had statistically significant relationships with the performance of learners.

Earlier researchers (Andrew & Schwab, 1995) on the factors influencing learners' performance argued that educators' experience as a predictor of performance has a limitation. The authors found that very well-prepared beginning educators can be very effective. Their research revealed that five-year teacher education programmes with a master's degree in education and one full-year student teaching placement prepares educators effective (confident) as equally as educators with many years of teaching experiences and with diplomas in teaching subjects and education.

2.4.4 Instructional facilities and materials and learners' performance

This section is concerned with the availability of material resources within the teaching environment, and their influence on learning and learners' performance in their final examination. A number of researches have established the relationship between availability of resources and learners' performance (Fuller, 1987; World Bank, 1998; Weeden, 2007; Innes, 2012; Maldiwari, 2012; Rilwani et al., 2014). Most evidence supporting these assertions is from the developing countries, though the World Bank (1998) found availability of resources to be a predictor of learners' performance in the developed world. Evidence from sub-Saharan Africa and South Asia is about school buildings, water and sanitation (World Bank, 1998), but this study is set to look at the availability of instructional facilities and materials such as textbooks, weather stations, laboratories, maps and globes, among others in schools, and how they influence learners' performance.

Findings from a study in Britain (Weeden, 2007) relate the concepts of teaching and learning resources, and eventually their overall influence on classroom management and effective curriculum implementation. Weeden states that material resources are important for curriculum implementation and attainment because of their unique role in unpacking lessons in the school syllabus.

In a comprehensive study of the availability of instructional materials and learners' performance in developing countries, Fuller (1987) maintains that simple instructional inputs, especially those directly related to the instructional process, are consistently associated with high performance. The importance of a textbook, which is directly related to reading and writing, has been consistently upheld in scores of studies (Fuller, 1987). In a study in Uganda reported by Fuller (1987), textbook availability was influential in learners' performance in

English. However, Fuller noted that this result is related to the socio-economic backgrounds of learners' parents. According to Fuller (1987), learners from poor families with rural backgrounds are likely to be without textbooks, but when supplied with them they help to enhance their studies.

A study in South Africa by Van der Berg & Burger (2003) found the availability of resources influenced learner performance. The study was carried out in the Western Cape on the causes of efficiency in the educational system. The study employed the OLS regression analysis. The result indicated a significant need for managerial intervention in the shortage of complementary teaching materials, since they play a significant role in improving learners' performance (Van der Berg & Burger, 2003). Van der Berg and Louw (2006) investigated factors determining learner performance in mathematics in South Africa. The authors used OLS and hierarchical lineal modelling to analyse the data for the performance of learners. The findings revealed that South African learners were not performing well in mathematics compared with those in other African countries. This was attributed to the fact that schools were not taking advantage of resources available to them. The authors advised schools to take advantage of the resources available to perform better in mathematics. Van der Berg (2006) went on to argue that resources alone do not necessarily make a difference in performance, but the ability to convert the resources to crucial factors.

Material resources in the delivery of geography lessons is emphasised by a number of researches done in Africa (Innes, 2012; Rilwani et al., 2014). Resources and teaching materials are necessary for effective teaching and learning in geography, especially in map work and recently introduced geographical information systems (GIS), which is a computer-based technique (Innes, 2012). According to Rilwani et al. (2014) and Innes (2012), the provision of geography materials such as laboratories, books, maps and weather stations affects learners' interest and promotes effective teaching and learning, and consequently learners' performance. Iyamu (2005) suggests that infrastructure and materials are not the only resources needed. Principals of schools must provide the funds to enable schools to undertake field trips, a very important teaching method.

Earlier studies done by Aslam and Siddiqui (2003) in Pakistan revealed a positive relationship between resources and learner performance. The authors investigated the determinants of learner performance on middle school learners in government, and private schools in urban and rural Lahore in Pakistan. The OLS method was used, supplemented with the instrument

variable (IV) estimation in order to control for endogeneity bias, and the Heckman two-step to control for the endogenous sample selection of learners into private and government schools. The results indicated that resources and teaching materials are statistically significant determinants of learners' performance, but the authors were quick to add that the results vary across subjects in Pakistan (Aslam & Siddiqui, 2003).

Despite the contributions teaching and learning resources make to performance and the retaining of learners in school, most schools have an inadequate supply. Most schools in Africa are under resourced, as reported by numerous studies (Innes, 2002, 2012; Madiwalar, 2012; Rilwani et al., 2014). In a study conducted in 25 high schools and 28 geography educators in Endo State in Nigeria that compared the number of teaching materials available in the schools and how they were used by educators, Rilwani et al. (2014) found that most schools are highly under resourced. Among the resources investigated, textbooks were found to be adequate, and 23 educators stated they made use of these books in their teaching. Atlases and topographical maps were adequate in only 13 schools. The remaining schools either did not have them, or did not have enough of them. It was found that only six schools had some form of laboratory, and they were ill-equipped. These results explain the poor performance of learners in geography in the study area (Rilwani, et al., 2014).

Other research on the availability of teaching materials in high schools was consistent with the findings of Rilwani, et al. In a study of six high school geography educators and 176 learners in Ethiopia in the teaching and learning of map work, Madiwalar, et al. (2012) found the shortage of teaching materials to be influencing poor performance in map work and in geography as a whole. In response to the question on the availability of textbooks, both educators and learners from the sample schools identified a lack of textbooks and other reference books. Political maps of Africa, Ethiopia and the world were the adequate teaching materials available.

2.4.5 Teaching methodology and learners' performance

The training and qualification of educators is to equip them with knowledge and skills to enable them to handle the task of imparting that knowledge and those skills. It is the educators' duty to acquire the learning resources and teaching ability to deliver knowledge to learners. According to Lambert (2002), quoted by Innes (2012: 6) "What makes methodology

very important in teaching geography is that the methods required for spatial development are quite different from the content.”

According to Omoro and Nato (2014), teaching methods refer to a broad range of teaching styles, approaches, strategies and procedures used by educators to facilitate learning. The appropriate choice of strategy for a particular lesson is a determinant of a successful or unsuccessful lesson. According to these authors, there are various strategies available to an educator to choose from and adapt for a lesson, especially a geography lesson: for example, a lecture discussion, demonstration, project or field trip (Weeden, 2007; Adeyemi, 2008; Omoro & Nato, 2014). Akintade (2011) states that the choice of an appropriate strategy depends greatly on the quality of the educator, in that a good teacher will always make the right choice and produce good teaching results. The appropriateness of the method used to deliver a particular lesson makes a difference. Akintade (2011) blames the poor performance of learners on poor delivering of lessons by educators using inappropriate strategies. According to Omoro and Nato (2014), teaching is an art which must be done methodically and When an educator teaches with inaccurate planning, she or he does nothing but recite from the textbook, and rote learning takes place. The lesson delivery from the introduction to the concluding stage should be well planned.

In assessment of educators’ methods in some secondary schools in Rongo District in Kenya, Omoro and Nato (2014) discovered that most educators used appropriate teaching strategies. Their strategies were grouped into three: interactive, collaborative and transmissive. The most common strategy used was the interactive. In the survey population, 77% of the respondents indicated that they used the interactive method. Collaborative methods were used by 23% of the educators surveyed, and 0.6 % used transmission methods. The greatest advantage of the interactive approach is the ability of the educator to involve learners actively in the teaching and learning process through discussion, brainstorming and question and answer. In the collaborative approach, educators use projects, assignments and field trips to augment their classroom teachings. The transmissive, more educator-centred approach used lectures and other expository methods. The researchers discovered that learners enjoyed lessons involving demonstrations, field work, experiments, and projects more than the rest of the approaches (Omoro & Nato, 2014: 228).

An earlier study in the UK (Weeden, 2007) reported that learners actively participated in geography lessons when they were actively engaged in the lesson. According to Weeden,

when geography lessons were presented using a variety of teaching approaches, learners' interest was focused, and they tended to enjoy the lesson. Activities such as showing videos, going on field trips, drawing maps, compiling projects and making oral presentations involved learners in their lessons, sustained their interest, and helped them to perform well in their tests and examinations

These two studies (Weeden, 2007; Omoro & Nato, 2014) explained the teaching approaches enjoyed by learners, but did not give any statistically significant relationship between these approaches and learners' performance. However, comprehensive research has been conducted to establish the relationship between strategies used for the teaching of geography and learners' academic performance in the Senior Secondary Certificate examination in Ondo State, Nigeria. Using the criterion variable from the 2003 SSC learners' results and the predictor variable collected from educators' teaching approaches such as lectures, enquiries, induction, deduction, discussion, textbook, field trips and exposition, Adeyemi (2008) performed a statistical regression test. The probabilistic value was less than 0.05, which indicated that there was a significant relationship between all the predictor variables and the criterion variables. The final result from the research indicated that the expository teaching strategy is the best predictor of learners' performance. In order of predictive capacity, the rest of the strategies were enquiry, deduction, induction, field trip, textbook and lecture methods (Adeyemi, 2008)

This result is in sharp contradiction of what was considered by Omoro and Nato (2014) and Weeden (2007) as the best methods of teaching geography. It suggests that a particular teaching method might be popular and interesting, but may not sustain learners during tests and examination, since performance is only measured in term of tests and examination results.

2.4.6 Language and learners' performance in an examination

Language has been described as the single factor that influences performance of learners in any assessment, whether an internal examination or the final examinations in South Africa. The language policy in the country allows two major languages, English and Afrikaans, as the media of instruction in high schools (DBE, 2010). The former Model C schools use Afrikaans, and Indian, Black and Coloured schools use English. However, most schools, especially the so-called previously disadvantaged schools, are lacking in this language capacity. The English language has become a second language to these learners, apart from

their native tongues, and has thus become a problem not only in speaking but in writing and reading to these learners (Ncanywa, 2014).

The difficulties of the English language as a second language for learners have made it difficult for them to pass their final examinations. Numerous researches (Howie, 2003; Mji & Makgato, 2006; Dhurumraj, 2013) have shown that difficulties in using English pose a challenge for all learners, in both the high schools and the tertiary institutions in the country, especially in the underrepresented rural areas. Researchers have explained that learners have to translate whatever they read in English into their native language, and then back into English. In the case of geography, all geographical concepts have to be translated into local languages and back into English. In most cases, learners fail to get a local translation for the concepts, and hence fail to answer some questions.

The difficulty of using of English as a medium of instruction and communication is not only limited to learners, but affects educators as well, especially those who are speakers of African languages.

The influence of English as a predictor of performance has been researched extensively, with diverse findings in South Africa, Africa and the rest of the world, especially the advanced world. One group of researchers found a strong relationship between English language proficiency and learners' performance (Howie, 2003; Mji & Makgato, 2006; Martiniello, 2008; Baik & Greig, 2009; Dhurumraj, 2013; Mitchel, 2015), but another research group found no significant relationship between learners' performance and their English language proficiency (Uyehara, Magnussen, Itano & Zhang, 2007).

In South Africa studies conducted on the performance of learners in mathematics, physical science and English (Howie, 2003; Mji & Makgato, 2006; Dhurumraj, 2013) reveal a positive correlation. Howie (2003) tested 10 factors, including English language proficiency, considered to be predictors of performance of learners in high school mathematics. The study revealed that nine out of the 10 factors had a weak correlation with mathematics performance, but English language proficiency was found to be most highly correlated. The first language-speaking learners were found to be the most highly scored: that is, the higher the proportion of the first language speakers tested, the higher the performance (Howie, 2003).

An investigation into the causes of poor performance of learners in mathematics and physical science in District 3, Tshwane, revealed that English as a second language is a predictor of performance in mathematics and science (Mji & Makgato, 2006). In an interview with learners and educators, the poor performance of learners was attributed to their lack of proficiency in English. Most of them did not understand the medium of instruction. Learners often struggled to understand and write the final examinations successfully because in teaching the subjects educators often switch between the local language and English (Howie, 2003; Mji & Makgato, 2006; Dhurumraj, 2013). Investigating the poor performance of learners in physical sciences in Kwazulu-Natal, Dhurumraj (2013) revealed that English strongly influenced learner performance in the NSC examination.

Baik and Greig (2009), in their study of university students in Melbourne, found a positive relationship between discipline-specific language support and student performance in architecture, building and planning. According to the research on a lack of academic language, assessment becomes abstract as learners encounter unfamiliar concepts in their discipline. This study corroborated earlier work by Martiniello (2008). Martiniello (2008) contends that lack of academic language not only reduces text comprehension, but also creates barriers to demonstrating content knowledge. Thus students with limited academic language are at risk of failure.

Mitchell (2015) corroborated the previous studies with research on the effect of English proficiency on biology during Massachusetts Comprehensive Assessment System (MCAS) performance. Mitchell (2015) draws the conclusion from her research on the effect of English proficiency on English language learners (ELLs) that as their level of proficiency increases their test scores in biology MCAS also increase. A linear regression test was performed using the two levels of English proficiency, i.e., cognitive academic language proficiency (CALP) and basic interpersonal communication skills (BICS), to determine the extent that English language proficiency significantly predicts performance in a biology MCAS test. The results indicated that ELLs with high proficiency in CALP show a positive statistical significant than those with BICS. Learners with BICS performed well in the multiple choice questions, but failed to perform in the summative test. However, learners with high proficiency in CALP performed well in summative questions, which require different skills. Questions requiring discussions, analyses, interpretations and evaluation became problematic for learners with proficiency in BICS.

However, literature from Mexico revealed no association between nursing students' performance and their proficiency in English (Uyehara, Magnussen, Itano & Zhang, 2007). The authors cited personal networking as a factor influencing their performance.

2.4.7 Class size and learner performance

Most developing countries have instituted universal primary education to achieve the Millennium Development Goals (Goals 2) initiated by the United Nations (Stats SA, 2013). As a result, more learners have gained access to schools. However, the increasing enrolment of learners was not matched by an increase in educators, which meant one educator teaching a large class of learners. The learner-educator ratio (LER), or class size, affects the quality of education and learners' performance. The two terms are used interchangeably, but do not mean the same thing. The learner-educator ratio is a global measure of the human resources brought to bear on children's learning; class size refers to the actual number of learners taught by an educator at a particular time (Enrenberg, Brewer, Gamoran and Willms, 2001).

A United Nations Educational, Social and Cultural Organisation (UNESCO) (2008) statistics report revealed that over 84% of classes in developing countries have more than 40 learners per educator, with most of them found in sub-Saharan Africa and Asia. The report indicated that the Democratic Republic of Congo has an LER of 54:1, Mali has 55:1, Ethiopia and Malawi have about 70:1, Afghanistan has about 80:1, and Cambodia and Bangladesh have 50:1. This phenomenon affects the quality of education and resources in schools, and consequently learner performance.

Clearly, the LER contributes directly to the quality of schooling offered. In South Africa, there has been a slight decrease in the LER since the coming into office of the new democratically elected government. The national average LER in public schools is about 32:1 (DBE Stat Report, 2012).

A study conducted in the Eastern Cape on a number of factors influencing performance and LER was found to have influenced performance of learners (Ncanywa, 2014). The researcher explored the state of the Eastern Cape schools using the ordinary least square (OLS) and quantiles regression techniques in 2013. The study showed that when non-linearity was controlled by squaring the variables, it turned out that the OLS and lower quantiles up to the 50th percentile favoured large classes, and high performing schools in the 75th to the 90th percentiles favoured small classes. It was also observed that the LER served to increase the

gap in relative performance between the 50th and 10th percentiles. Though results showed a mixed estimate level across specification, there was an association of low and middle performing schools with large classes and high performing schools with smaller classes (Ncanywa, 2014: 14).

Kaloki (2012) conducted research on LER and the performance of pupils in primary schools in Kenya, using questionnaires for data collection on 24 teachers. The data was analysed using Pearson's product moment correlation and simple regression to determine the predictability of LER on performance. The correlation coefficient was calculated with R-value of -0.323. The negative correlation indicated that as LER increases, performance decreases. Applying a simple regression model, a score of 268.60 was generated, indicating the model applied was significantly good enough. The findings thus revealed that LER significantly influences performance of learners' in national examinations (Kaloki, 2012).

In Nigeria, Ajani and Akinyele (2014) investigated the effects of LER on the academic performance of learners in three selected high schools in Port Harcourt. The authors used questionnaires and the achievement test in mathematics to collect data from 120 learners on their perception about the effects of LER on their performance in the final national examination. The data were analysed using the statistical tool of Pearson product moment correlation. A significant relationship was established on learners' perception of LER and their performance in the mathematics test. The result suggested that a smaller LER led to higher performance of learners in mathematics. Ajani and Akinyele (2014) went on to say that the smaller class size benefited the learners both academically and socially.

The LER was found to be positively related to learners' performance in Bangladesh. A study was conducted (Raychaudhuri, Debnath, Sen & Majumder, 2010) on factors affecting learners' academic performance in Agartala Municipal Council Area schools. In the statistical analysis the coefficient value was found to be 0.035, and the t-value was 0.815, which was statistically not significant. Raychaudhuri, et al. (2010) concluded that a high LER produced less performance, but a low LER produced high performance.

Despite the many researches showing a positive relationship between the LER and learners' performance, a number of researchers have found a negative relationship. Researchers in both developed and developing countries have revealed that class size reduction is not enough to change learners' performance.

Findings from India by Banerjee, Cole, Duflo and Linden (2007) found no impact of reduction in class size on learners' performance. In this study, a class of 80 learners was split into two. One class was provided with a remedial educator, while the other class remained with the regular educator. The result revealed that the class with the remedial educator performed worse than the class with the regular educator, concluding that class size alone does not change the performance of learners. A similar study in Kenya by Duflo, Dupas and Kremer (2008) revealed that reducing class size without making other changes such as providing qualified educators, resources and facilities does not lead to a significant increase in learners' performance (Duflo, et al., 2008).

The South African Consortium for Monitoring Education Quality (SACMEQ) report presented at the Conference on Investment Choice for Africa in September 2006 raised an objection on the relationship between class size and learners' performance. The research was conducted during and after apartheid. The report revealed that there is a negative relationship between the educational performance of black learners and small class sizes, and it did not find any change among white learners (Kaloki, 2012).

On the contrary, large classes were found to have a positive correlation with learners' performance. The available literature revealed that a very large class size produced excellent performance (Vander, 2003). The author contended that South Korea was placed second in TIMSS in 1996 with an average LER of about 60:1 in mathematics classes and 49:1 in science classes

2.4.8 Parental characteristics and learners' academic performance

Parental involvement in children's education has been identified as the most important predictor of learners' academic performance (Henderson & Berla, 2004; Hassan, 2009). A study in Norway by Hassan (2009) identifies parents' socio-economic status as a factor influencing learners' academic performance. Two parental socio-economic characteristics – educational level and employment (income) – were identified, among others, as very influential in determining a child's academic performance. The researcher established a strong relationship between parents' educational level and their children's performance. Children from parents with appreciable secondary and tertiary education were found to progress well in their academic work. Hassan (2009) established that educated parents are likely to be involved in their children's academic work, and help them in doing their homework. According to Hassan (2009), parents with high incomes also influence learners'

performance positively. It has been established that parents with a high income provide their children with all academic needs, and hence influence their performance.

Henderson and Berla (2004), however, argue that the most important predictor of learners' performance in any test is neither the income nor the social status of parents. Though the researchers agree to some extent that income and social status can be an influence, they believe that parents' involvement in their children's education by creating an enabling home environment is of the greatest importance. They believe that parents must express high expectations for their children, but warn that too much expectation can lead to poor performance. Henderson and Berla (2004) think that parental involvement in their children's homework and school activities encourage them to do well academically. This goes back to Hassan's (2009) assertion on parental educational background. The parents are only capable when they understand the schoolwork.

Research conducted by Steinberg (2006) shows that learners' performance improves when parents become involved in their children's education at school and at the community level. Steinberg (2006) argues that direct parental participation in school activities such as games, and regular parents' and educators' meetings enhance learners' performance. The researcher believes that regular physical contact between the home and the school community reinforces the view in the child's mind that school and home are connected (Steinberg, 2006), and this has a significant effect on learners' academic performance. The assertion was corroborated by Snow, Barnes and Chandler (2001) that a home-school relationship influences learners' performance, even among learners with low-income parents. The researchers argue that the most single important factor that connects learners' performance with extra-school influences was parental involvement in school activities such as parent-educator associations. They therefore conclude that parental and community involvement has a more significant positive impact on their children's achievement than income.

Researchers in Africa have also indicated the role of the home in education as an influence on learners' performance. Singh, Mbokodi and Msila (2001) found that parental participation in school activities influences learners' performance. They agreed with earlier research findings that providing a good learning environment for children is better than having a lot of money, Mji and Makgato (2006) concur, in their studies on factors influencing the poor performance of learners in mathematics and science, that parental involvement in the learners' and the school's activities influences learners' performance. This finding was mentioned by both

educators and learners when interviewed by the researchers on ways of improving learners' academic performance. Educators who responded to the question stated that parental involvement in checking learners' home work, and regular interaction with the schools to ascertain the progress of their children are crucial ways of improving the educator-parent relationship. This relationship then translates into enhancing educators' and parents' knowledge of the two environments (home and school) of the learner. On the other hand, most learners stated that their parents cannot actively help them because they are not educated, which concurs with earlier findings from Hassan (2009) that the parents' educational level positively influences a learner's performance.

2.5 Conceptual framework.

Since various factors were found in the literature to have influenced learners' performance, it will be difficult to follow one particular theory as the basis of this study (Imenda, 2014). In view of this, the reviewed factors will form the theoretical basis for this study. Therefore, instead of developing a theoretical framework, the various factors will serve as concepts and hence form a conceptual framework (Imenda, 2014).

The conceptual framework of this study is based on the fact that learners' performance in the NSC examination in geography in selected high schools in the uThungulu district is a concept based on all the factors discussed in the reviewed literature. According to Cob (2003), learners' performances in the high school are controlled by external sources. These are spelt out as follows:

1. Educators' characteristics: These include the educators' gender, qualifications, experience in teaching, methodology and pedagogy. The educator controls, and is responsible for, the learning process. In addition, activities performed by learners such as assessments are developed, monitored and evaluated by the educator towards the accomplishment of the NSC. The teacher takes ownership of how learners learn the information, structuring the learning environment and motivating the learners.
2. Institutional involvement: Instructional facilities and material resources provided by the Department of Education, namely: textbooks, laboratories, charts, maps and computers, among others. The language and enrolment policies are part of the institutional involvement.

3. Parental socio-economic characteristics: The involvement of parents by providing an enabling environment for their children.

All these elements will provide an enabling environment, instructional strategies and appropriate technology and opportunities for the learners to experience successful learning and hence produce a good performance in their final matriculation examination. The conceptual framework is represented in Figure 2.1.

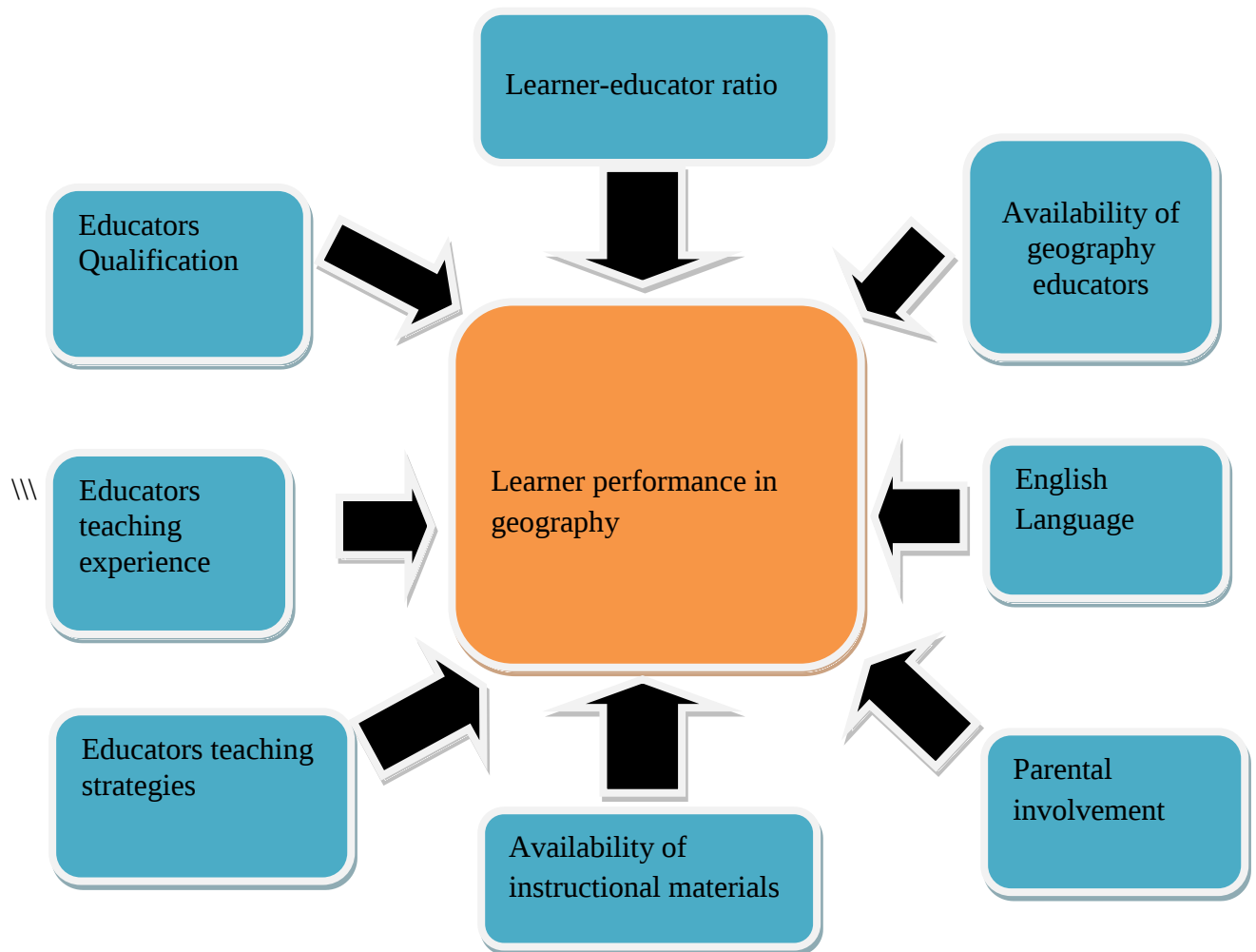


Figure 2.1 Conceptual framework

2.6 Conclusion

A number of considerations linked to learners' performance in geography have been discussed in this chapter. National and international studies that attempt to link learners' performance in geography at class, school and national levels have been discussed.

The literature clearly reveals that South African learners are performing well, in fact above the national average in the NSC examination, which is the means of measuring learners' performance.

Various studies have shown that there are many influences that affect learners' performance in geography for better or worse. These include the availability of educators, educators' qualifications and teaching experience, the availability of learning and teaching resources, teaching methodology, English language, class size and parental involvement in education.

“Finally the concepts, the reviewed literature forms the framework for collecting data (Chapter 3), and provides the necessary background for data”. The next chapter (three) discussed in details the data collecting methods.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

According to Baily (1997: 33), methodology is the philosophy of the research process. The methodology outlines the assumptions and values that serve as a rationale for the research, and the standards used for interpreting data for reaching conclusions. Research methodology consists of the research design, data collection and data analysis. This chapter outlines the methodological approach adopted, and the rationale for the choice of data sources, and the method used to collect data, and discusses methods of analysis and their limitations.

The approach that follows discusses the methodology adapted and provides a justification for the decisions made during the research process. The advantages and disadvantages of using primary and secondary data as sources for data collection are discussed, along with how data sets are analysed at both the district and school level. Lastly, the tools used to collect data about the 40 sampled schools are outlined, including the use of a questionnaire, a semi-structured interview and official documents.

3.2 Rationale

This research began with a strong, practical, underlying purpose developed from the researcher's experience in teaching and marking high school geography in the NSC examination. Most times during marking sessions, markers gather to discuss the causes of learners' performance in geography. What factors are responsible for poor and good performance of learners in their final examinations? The researcher embarked on this work to find some answers to this question.

The researcher is also influenced by the fact that there is a vast quantity of data available, both national and local, on learners' performance in geography. Their performance has been analysed both at the national and the local levels, including schools. This suggested to the researcher that data were available to embark on this research. Finding secondary data was going to be easy and could be supported and developed by collecting primary data from schools to understand the individual school contexts.

The researcher made use of the extensive literature review to form the basis of methodology for this research. The literature was not restricted to South Africa; it was sought from both the developed and developing world, especially Africa, to come up with a possible explanation for poor and good performance among learners in general and students of geography in particular.

3.2.1 Paradigmatic approach

Possible methodologies that were considered by the researcher were those of the positivists and relativists. The available data provide an opportunity to test hypotheses using a positivist approach. However, the complexity of the contexts and variables made it difficult to investigate this research topic in this way. The positivistic methodology is predicated by the ontological assumption that social reality is external to individuals (Cohen, et al., 2007). It also requires the researcher to hold the epistemological position that there are identifiable causes for a decline and upsurge that can be objectively measured, and would be constant from one context to another (Cohen, et al., 2007). This epistemological position is problematic for this research because individual academic performances are based on different contexts (educator factors, school factors, home factors, and even learners' factors). Though it is possible to identify relationships between variables, and to develop a theory of performance based on data generated about performance in the NSC examination, it is virtually impossible to identify a scientific law that would satisfy the extreme position of the positivist on ontology and epistemology.

The researcher therefore adopted the realist methodology (Robson, 2002). This is based on the view that there are no facts that are beyond contestation, and that knowledge is created by social and historical interactions (Robson, 2002). It assumes that there are realities outside of the observer. This position draws upon scientific method while recognising the complexity of the social context. An important feature of realism is that observations are not the rock bottom of science, but are tenuous, and always subject to interpretation (Robson, 2002).

It was stated earlier that the researcher's starting point was the observation of the geography education community in order to understand the elements of a teaching and learning situation that is of concern to geography educators. The aim is to better understand the relationship between the variables that will enable schools, educators and all other stakeholders to take action that will reverse the present unsatisfactory situation. While seeking to find the reasons

for this situation as objectively as possible, the researcher was also an active participant attempting to influence it by providing a framework that would be flexible enough to be used by educators, schools and the Department of Education.

3.3 Research design

Research designs are plans and procedures to be followed in conducting an investigation. This plan serves as a guide to the whole research process. It communicates to the researcher how he/she is going to test, measure or observe a phenomenon of interest. The design describes the procedure for conducting the research, including when, from whom and under what circumstances and conditions the data are obtained.

Various approaches to researching the topic were considered, but it was decided that a critical, realistic, non-experimental mixed design (Cresswell & Plano Clark, 2007) approach was the most appropriate. The non-experimental approach was used because the researcher did not involve the manipulation of variables. Existing data were collected from the 40 schools, and necessary information from the respondents. The researcher simply selected the relevant variables for an analysis of their relationship, since the events had already occurred. The dependent variable in this research was the academic performance of learners, which was measured by the NSC examination grades and means scores for schools in the period 2009-2014. The independent variables in this case were those suggested by the literature. These were: teacher availability in the schools (Hanushek & Rivken, 2004; Mji & Makgato, 2006; Mohammed, 2014); teachers' qualifications (Magi, 1981; Hanushek & Rivkin, 2004; Darlington-Hammond, 2006; Mji and Makgato, 2006); years of teaching experience (Hanushek, et al., 2005; Darling-Hammond, 2000, 2006; Adeyemi, 2009; Akinsolu, 2010); methods of teaching (Weeden, 2007; Adeyemi, 2008; Omoro & Nato, 2014); availability of teaching and learning materials (Fuller, 1987; World Bank, 1998; Weeden, 2007; Innes, 2012; Maldiwari, 2012; Rilwani, et al., 2014) and parental involvement in their children's education (Singh, Mbokodi & Msila, 2001; Henderson & Berla, 2004; Steinberg, 2006; Hassan, 2009), including the learners' attitude towards learning.

3.3.1 Mixed method approach

The approach adopted entailed mixed methods of data collection (Creswell & Plano Clark, 2007) that involved analysing NSC results from 2009 to 2014 to investigate correlation between the variables, alongside questionnaires and interviews to gather both quantitative and qualitative data from geography educators and subject adviser. According to Creswell and

Plano Clark (2007), a mixed method design links both quantitative and qualitative data in a way that provides a unified understanding of a research problem. The collection of the quantitative and qualitative data was done in a single study (Creswell & Tashakkori, 2007). Though seen as time- and resource-consuming, the triangulated mixed method worked well to reduce wastage in time and resources (Delpont & Fouché, 2012).

3.3.1.1 Quantitative approach

The quantitative approach involves numerical or statistical analysis to interpret the data. According to Durrheim and Painter (2012), quantitative research generates quantitative data that enables researchers to quantify results. It gives the researcher the opportunity to seek explanations, break the data into smaller parts and test hypotheses, make predictions, confirm relationships, compare results and generalise findings (Durrheim & Painter, 2012).

This study used a questionnaire to collect data from various schools so as to compare the findings. A total of fifty (50) questionnaires were designed and distributed. The quantitative research method was chosen as the basis so as to reduce errors and enhance objectivity (Durrheim & Painter, 2012). The questionnaire consisted of four sections, with each section addressing the factors influencing learners' performance in the NSC examination. The first section elicited biographical information including age, sex, academic qualifications and teaching experiences of geography educators. The second section dealt with educational institutional factors such as availability of teaching and learning resources which includes: text books, cartographic equipments, field equipments among others. The third section is designed to collect data on educator attitude towards teaching of geography in grade 12. The section dealt mainly with educator teaching skills and content knowledge. The last section was designed to collect information on parent involvement in children academic work. This section seeks information regarding assistance given by parents to the schools and learners.

3.3.1.2 Qualitative approach

The qualitative data collection approach was also used in this research. This is an inquiry in which researchers collect data in face-to-face situations by interacting with a selected person in his/her setting. This type of research describes and analyses actions, beliefs, thoughts and perceptions. The researcher interprets phenomena in terms of the meanings people bring to them (McMillan & Schumacher, 2001: 395).

Best and Khan (1998) argue that a qualitative approach assists researchers to see why something is the way it is. It provides insight, interpretative nuance and rich sensory details beyond the scope of their research models. It is flexible in that it allows adjustment of the direction of inquiry based on ongoing experiences during data collection.

In this research, the researcher compiled responses from the ten (10) geography educators who took part in the interview. The educators responded to questions on attitudes of educators towards teaching of geography, availability of teaching and learning resources and also the parental involvement in academic work of their children. Responses from the subject adviser were also compiled. The questions were based on the adviser's perceptions about factors influencing learners' performance in geography in the district, and what in her opinion should be done. The data was analysed by the qualitative method, as described below.

3.4 Population of the study and sampling

3.4.1 Target population

A target population has been defined as setting the boundaries for research (De Vos, et al., 2012). The target population in this research was all public high schools where geography is offered as an optional subject, and all grade 12 geography teachers in the uThungulu District. In all the total participants for the study were 147 grade 12 geography educators. There are other independent schools in the district, but the choice of public schools was made in order to have one common source of information on learners' performance, since the independent schools do not take the NSC examination. There were other stakeholders from whom information on learners' performance could be elicited, including learners, parents, and the school management team, but the researcher chose educators. The educators were chosen for this study because of their direct involvement with learners in the classroom. Since not all schools where geography is offered could be investigated a segment was selected. The selection was done to represent the homogeneity of the entire population.

3.4.2 Sampling frame and sampling procedure

According to McMillan and Schumacher (2001), a sample is representative of a larger group selected for research. Sampling, on the other hand, is the process of selecting an individual or group of individuals from the larger population from whom information can be obtained for research (De Vos, et al., 2012). The selection processes involved both probabilistic and non-probabilistic sampling methods (De Vos, et al., 2012). Non-probabilistic sampling

deliberately avoids representing the wider population and seeks only to represent a particular group or a particular named section of a wider population (De Vos, et al., 2012). The selection of schools began with obtaining a list of schools in the district. First of all, schools were clustered into five (5) educational circuits by means of cluster sampling. Within these circuits, schools offering geography were identified by purposive sampling. Ten schools were then selected from each cluster by means of the systematic random sampling technique. A total of fifty (50) schools were included in the survey. Educators were selected by identifying the Grade 12 geography teachers from these selected schools. The selected number of 50 participants out of a total of 147 was representative enough to ensure the reliability and validity of the research findings. Out of the fifty selected participants, forty responded to the questionnaire giving a response rate of eighty percent (80%).

3.5 Data collection strategies

The data collection was done systematically following the mixed method approach and the fieldwork was conducted in three phases. Phase one involved the completion of the questionnaires (see Appendix I) by educators who were selected through the sampling. Phase two was interview held for ten (10) educators who did not answer the questionnaire. The interview schedule contains part of the questions on the questionnaires. The third phase involved collection of NSC geography results for the period 2009 to 2014 from the school principals (see appendix J for inventory form). Details of the collection strategies and the instruments used are discussed below.

3.5.1 Research instruments

Instrumentation refers to the development of tools or instruments for gathering data from the respondents during field work (De Vos, et al., 2012). Three types of instrument were used in this study. They were a structured questionnaire, an unstructured interview schedule, and an inventory. The questionnaire was the main instrument, and was used to collect primary data eliciting personal information and the views of geography educators on the teaching and performance of learners in geography in their schools. The unstructured interview schedule was administered in collecting information from the subject adviser and 10 other educators who did not respond to the questionnaires, and an inventory was designed to collect the NSC results of learners from 2009-2014. The details and characteristics of the instruments are provided below.

3.5.1.1 Educator questionnaire

Questionnaires are very common data collection method in educational research (McMillan & Schumacher, 2001) because of their relatively economical nature and their anonymity (De Vos, et al., 2012). The teachers' questionnaire was designed to be easily analysed. Questions were designed to provide both relatively easily processed data through the use of closed-, open- ended and Likert questions about specific topics or factual information relevant to this research.

The questionnaire was structured specifically to answer questions on factors influencing learners' performance in geography in the NSC in the uThungulu District as reviewed in the relevant literature. There were five parts to the questionnaire. Part One consisted of nine questions where educators were to provide their bio-demographical information, including teaching experience in geography. Part Two consisted of items related to the availability of teaching and learning materials in the school, and the time of completion of the geography syllabus. Questions in Part Three addressed the issues of educators' general attitude towards the teaching of geography, their love for the subject, and commonly used teaching methods. Part Four dealt with aspects of parental involvement in their children's education. Five Likert questions were asked, and four responses to each provided to choose from. The last part consisted of two open-ended questions on educators' perceptions about factors hindering learners' performance in geography in their schools, and what measures to take to improve performance. This section was very important because of the variety of factors that existed in different schools.

The questionnaire was constructed using more closed-ended questions and Likert items to speed up coding and analysis. The wording was important to reduce the possibility of respondents misinterpreting the questions and providing answers that had not been anticipated. The open-ended questions asked for some explanations to allow for diverse responses from the respondents. However, analyses of these responses were problematic in that coding, sorting and categorising were required. Reporting some comments was also problematic because of the diversity.

The questionnaires in quantitative research are precise and explicit, and determine identification of variables in advance. They are also economical, and very simple to administer. The responses can easily be coded for statistical analysis. However, despite their usefulness, questionnaires are very complex to construct. They can also be biased and

ambiguous if care is not taken, and can render the findings unreliable and invalid. The researcher, however, piloted the questionnaire to improve its reliability and validity, and other empirical issues that might have arisen (see Appendix I).

3.5.1.2 Unstructured interview

Interviews provide the researcher with the opportunity to gain firsthand insight into the worldviews, beliefs, values, opinions, and behaviour of the interviewees, making them a valuable source of data (Cohen, et al., 2007). They serve as an additional means by which data are collected by delving into the interviewees' knowledge about the issues in the research problems (Cohen, et al., 2007). Interviews also create an opportunity for the researcher and interviewees to seek clarification and understanding of what the issues are. The interviews with the subject adviser and the 10 other geography educators were held to corroborate the perceptions of educators on factors influencing learners' performance in the district. It was an opportunity to dig deep into the rich experience of the subject adviser on learners' performance in geography, and diverse views expressed by educators.

However, Cohen, et al. (2007) state that the interviews should be conducted very accurately to achieve the desired results. To ensure accuracy in this study, a pre-designed interview schedule with specific questions on the main areas of interest was used to avoid unnecessary information that might not be relevant to the study. The schedule also made it possible to be focused on the main issues and be time bound (Creswell, 2008; De Vos, et al., 2012). As part of ensuring accuracy, enough time was given to respondents to answer the questions without interruption.

Information was collected from the subject adviser on schools who are not offering geography in the district. The issues of educators' availability and their qualifications were also raised. The adviser's perception of learners' performance in geography in general, and specifically in the NSC examination in the district, were of main concern. Recordings were made and notes taken at the same time during the interviews. This the researcher found necessary in order not to miss anything in the discussions. Although the notes were detailed, tape recordings were consulted where the notes were unclear.

There were some informal discussions about the issues after the formal interviews ended, they did not form part of the recordings, and were not used for analysis.

3.5.1.3 Inventory

Documentary data included the list of schools in the district, and the NSC examination results for the period 2009-2014. The documentary data enabled the researcher to collect factual data about the location of the schools, their gender character (mixed or single), and the performance of the learners (see appendix J).

3.6 Data collection procedure

Permission was sought from the KZN Provincial Department of Education, and granted for the period from September to December, 2015 (see Appendix E). The uThungulu District Education Officer and respective SMCs were officially notified of the research. Official letters (see Appendices A to D) were sent to principals of the selected schools and educators concerned, and were followed by personal phone calls to the principals to agree on a date for the administration of questionnaires to the teachers. The educators concerned were also informed through letters and phone calls of the strict confidentiality of their responses. All the 60 geography educators agreed to participate in the research. The subject adviser was contacted by phone to arrange an agreed date for the interview. The representativeness of the returned questionnaires was checked. Of the 50 educators selected to respond to the questionnaires, 10 failed to return theirs. The 80% positive response turned up might occurred perhaps because the researcher was once a geography educator in the district, and known by most of the respondents.

3.7 Types of data collected

3.7.1 Primary data

Primary data were collected from two main sources using two main methods. Fifty educators were handed questionnaires while the geography subject adviser and 10 other geography educators were interviewed using a semi-structured interview schedule. The educators were selected among those in the district where geography was being offered, using probabilistic and non-probabilistic techniques.

3.7.2 Secondary data

Results of NSC examinations from the cohort years 2009 to 2014 were available in schools, the District Education Department and the Department of Basic Education's official websites for easy assessment and retrieval. All the data were complete representations of learners who

took the NSC examination between 2009 and 2014, so the data were reliable, and did not contain errors. The advantages of secondary data were that they were cheap, easily available, and more accurate than a sampling method could organise. The only difficulty the researcher had was that the data in most schools were not very organised for ready use, especially for the first two years (2009 and 2010).

3.8 Data analysis

The main aim of data analysis is to seek patterns of responses and determine the causal relationships of responses to provide solid descriptive narrations of respondents' perceptions on factors influencing learners' performance in geography in the uThungulu District. These responses were reduced to an intelligible and interpretable form for easy conclusions to be drawn (De Vos, et al., 2012). The data collected for analysis in this study were both quantitative and qualitative. The responses consisted of questionnaire responses, tape recordings of interviews, and field notes from geography educators and the subject adviser. Hence quantitative and qualitative analysis techniques were used to determine the results.

The mixed method approach was used in this study to collect data on factors influencing learners' performance. According to Cresswell and Plano Clark (2007), mixed method research involves the mixing of both quantitative and qualitative methods in collection and analysis of data. In this way the gathered data will provide a better and meaningful understanding of the research problem (Cresswell & Plano Clark, 2007).

3.8.1 Quantitative analysis

The data from the questionnaires were collated, sifted and edited in order to address the problems of partial and no responses to questions. The opened-ended questions were coded (grouping the responses and assigning numbers to them). The edited and coded data were entered onto a series of spreadsheets to enable easy analysis of the quantitative responses from the Likert or rank order questions combined (De Vos, et al., 2012). The Statistics Package for Social Sciences (SPSS) software was used to run consistent checks on the data for desired transformation, and a data base was generated. The collected responses and the average NSC results for the period were merged into one file for easy comparison. Data were analysed using a generated group frequency distribution table. Descriptive statistics were used to organise and summarise the data for easy and meaningful understanding of the results. The tabular presentation helps to reduce data to an interpretable form which serves as

a basis for further analysis (De Vos, et al., 2012). The quantitative data were therefore presented in graphical and numerical form.

The tabular data were transformed into graphical representations using Microsoft Excel 2003. The following were derived:

- Bar charts with various levels of complexity.
- Pie charts used to represent divisions.
- Cross-tabulations involving observations made on two different related categorical variables using the table.

In this study the relationship between the independent and the dependent variables of the research was determined using the Pearson product moment correlation coefficient, and the t-test was used at a 0.05 level of significance. A linear regression model was used to establish the relative contribution of the independent variables on the academic performance of learners in geography.

The graphical representations described above enable a clearer understanding of essential features of frequency distribution, and help with comparative analysis (De Vos, et al., 2012). They also assist in making decisions about the hypothesised states of the world which draws some inferences from analysis of qualitative data.

3.8.2 The qualitative data analysis

The central questions in this study were qualitative in nature, and therefore necessitated open-ended questions in the questionnaire and interview schedules to answer them.

Qualitative data from interviews and open-ended questions in the questionnaires were analysed using the thematic analysis. The thematic analysis is a method of identifying and reporting patterns within data (Braun & Clarke, 2006). All the qualitative data were subjected to a systematic coding. According to Creswell (2008), coding is a process of ‘segmenting and labelling text to form descriptions and broad themes in the data’, which allows for data filtration into image segments, examination for overlap, redundancy, and collapse of these codes into broad themes (Creswell, 2008). Coding acts as a sieve to select specific data to use, and disregards other data that does not provide evidence (Creswell, 2008).

The systematic coding and classification were classified into categories which corresponded with those in the questionnaires. The qualitative and the quantitative data sets were merged, transformed and compared to examine similarities which resulted in thematic discussions (Creswell & Plano Clark, 2007: 137). This mixed method approach allows one to report statistical results, and then follow up the report with specific quotes or information about a theme that confirms or discards the qualitative results (Creswell & Plano Clark, 2007: 140).

3.9 Ethical issues

According to De Vos, et al. (2012), ethics is a set of widely accepted moral principles followed by researchers to ensure professionalism in their studies. The main participants of the study were educators, so ethical considerations were of major concern. A number of guidelines were followed: informed consent, voluntary participation, respect for participants' privacy and keeping participants' identity anonymous in all publications.

The researcher addressed the ethical issues before the start of the fieldwork and data collection. The procedure started with obtaining authorisation from the Department of Education in Kwazulu-Natal in early July, 2015 (Appendix E). Upon receipt of the Department's authorisation the researcher communicated to participating schools through the principals via letters and telephone calls to ask for permission to conduct research in their schools (Appendix B). The uThungulu Circuit Management Centre was also effectively communicated with through correspondence (Appendix A). Educators' consent forms were also sought for stating the goals and objectives of the study (Appendix C). In all these steps the University of Zululand's ethical guidelines were followed, and the process was supervised and evaluated by the University of Zululand Research Ethics Committee. A final endorsement was granted by providing a number of documents, among them the University's ethical clearance certificate issued by the University Ethics Committee (Appendix F). The clearance certificate was the green light for fieldwork and data collection.

The ethical procedures were carefully followed to protect the confidentiality of the respondents. Individual respondents were not mentioned throughout the study. All personal and identifiable information as provided by the respondents has been and will continue to be protected at all times.

3.10 Conclusion

This chapter has provided the step-by-step method followed to arrive at the results for this study, and a comprehensive motivation for the research design, with the rationale for selecting the mixed method approach involving both quantitative and qualitative methods. A comprehensive discussion on the general orientation for this study was given. In order to ensure that this research represented the entire population, sampling was done to select a representative segment. Ethical issues that might arise were also dealt with in this chapter, discussing all the possible ethical considerations. To ensure reliability and validity as a measure of this study, piloting was done using the constructed data-collecting tools before administering them to the respondents. The processes of piloting and administering the questionnaire and interview were discussed. The final section of this chapter discussed the analysis, interpretation and presentation of data. This last section is discussed in detail in the chapter that follows.

CHAPTER FOUR

DATA ANALYSIS AND PRESENTATION

4.1 Introduction

This chapter covers the analysis and interpretation of data collected from the respondents in order to answer the research questions. Data were collected from respondents using quantitative and qualitative instruments in order to produce a comprehensive answer to the research questions. The triangulation is an integrated approach that brings both the quantitative and qualitative instruments together (Creswel & Plano Clark, 2007).

Data were collected from 40 geography educators who were selected through multiple probabilistic methods. These respondents were part of 50 geography educators earmarked for the for research. The questionnaire return rate was 80%, which was deemed an excellent response rate and adequate for analysis and reporting (De Vos, et al., 2012).

This chapter is presented in three sections. In order to answer the first research question of the study, the first section presents the secondary data collected on Grade 12 final NSC results in geography from 2009 to 2014 for schools in the uThungulu District and the sampled schools. The second section presents and analyses data collected from the respondents on factors influencing learner performance using the questionnaires and interviews. The analyses are presented as descriptive and inferential statistics represented as tables, graphs, percentages, means and significant tests to determine an association between the variables. Further discussions answer the research questions.

4.2 Trends of geography learners' performance in the NSC examination within the uThungulu District from 2009 - 2014

This section analyses secondary data collected from the uThungulu District Education Department and the field data collected from the 40 selected public high schools in the district on learners' performance in geography in the NSC examination. The aim is to assess their performance over the given period of six years. This enables the researcher to answer the first research question: What is the performance trend of learners' performance in geography in the NSC examination in the uThungulu District?'

There are 178 high schools offering geography in the uThungulu District whose data appears in Table 4.1. The performance indicator used was in the range of 0-29% (level 1); 30-39 (level 2); 40-49 (level 3); 50-59 (level 4); 60-69 (level 5); 70-79 (level 6) and 80-100 (level 7). See Table 4.1 for more details.

Table 4.1 Performance of learners in geography in the NSC examination in the uThungulu District from 2009 to 2014

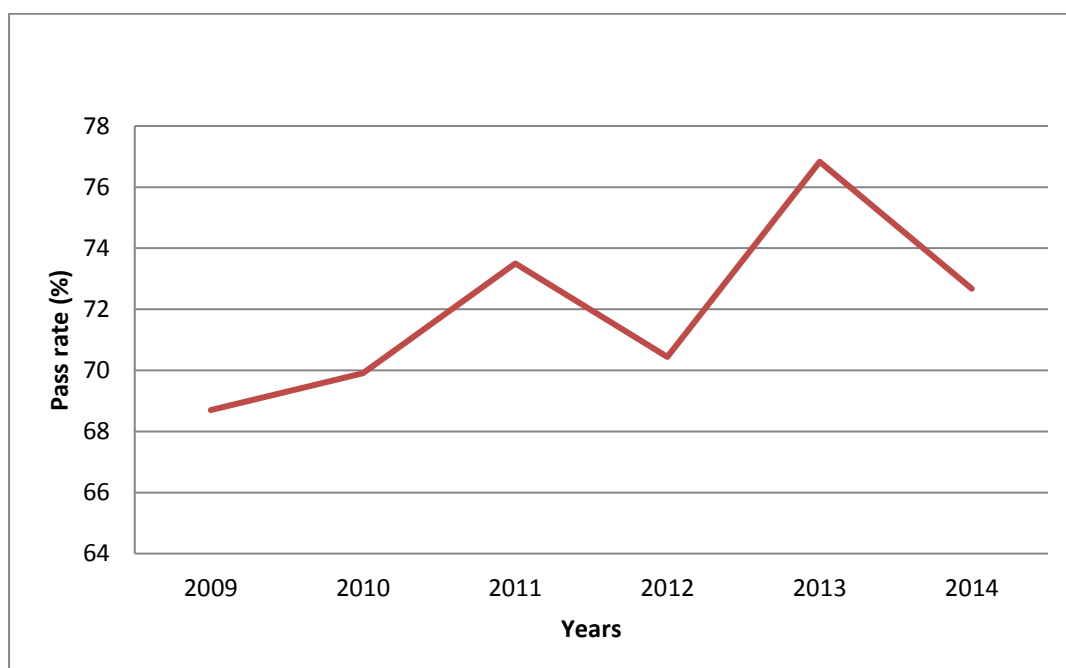
Year	Total wrote	Total passed	Pass %	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7
2009	5065	3480	68.70	1558	1009	560	230	82	41
2010	5011	3501	69.90	1362	1104	589	265	136	45
2011	5531	4065	73.50	1318	1291	823	403	167	62
2012	5720	4029	70.44	1559	1149	727	365	174	58
2013	6779	5208	76.83	1694	1481	1086	606	259	82
2014	6935	5040	72.67	1688	1514	1021	498	239	80

Source: uThungulu District Department of Education, 2015

Table 4.1 shows the performance of learners in geography in the NSC examination over time in the uThungulu District. The general trend in the performance level can be described as good. It suggests that geography is doing well as a subject in the midst of poor performance in other subjects, especially mathematics and physical sciences. The uThungulu District results are not different from the national: they show similar trends. The main concern, though, is the quality of performance, which remains a thorny issue for this study. The table indicates improved performance from 2009 to 2011. In 2009 a total of 5065 learners wrote the examination, of whom 3480 (68.70%) passed, and in 2010 the total passes were 3501 (69.90%), an increase of 1.2% over the 2009 performance. It is worth noting that the majority of learners performed in the region of levels 2, 3 and 4, while very few performed at levels 5, 6 and 7. Though a rise in performance is worth noticing, the two cohort years were below 70%. This performance can be attributed to the overall drop in the national average pass rate. The 2011 cohort performed at 73.50%, which is a significant increase of 3.6% from the

previous performance. However, in 2012, there was a slight drop of 0.3% from the previous year. Of the 5720 learners who wrote the final examination, 4029 (70.44%) passed. The enrolment for 2013 increased by 1059 from 5720 in 2012 to 6779 in 2013, with a consequent increase in performance for the cohort year. Of the total number of 6779 candidates who sat for the examination, 5208 (76.83%) passed. This pass rate was a leap of 6.39% over the 2012 performance, and the highest increase in the cohort years from 2009 to 2014. The 2014 performance, however, fell sharply from 76.83% in 2013 to 72.67%. The overall trend in the performance reflects a fluctuation rather than a continuous rise. The decline in 2014 can be attributed to the introduction of the new curriculum (CAPS). Although the CAPS did not introduce drastic changes, the euphoria of implementing the new curriculum cut up with performance of both educators and learners. Figure 4.1 illustrates the performance trend for the cohort years.

Figure 4.1 Graphical presentation of learners' performance in geography in NSC examination in public high schools in the uThungulu District from 2009-2014



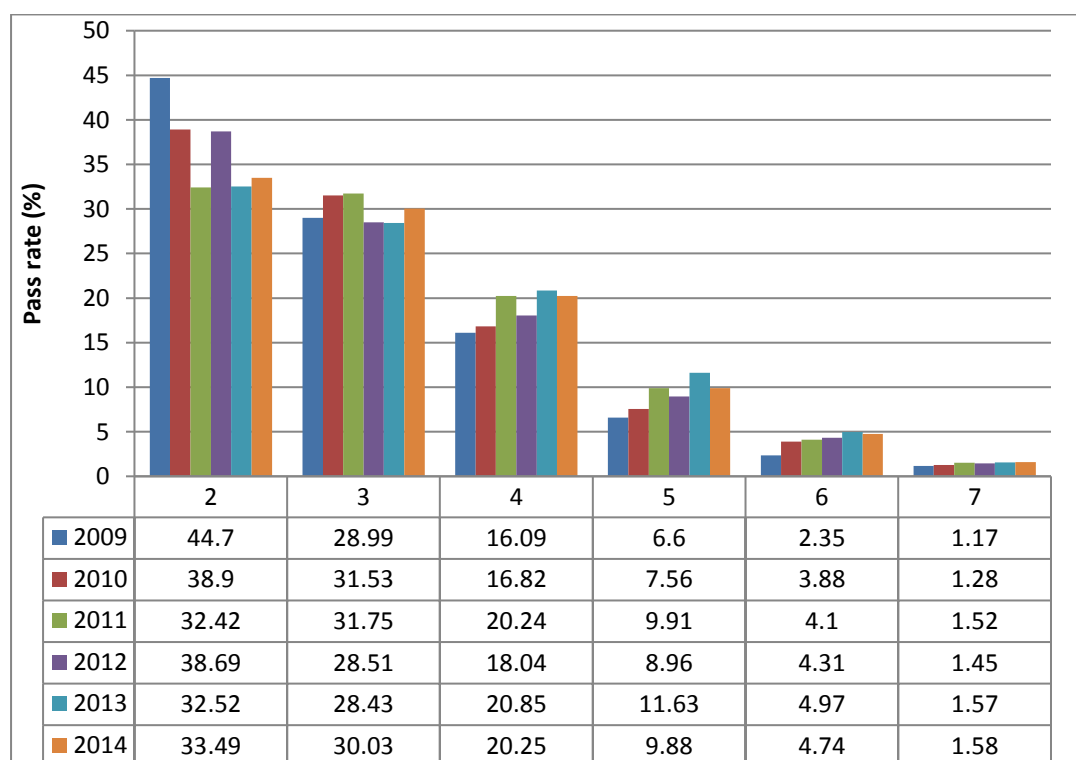
Source: uThungulu District Department of Education, 2015

The trend in total enrolment figures also shows a fall and rise from 2009 to 2014. However, the fall was only recorded in 2010 where the figure fell from 5065 in 2009 to 5011. In that same year, the performance of learners went up by a significant margin from the previous year. Thereafter, the enrolment figures increased. The rise in the total enrolment figures

might be attributed to the rise in learners' performance from the previous year, which can be described as healthy.

The quality of performance in these years was not pleasing for the entire district. In 2009, of the total of 3480 learners who passed, 2567 (73.69%) passed at the elementary and moderate level (2 and 3), 560 (16.09%) passed at the adequate level (4), 230 (6.60%) achieved the substantial level (5), 82 (2.35%) passed with meritorious achievement (level 6), and only 1.17%, 41 learners, recorded outstanding achievement (level 7). Figure 4.2 shows that the cohort year 2013 produced the best performance. The pass rate for 2013 can be described as best in the district for quantity and quality. Of the total number who wrote the NSC examination in 2013, 60.95% passed at the elementary and moderate levels, which was worse than other cohort years. Adequate achievement was 20.85%, the highest in the cohort years. There was an 11.63% pass at the substantial level, meritorious achievement went up to 4.97%, and outstanding passes were 1.57% – lower than 2014 by only 0.1%, but far higher in numbers.

Figure 4.2 shows the trends in quality of performance of learners in geography in the NSC examination in public high schools in the uThungulu District between 2009 to 2014



Source: uThungulu District Department of Education, 2014

4.2.1 Performance trends of learners in geography in the NSC examination in selected public schools in the uThungulu District

From table 4.2, the trend in performance in geography in the NSC examination in the 40 selected public schools in the uThungulu District was mixed. Of the 40 selected schools, 22 (55%) scored an average pass rate between 80% and 100%, five (12.5%) scored from 70% to 79%, and six (15%) had an average score of 60% to 69%. Three schools scored an average pass mark of 50% to 59% (7.5%), and two (5%) each scored an average pass mark of 40% to 49% and 30% to 39% respectively. A closer analysis of the results reveals that all the ex-Model C and fee-paying schools in selected towns performed with average scores of 88% to 100%. Most of the schools in the townships and rural areas performed below 88-100%, with few falling within the 88-90% range. The performance trend in the selected schools reveals the inequalities in the public educational system left by apartheid, with some schools (ex-Model C) more endowed with resources than the township and rural schools.

Table 4.2 Trends in learner performance in geography in selected public high schools in the NSC examination in the uThungulu District.

Pass rate	Levels	Frequency	Percentage
30 -39	2	2	5.0
40 - 49	3	2	5.0
50 - 59	4	3	7.5
60 - 69	5	6	15.0
70 - 79	6	5	12.5
80 - 100	7	22	55.0
Total		40	100

Source: Field Survey, 2015

The analysis presented above shows that the quality of the results has been compromised. Many researchers attributed the low performance to poor educators, but there might be other possible factors directly or indirectly contributing to the performance trend in the district. The researcher collected data on these factors, based on the reviewed literature, to establish the influence these factors have on learner performance in geography to enable the researcher to

answer the second research question: ‘What factors influence learner performance in geography in the NSC examination in public schools in the uThungulu District?’

4.3 Factors influencing learners’ performance in geography in uThungulu District schools

In an attempt to answer this critical research questions, data collected from the respondents are analysed and presented in this section. Data are grouped as follows for the sake of analysis: educator characteristics, school management and curriculum policy, home factors and learner factors. These analyses result from responses collected from educators through the use of questionnaires and interviews, and an interview granted by the district subject adviser. The data from the questionnaires forming the quantitative analyses were presented by means of descriptive and inferential statistics as described in the methodology section.

4.3.1 Educator characteristics

This section provides the results from geography educators, wherein their background information is presented and critically discussed. The following responses provide general biographical information about the respondents. This section allows the researcher to explore respondents’ information regarding the influence they have on the learners’ performance, or their knowledge of factors influencing learners’ performance in geography in the NSC examination. These include educators’ qualifications, teaching experience and methods employed in teaching.

4.3.1.1 Gender of respondents

The collected data as shown in Table 4.2 reveals that of the 40 educators who participated in this study, more than half were females 23 (57.5%) and 17 representing 42.5% were male. The figures suggested that more females in the sampled schools are teaching geography. These data are significant for this study, although they do not answer any of the research questions directly. However, the passion of women for teaching is highlighted here, and the more passion you have for teaching, the more likely you are to produce good performance. There is a traditional recognition that mothers are our first teachers and that if you are taught by a woman who is a natural teacher you will perform better. This does not mean that men are poor teachers.

Table 4.3 Gender profile of the respondents

Gender	Frequency	Percentage
Male	17	42.5
Female	23	57.5
Total	40	100

Source: Field Survey, 2015

4.3.1.2 Age of respondents

The age distribution of the respondents is shown in Table 4.3. About 3 (7.5%) were less than 24 years old; 5 (12.5%) were 25 to 34; 18 respondents (45%) were 35 to 44 years old; 12 (30%) were 45 to 54; and only 2 respondents (5%) were over 55. The information indicated that most geography educators were aged from 35 to 44. The educators' ages, as presented here, do not directly answer the research questions, but are very significant as age is directly related to experience of teaching. The age range indicated that experienced educators were in the majority, with an average age of about 40, and would be teaching and mentoring young colleagues for the next 20 years. The experience of educators naturally has a direct effect on the performance of learners – an aspect of education that is dealt with in the next section.

Table 4.4 Age of respondents

Age (years)	Frequency	Percentages
Less than 25	3	7.5
25 – 34	5	12.5
35 - 44	18	45.0
45 – 54	12	30.0
Above 55	2	5.0
Total	40	100

Source: Field Survey, 2015

4.3.1.3 Qualifications of respondents

Table 4.4 shows that of all the 40 educators, 17 (42.5 %) had a B.Ed, 11 (27.5%) and STD, 4 (10%) had a BSc, and 3 (7.5%) had a BA. Five (12.5%) educators indicated they had a postgraduate degree, two (5%) had an M.Sc, and three (7.5%) had M.Ed. The result indicates

that most of the respondents had a B.Ed. Those participants with B.Sc and B.A qualifications had a professional teacher's qualification (the Postgraduate Certificate in Education).

These results indicate that most respondents (72.5%) were suitably qualified according to regulation (DHET, 2007). Only 27.5% were under-qualified, and they all had a post-secondary education and training in teaching. However, of all the 40 sampled educators, it was found that two (5%) with a B.Ed majored in life sciences, not in geography. The data also indicated that 38 (95%) of the respondents had sufficient subject and pedagogical knowledge to teach geography at the FET phase.

Table 4.5: Qualification variance of the respondents

Qualifications	Frequency	Percentage
MEd	3	7.5
MSc	2	5.0
BEd	17	42.5
BA	3	7.5
BSc	4	10.0
Dip	11	27.5
Total	40	100

Source: Field Survey, 2015

There is an overall satisfactory mood in the district about the quality of geography educators' qualification, and this has been reflected in the overall performance for the past six years, which shows a rise in the pass rate (averaging 72%) in geography

However, the qualifications of educators in geography were found not to be significantly related to learners' performance, according to individual school results. The results of the sampled schools (Table 4.4) reveal that of the two schools with a performance level below 40% (level 2), one had an educator with an MSc degree, and the other had one with a three-year diploma with specialisation in geography. The level 7 results in other schools were also found to have been achieved by educators variously qualified with a B.Ed, BA with PGCE, and a three-year teacher's diploma with specialisation in geography.

A further statistically significant test was performed using analysis of variance (ANOVA) involving the qualifications of educators, and results obtained over the six years were similar.

Table 4.6: ANOVA on educators' qualifications and matric pass results

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	17.873	5	3.575	1.694	.163
Within Groups	71.727	34	2.110		
Total	89.600	39			

The result is significant at $p < 0.05$; not significant at $p > 0.05$

From Table 4.5, the focus is on the F-test to determine the significant difference between educators' qualifications and learners' performance. The $F(5) = 1.694$, $p\text{-value} = 0.163$. This result shows that $P > 0.05$, indicating the mean of the educators' qualifications, are the same, and there is no statistical difference in educators' qualifications and learners' performance in the NSC examination.

The study revealed that although teachers' qualifications are important in delivering and achieving results, there is no statistically significant relationship between educators' qualification and learners' performance in geography in the NSC examination in the uThungulu District. The findings indicate that an educator's higher qualification does not necessary translate into more learners passing their final examination in geography. This could also mean that the highest qualifications were obtained in other fields, not necessarily in geography.

This finding was corroborated by an under qualified educator who has managed to produce good results in the NCS examination over the past four years, and this is what he said:

'Because I know I am not 100% qualified, I have to do a lot of reading and research before meeting my learners. This has helped me over the years to acquire the experience to teach and to make a meaningful impact on my learners.'

The statement indicates that experience is a factor contributing to learners' performance. This is discussed in the next section.

4.3.1.4 Teaching experience in geography

Table 4.6 unpacks the experience of the respondents. The results show that most of the respondents 17 (42.5%) have taught Grade 12 for more than 10 years, and 6 (15%) have taught from eight to 10 years, and four to seven years, respectively. There were 9 respondents (22.5%) who reported to have taught from two to four years. Two (5%) educators with less than one year's teaching experience were in the minority. The overall results show that 72% of the respondents had taught for more than five years.

Table 4.7: Respondents' teaching experience in geography

Teaching experience(years)	Frequency	Percentages
Less than 1	2	5.0
1 - 4	9	22.5
4 – 7	6	15.0
7 – 10	6	15.0
Above 10	17	42.5
Total	40	100

Source: Field Survey, 2015

Those who had taught for less than five years were fewer because most educators and others involved in education believe that the more experienced an educator is, the better the performance of learners. Geography learners in the uThungulu District public schools are being taught by educators with considerable teaching experience; most have had more than 10 years teaching geography in Grade 12.

Educators' teaching experience refers to the number of years that educators have been teaching in a particular school without interruption. Educators' teaching experience and learners' performance have been widely researched, and the results indicate a positive correlation between the two. These researches were in general performance (Ncanywa, 2014; Akinsolu, 2010), mathematics and science (Mji & Magokto, 2006), and in geography (Adeyemi, 2008, 2009).

The data collected displayed a similar trend. The data collected on Grade 12 indicate that educators' teaching experience has a significant influence on high quality teaching and learners' performance in geography. The data also reveal that the two schools with average matric results of less than 40% had educators with less than five years' teaching experience. In one school, the educator had just graduated from a tertiary institution, and was appointed to teach Grade 12, and the second educator had been teaching for three years. Schools that obtained matric results in levels 2 to 4 were found to have teachers who have served two to five years in their respective schools, and schools that obtained levels 5 to 7 had teachers who have taught Grade 12 for more than 10 years. The findings confirm that educator experience significantly affects learner performance in geography. Educators interviewed also attest to the fact that their experience counts in producing good quality results. This is what the novice educator had to say:

'This is my second year in this school teaching geography in Grade 12. I am not used to my learners since I spend a lot of time trying to control the class because learners are not used to me either. The little time spent on teaching and learning is my biggest problem with teaching in this school. I also have to spend considerable time familiarising myself with departmental policies instead of preparing to teach.'

This response indicates that teaching experience is not only needed for teaching but also to control class activities in order for teaching and learning to take place. These educators also recognised the need for a serene atmosphere for teaching and learning to take place, which can be achieved by experienced educators. As the English axiom says: *'Experience is the best teacher.'*

To ascertain the above significant relationship between educator experience and the performance of learners in geography in the NSC examinations over these six years, a further statistical test was conducted. The ANOVA test was performed on educator experience as the dependent variable, and average matric results as the independent variable. The ANOVA Table 4.7 shows the significant difference between the means, $F(4) = 6.441$, $p \text{ value} = 0.001$. This shows a significant difference between educators' years spent teaching geography, and learners' performance.

Table 4.8: ANOVA of educators' teaching experience and matric results

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	37.992	4	9.498	6.441	.001
Within Groups	51.608	35	1.475		
Total	89.600	39			

Significant at $p < 0.05$; not significant at $p > 0.05$

4.3.1.5 Educator marking experience of respondents

In answering the question on marking experience, most respondents 26 (65%) indicated that they had enough experience in marking the final NSC examination papers. The remaining 14 (35%) have not been involved in marking these papers. This information is represented in Table 4.8 indicating the number and percentage of educators.

Table 4.9: Respondents' marking experience

Marking experience	Frequency	Percentage
Yes	26	65.0
No	14	35.0
Total	40	100

Source: Field Survey, 2015

Closely linked with the educators' teaching experience and learner performance is educators' marking experience in the final NSC examination. Respondents' experience in marking the final NSC examination and their matric results were compared. Comparisons of means and standard deviation among educators in their marking experience and their learners' performance in matric results were computed as shown in Table 4.9.

Table 4.10: Descriptive analysis of educators' marking experience

	Marking experience	N	Mean	Std. Deviation	Std. Error Mean
Matric results	Yes	26	5.38	.898	.176
	No	14	4.00	2.000	.535

Yes denotes educators with marking experience

No denotes educators without marking experience

The statistics reveal unique differences in the means of educators with marking experience, and those without it. Those with marking experience obtained a mean of 5.38 with a standard deviation of 0.898. Those without scored a mean of 4.00 and standard deviation of 2.000. Table 4.9 provides t-test statistics that reveal the significance of mean difference in the educators' marking experience.

Table 4.11: Significance of mean difference for the respondents' marking experience

	Levene's test for Equality of variances	t-test for Equality of Means			
	F	Sig	t	df	Sig (2-tailed)
Matric results	19.671	0.000	3.031	38	0.004
Equal variances assumed					
Equal variances not assumed			2.460	15.877	0.026

Significant at $p < 0.05$; not significant at $p > 0.05$

Significant differences are observed in Table 4.9 with respect to educators' marking experience and the matric pass rate in their schools. It is expected that educators with years of marking experience tend to have better results and ability to teach learners to answer final examination questions. Levene's test for equality of variance in Figure 4.8, $F(38) = 19.671$, p value = .000. The p value is considerably smaller than 0.05, indicating variance not equal. From the test of equality $t(38) = 3.031$, $p(2\text{-tailed}) = 0.004$ ($p < 0.0005$). The result is significant, and thus there is a significant difference in the matric pass rate in relation to educators' marking experience. This result shows that the more marking experience an educator has there is likelihood to produce quality results.

4.3.1.6 Educators' subject content knowledge and learner performance

Educator's subject content knowledge (SCK) is important to this study in determining the level at which educators have mastered various aspects of the subject of geography. An educator needs to have a sound content knowledge as a basis for better planning and delivering (Taylor, 2013). It is when educators have adequate content knowledge can they effectively motivate, engage, and inspire learners through the pedagogical knowledge (PCK) (Makgato & Mji, 2006). However, measuring educators' SCK has not been very easy (Taylor, 2013). Several methods have been used to collect data on SCK, the most common being tests and class observations (Taylor, 2013). Data on the SCK of educators was collected using the questionnaires and interviews.

Respondents were asked to rate their knowledge of teaching geography in Grade 12 on a three-scale response as 'very good', 'good' and 'average'. Table 4.10 shows responses from educators on the ratings. Most of the respondents 28 (70%) rated themselves as 'good', 10 (25%) indicated 'very good', and 2 (5%) 'average' in their handling of Grade 12 teaching.

Table 4.12: Rating of geography teaching in Grade 12

Ratings	Frequency	Percentage
Very good	10	25.0
Good	28	70.0
Average	2	5.0
Total	40	100

Source: Field Survey, 2015

These data explain the confidence level of educators, which is directly linked with the level of their subject content knowledge. The data also reveal that educators who responded 'very good' had average matric pass rates above 90%, indicating they had control over the subject matter. The majority who indicated 'good' were among those whose pass rates were above 50%, though a few had an average of 80%, but were not confident enough to rate themselves as 'very good'. This might be because they had a lower qualification in the subject (STD), and underrated themselves. However, the last two educators, who responded 'average', had the lowest matric pass rate.

To throw further light on the content knowledge, respondents answered questions on aspects of the subject that gave them problems. Table 4.12 shows the respondents' problematic topics in Grade 12 geography. The majority 28 (70%) indicated that map work is challenging, 6 (15%) indicated that physical geography posed a problem for them, and 15% said that human geography was problematic and difficult to teach.

Table 4.13: Problematic topics in Grade 12 geography

Topics	Frequency	Percentage
Physical geography	6	15.0
Human geography	6	15.0
Map work	28	70.0
Total	40	100

Source: Field Survey, 2015

Map work deals with the interpretation of topographical and orthophotograph maps measurements and calculations and the recently introduced geographical information systems (GIS). The results show that map work presents a problem across schools. This is not at all surprising because even the chief examiner's reports highlighted map work as being the lowest scored questions, especially GIS and calculations (DBE, 2014). This is what participant A had to say with regard to the teaching of map work:

'I don't like teaching map work because of the calculations and the GIS section. I like the map interpretations very much, but as for GIS and those calculations, forget it. My counterpart, who teaches Grade 10, doesn't know it either, therefore we are all struggling to teach this section and it's an embarrassment, I know. Eish! It is a big challenge. '

This response clearly shows that some educators are battling with content knowledge as far as map work is concerned. The problem seems to be greater with educators teaching in schools with low matric pass rates than their counterparts in schools with high matric pass rates. This means that incorrect explanations of concepts dominate their teaching processes, leaving learners with no choice but to sit for the examination with a very poor grasp of knowledge and skills to answer questions (Mji & Makgato, 2006). This is also evident from the work of

educators from low-performing schools. However, high-performing schools do not experience this problem. This is what participant B from a high-performing school had to say:

‘As for me, to be frank with you I have no problem as far as geography is concerned. I have been teaching this subject for over 10 years, and have been producing a good matric pass rate. Though initially I had some challenges with GIS, I overcame them through the help of an in-service course. In fact, geography is part of me now: I eat geography, drink it and it is me...hahahaha!’

While some educators were struggling to master map work, others were very comfortable, and delivering their lesson with ease. This attitude of educators no doubt contributed to their high quality teaching, and the high quality exhibited in the learners’ performance during the matric examination.

Table 4.14: Respondents knowledge of GIS

Knowledge in GIS	Frequency	Percentage
Very good	0	0.0
Good	13	32.5
Average	22	55
Poor	5	12.5
Total	40	100

Source: Field Survey, 2015

Respondents gave their knowledge of GIS on a four-point scale: very good, good, average and poor. Table 4.13 represents responses that indicate that the more than half 22 (55%) rated their knowledge in GIS as average, 13 (32.5%) indicated their knowledge as good, but 5 (12.5%) indicated poor knowledge. It was on record that no one had very good knowledge on this topic. The reasons for this trend are clear: GIS is a newly introduced section in the geography curriculum, and most educators who have been 10 years and more in the service are bound to experience problems. In an interview with participant C the answer was:

'GIS is new to me, but I know it is a computer course that must be taught to learners. In our schooldays we did not do GIS, and therefore this is entirely new to me. I must be honest with you - I don't teach it. The only thing I do is to copy what is in the textbooks for learners. There was a time I invited another educator who came and helped me.'

This remark clearly shows that this is a very important aspect of the curriculum, which is sometimes not taught by educators in most schools, especially educators who completed their teacher-training courses before the introduction of GIS. This development clearly shows that educators are struggling to come to terms with this concept. However, some of them, especially those from well-endowed schools, and a few who completed their teacher-training courses in recent times, were among educators who claimed to have a good knowledge of GIS.

Respondents answered the question on the topic they most enjoy teaching in Grade 12, and their responses were as follows: 16 (40%) indicated that they enjoyed teaching physical geography, 18 (45%) preferred teaching human geography, 6 (15%) said map work was their favourite. This shows that the vast majority of educators are knowledgeable and capable of teaching physical and human geography with ease. This has appeared in the performance of learners. Most learners answer questions on physical and human geography well during the NSC examination, but fail to answer questions on map work (DBE, 2014).

4.3.1.7 Educators' pedagogical knowledge and learners' performance

Pedagogical content knowledge and subject content knowledge are different sides of the same coin. There is a direct relationship between the two concepts. This is because pedagogical knowledge is knowing what teaching approaches fit the content, and how the content can be arranged for better teaching. The subject matter must be interpreted by the educator to make it accessible to learners (Mji & Makgato, 2006).

In an attempt to determine the pedagogical knowledge of educators, data were collected on teaching methodologies in class. These included the use of various study resources, content coverage using the work schedule, and inclusion of learners with barriers to learning – not necessarily handicapped, but having learning difficulties because of slow learning, or defective hearing or sight. The teaching methods were discussed as they arose from the questionnaires and interviews.

Data were collected in order to examine the general methodologies and approaches employed by educators as they delivered geography lessons in the classroom. Their responses are presented in Table 4.14 with a mean for each item calculated to determine the extent to which the educators used each method to influence learners' performance in the uThungulu District. It was decided that only four main teaching methods would be examined: lecture, question and answer, group discussion and demonstration. A rating scale was used during this section of data collection, comprising 1, 'quite often', 2, 'often' and 3, 'less often'.

The results presented in Table 4.14 show that most respondents 16 (40%) answered 'often' in response to the use of the lecture method, 13 (32.5%) responded 'quite often' to using it, and 11 (27.5%) used it 'less often' in delivering geography lessons. The lecture method was found to have a calculated means of 1.95.

With regard to group discussion as a method of teaching and learning, the following responses were obtained: educators who answered 'quite often' represented 17 (42.5%) of the sampled population, 20 (50%) responded 'often', and the remaining respondents 3 (7.5%) 'less often'. The responses represent a calculated mean of 1.65.

27 (67.5%) of the respondents used the question and answer method 'quite often', and 13 (32.5%) responded 'often'. This seemed to be the preferred method, since no one reported using it 'less often'. The calculated mean for this response was 1.33.

The demonstration method, according to Table 4.13, demonstrates that 11 (27.5%) of respondents used it 'quite often' in teaching, 14 (37.5%) used it 'often' and the remaining 15 (35%) used it 'less often'. This section has a mean of 2.1 who answered on the use of the demonstration method.

Table 4.15: Educators' teaching methods and learner performance

Methods	Quite often	Often	Less often
Lecture	13 (32.5%)	16 (40%)	11 (27.5%)
Group discussion	17 (42.5%)	20 (50%)	3 (7.5%)
Question and answer	27 (67.5%)	13 (32.5%)	-
Demonstration	11 (27.5%)	14 (35%)	15 (37.5%)

Source: Field survey, 2015

The above responses demonstrate clearly that educators employ various methods in teaching geography, and do not stick to one teaching method. The question and answer method is the popular choice for most educators. This method is interactive in nature and exposes learners to asking questions and seeking clarification. The discussion method is also used to communicate lessons from educator to learner and learner to learner. The demonstration and lecture methods were less used. Most educators indicated that their choice depended on the topic being discussed, here is participant E:

'I use a particular method for a particular topic under discussion. For example, when I want to teach map work the demonstration approach is the most appropriate because the learners must practise what is taught. You can't use, for instance, the lecture method, which is just giving information to learners. But when teaching a topic like fluvial processes, where learners must visualise, you can use the lecture method because you are exposing learners to some fact they are not aware of.'

This clearly demonstrates that educators are very aware of the appropriate method to be used for any given topic. However, some educators failed to use the appropriate teaching method because they lacked the resources to do so. This is what participant F had to say about teaching with the wrong method:

'Sometimes we are forced by circumstances and resources unavailability to use the wrong methods. In my case I know the use of demonstration will be good for teaching map work, but we don't have enough maps in the schools, and therefore use the chalkboard instead of getting learners to practise.'

Another participant G blames the use of wrong teaching methods on the large class size.

'There are times you feel the lesson must be taught using questions and answer, but the class is so noisy that you can't use it; but when you begin to write on the chalkboard for them they become less noisy, and copy from the chalkboard.'

These responses show that educators who are in control of pedagogical content know how to control a class with the appropriate strategies. This has contributed to the high pass rate in their schools and the district at large.

One most important teaching method that has been recommended by CAPS for teaching geography, but has been missing completely from the methods used by educators, is the

enquiry method, which includes fieldwork. Most educators showed they knew a lot about field trips and their importance for teaching, learning, and learner performance. Data collected from educators through interviews indicated that field trips were not one of their favoured methods because of their expense. Most educators stated that funds were not being given for field trips to consolidate classroom teaching. An educator from a school with a level 4 pass rate indicated that:

'Learners understand geography better when they see natural phenomena occurring physically, but we have no funds to undertake the trips. I have proposed trips many times, but funds were not available. The school principal failed us.'

Meanwhile, a counterpart from a level 6 (participant H) pass rate school stated that:

'Field trips are very important, and we undertake them regularly, but not necessarily to a distant place: we go to areas around us.'

These responses from the educators show that educators understood this method of teaching differently. The educator from the level 4 school knows that field trips enhance teaching and learning, but he did not consider the immediate environment for them. Instead he thought of visiting a place far away that required funding which was not available. 4.3.2 School management and curriculum policy.

School management style and national curriculum policy are also factors identified to have influenced performance of learners in geography at public schools in the uThungulu District. Data were collected on the following: resources available in the schools, the learner-educator ratio, the language policy of the Department Basic of Education, and how they all affect the performance of learners.

4.3.2.1 Availability of teaching and learning resources

This section presents findings about the availability of teaching and learning resources such as textbooks, field equipment, and cartographic materials such as maps and globes. The availability of these resources is enough to suggest that the school is well resourced for teaching and learning.

4.3.2.1.1 Textbooks availability and learner performance

Most of the respondents indicated that they had enough textbooks in their schools. However, 21 (52.5%) indicated that the textbooks were available, but inadequate, 18 (45%) indicated adequate availability. One respondent (3%) indicated that the shortage of textbooks was

linked to the low return rate from Grade 12 learners. It appears that the recovery rate is not working in most of these rural schools. Table 4.15 represents the availability of textbooks in schools.

Table 4.16: Availability of textbooks

Response	Frequency	Percentage
Adequate	18	45.0
Inadequate	21	52.0
Not available	1	3.0
Total	40	100

Source: Field Survey, 2015

The low return rate of textbooks, especially in rural schools, is corroborated by participant I below:

‘In the last two years we were supplied with lots and lots of books on geography because of the new CAPS programme, but the previous learners went away with the books because there is no policy in place to reclaim them. We suggested to management, especially the principal, to retain the matriculants’ results until books were returned, but he didn’t take our advice.’

This statement implies that the lack of textbooks was less a failure of the Department of Basic Education to supply them than a failure on the part of principals to reclaim them from previous users.

4.3.2.1.2 Availability of field and cartographic materials and equipment

Table 4.16 indicates that most schools 26 (65%) were inadequately supplied with field equipment, and 10 (25%) were without a single item of equipment. Only 4 (10%) of the respondents indicated that enough equipment was available for practical map work.

Table 4.17: Availability of field equipment

Response	Frequency	Percentage (%)
Adequate	4	10.0
Inadequate	26	65.0
Not available	10	25.0
Total	40	100

Source: Field Survey, 2015

4.3.2.1.3 Availability of cartographic materials and equipment

Table 4.17 represents the responses from the respondents on the question of availability of cartographic equipment in their schools. Of the 40 respondents, 6 (15%) said that maps, globes and drawing instruments were sufficient to enhance teaching. The respondents who reported only some inadequacy were 20 (50%) of the total respondents, and respondents 14 (35%) said materials were unavailable.

It is very clear from the above data that most schools do not have adequate materials for map work. Geography is a living subject, and must be taught with appropriate instruments. The unavailability of some equipment was blamed on school vandals and the carelessness of subject educators. One participant J from a rural school with a low pass rate stated:

‘When I came to this school some ten years ago we had almost all equipment in the school well kept in a storeroom which I was using in teaching. School hooligans set the storeroom on fire and everything got burnt, and since then the Department has made no effort to supply the school with any equipment. Even in the last three years, if I’m not mistaken, the newly built computer laboratory for use for GIS was broken into, and some computers stolen. Now we don’t use it any more.’

Geography cannot be taught without equipment. Schools with adequate cartographic and field equipment are among the best performing schools in the district. In the midst of inadequacy some educators are doing well by improvising equipment and sometimes visiting neighbouring schools to use their resources, Participant H comments:

‘Every year I have to take my learners to our neighbours where they will be exposed to some of the materials we are talking about. In fact I saw some of these facilities for the first time when we visited our neighbours, and was taught to use them. This has helped us a lot to do well in our results.’

Table 4.18: Availability of cartographic material

Response	Frequency	Percentage
Adequate	6	15.0
Inadequate	20	50.0
Not available	14	35.0
Total	40	100

Source: Field Survey

4.3.2.2 Learner-educator ratio (LER) and learner performance in geography

One most important resource in school is the educator in relation to the number of learners, commonly referred to as the learner-educator ratio. In South Africa the LER is measured by the number of educators, including principals, and non-teaching staff compared to learners in the school. This ratio is often different from that between the educator and class size. Although the term LER means different things, it is used interchangeably in this study in relation to its effect on learner performance in geography.

Table 4.19 Educators' responses on LER

Learner-educator ratio	Frequency	Percentage
Applicable	7	17.5
Not applicable	33	82.5
Total	40	100

Source: Field survey, 2015

Table 4.18 shows that only a few schools in uThungulu have large class sizes. The data indicate that seven schools (17.5%) out of 40 have large class sizes, with the remaining 33 (82.5%) schools meeting the required maximum class size of 35 learners per educator or fewer. However, all educators agreed that the LER influences learner performance in their schools. The seven respondents indicated that educators with large classes have a lower matric pass rate than those with smaller classes. An educator attending to a high number of learners is likely to be unable to reach all learners in the class. It will be difficult to supply the relevant knowledge to learners needed for good performance, especially in lessons involving demonstrations. Participant E from a school with small classes confirmed this assertion in an interview:

'I have a large number of learners doing geography in Grade 12, but the learners are divided into smaller classes for easy management. This allowed me to have more time with each class, and I always finish my syllabus in time to revise before the final examination.'

The above response also indicated that a lot of teaching time is lost when handling a large class. A response from participant C with a large class stated that:

'I am aware of the difficulties and benefits of large classes, but I have no choice because of the unavailability of classrooms. I have two different classes offering geography and because of lack of time and space I have to combine the two classes. It is difficult handling this class and it affects my performance during teaching, and the learners performed poorly in examinations, including matric.'

The learner-educator ratio is a critical factor affecting learner performance as indicated by the above data from respondents. It was also revealed that a large class reduces educator competence and quality of teaching, especially assessment of learners' work. Participant J complained bitterly about the large class and competence.

'I was visited by the subject adviser some time ago, and I was embarrassed. The SA asked for all my formal tasks for the term, and I couldn't provide them because I was unable to conduct class tests and exercises because of the large numbers. Even those that I gave I couldn't mark, and that was more embarrassing.'

4.32.3 Language proficiency and learner performance in geography

Language policy in South African has contributed significantly to the performance of learners in their final NSC examination. The policy is that learners are taught in their home languages for the first three years of schooling (CAPS, 2011). In uThungulu, the dominant language is isiZulu, which is spoken by almost 99% of the district population, and very few speak Afrikaans and other languages. These two languages dominate as the medium of instruction, with isiZulu used in almost all public primary schools. Thereafter, in the fourth year, English and Afrikaans become the media of instruction. Data were collected to test the impact of language proficiency on learners' performance in geography in the uThungulu District

Table 4.20: English proficiency and learners' performance in geography

Lack of English language	Frequency	Percentage
Applicable	6	85.0
Not applicable	34	15.0
Total	40	100.0

Source: Field survey, 2015

Table 4.19 shows that English language proficiency was regarded by 34 (85%) of the respondents as an influence on learners' performance in geography, but six (15%) indicated that language proficiency did not influence learners' performance in their schools. Those who indicated that the difficulties of English did not affect learners' performance stated that most learners in their schools understood the English language. The data also reveal that some of the respondents who had no language problems were actually those from the former Model C schools, where Afrikaans or English was their first language as well as the medium of instruction. The 34 indicated that most learners could not speak English proficiently, and hence had difficulty in expressing themselves in examinations. Most of these respondents came from rural and township schools.

Using English is not only problematic for learners but for educators as well. Most educators confirmed in their interviews that use of English as a medium of instruction does not allow them to express concepts effectively to learners. This is what participant H had to say:

'We were taught in isiZulu, so the use of English for teaching doesn't make me feel comfortable at all. I use the local language because I want learners to understand whatever is being said in class. At times the use of the English language is problematic for me too,'

This response clearly demonstrates that during geography lessons most important concepts are either misinterpreted or not taught as a result of the use of the local language, since the educator's English is poor; but the textbooks are written and learners' assessments conducted in English. Nonetheless, the level of English proficiency in matric was found to be good in 34 schools; only two had an average of level 3 and 4 respectively.

The group statistics from Table 4.20, show the means and standard deviation from the responses on the influence of English proficiency on learners' performance in geography in the NSC examination in selected public schools in the uThungulu District. The results show significant variance in the means.

Table 4.21: Significance of mean difference in respondents' English proficiency

	Levene's test for Equality of variances	t-test for equality of means			
		Sig	T	df	Sig (2-tailed)
Matric results Equal variances assumed	2.827	0.101	2.275	38	0.029
Equal variances not assumed			4.306	23.885	0.00

Significance at $p < 0.05$; not significant at $p > 0.05$

An ANOVA test was conducted to find the relationship between English language proficiency and learner performance. This shows that the relationship between proficiency in the language of instruction was statistically significant $t(38) = 2.275$, p value = 0.03. The result confirmed that schools where the English and Afrikaans were used as the medium of instruction performed better than their counterparts with local language (isiZulu).

4.2.3 Home and school relationship and learner performance in geography

A school exists within a community, and therefore community involvement in the sharpening of the school through mutual cooperation is much to be desired, if not always inevitable. A good relationship through partnership between school and community enhances success in

administering the school. Parents of learners should be involved in the day-to-day running of the school by offering their services, participating in the decision-making and taking part in other school activities.

Data were collected to determine the extent to which parental involvement influenced academic performance in geography in the uThungulu District. The respondents were asked to indicate the extent of the school-parent relationship's influence on the performance of learners in geography on a five-point Likert scale. The range was 1. 'Always', 2. 'Sometimes', 3. 'Rarely' and 4. 'Never'.

Table 4.22: School-parent relations and learner performance in geography

Responses	Always	Sometimes	Rarely	Never
Invitation of parents	10 (25%)	23 (57.5%)	4 (10%)	3 (7.5%)
Advising parents	10 (25%)	10 (25%)	15 (37.5%)	5 (12.5%)
Parental support for school	10 (25%)	15 (37.5%)	12 (30%)	3 (7.5%)
Parental support for learners	10 (25%)	15 (37.5%)	12 (30%)	3 (7.5%)
Parents provide learners' discipline	14 (35%)	14 (35%)	6 (15%)	12 (15%)

Source: Field Survey, 2015

Table 4.21 shows that 10 (25%) of the 40 respondents invited parents to the school always, 23 (57%) did so sometimes, four (10%) did so rarely, and three (7.5%) had never invited parents to their schools. Interaction between parents and educators is very important because it checks the unruly behaviour of learners when they know that it will be communicated to their parents. The responses show that there is a weak relationship between the schools and the communities, which leads to poor interaction. The data indicate that schools that interact regularly with parents were those with high matric pass rates. The three schools whose

educators indicated poor interaction were also found to perform poorly in geography. It was discovered from the interview with educators later that even those who do invite parents only do so if there is a problem with their children, not to discuss the way the school is run. Participant G gave a reason for not inviting parents to discuss their children's performance.

'In my ten years in this school, I have realised that this community is not interested in education at all. In the past we did invite parents, but the attendance at meetings was so discouraging: sometimes only five parents out of 30 would turn up. It came to the point that they were no longer coming when invited, so we stopped bothering about them.'

There is little educator-parent interaction in most schools: parents are never informed or advised on their children's academic performance. On the issue of schools advising parents on the education of their children, 10 (25%) respondents stated that parents were always advised, and another 10 (25%) indicated that advice was sometimes given to parents. 15 (37%) of the respondents gave it rarely, and five (12.5%) never gave it. As with small classes, the advice that educators can give to parents has a positive effect on learners' performance in geography. Those who gave constant advice to parents were found to have a high matric pass rate, but for those who neglect to advise them, the pass rate is low. Sometimes advice is given in writing, not in meetings. *'This leads to a break in communication because most parents of learners are not educated,'* remarked an educator.

Of the 40 respondents only 10 (25%) indicated parental support for the school. 15 (37.5%) said that parents sometimes gave support, and 12 (30%) received it rarely. The remaining three (7.5%) of the respondents never received it. According to the data, schools with a weak relationship between parents and educators received little or no support from parents, whereas those with a well-established relationship always received it. Regular parental support positively influences a school's geography results. This is what participant A had to say:

'Parents are always willing to support in any way their children's education. They support materially, socially and, more importantly, financially, and this is what keeps the school going. Any time we want to embark on field trips they are always there to support, since the school has insufficient funds. As you know, a field trip is a very important means of teaching geography, and is helping.'

Table 4.21 indicates that parental support for learners was very poor. Of the 40 respondents only 10 (25%) indicated that parents always gave support. 15 (37.5%) stated that learners sometimes received it, and 12 (30%) said that it was rarely or never given. Support came in the form of provision for extra teaching and learning materials. The data indicate that schools with regular parental support for learners perform better in matric than those with little or none.

On the issue of parental discipline for their children, 14 (35%) respondents indicated that parents always disciplined them, 14 (35%) said it happened sometimes, six (15%) said it was rare, and six (15%) said that parents never discipline their learners. The issue of parental discipline is directly related to interaction between the parents and the school, and especially subject educators. Learners have the opportunity to do well in a conducive and disciplined environment, and therefore if the home is left out of the disciplining not much learning will take place. This has been confirmed by the data. The 14 educators who responded that the children were receiving discipline from parents came from some of the top performing schools in the study population, but the six educators whose learners were not disciplined by their parents were from some of the least performing schools.

The responses from the data indicate that on the whole, the relationship between schools and parents is very weak. Parents were never involved in their children's education and the day-to-day running of the schools.

4.3.4 Learner factor influencing learners' performance

The attitude and commitment of learners towards education has been identified as factors influencing their performance in the final NSC examination. Respondents contributing to the debate indicated that indiscipline, unwillingness to study and peer pressure are dominant factors influencing learners' performance in geography. The data indicate that these factors combine in influencing learners. Table 4.22 lists the educators' responses.

Table 4.23: Educators' responses on learners' attitudes towards geography

Factor	Agree	Disagree	total
Self-discipline	12 (30%)	28 (70%)	40 (100)
Unwillingness to learn	24 (60%)	16 (40)	40 (100)
Peer pressure	2 (5%)	38 (95%)	40 (100)

12 (30%) of the respondents indicated that self-discipline among learners is a factor influencing learners' performance in geography. The 12 respondents indicated that there is indiscipline among learners in their respective schools, and that is contributing to low academic performance, not only in geography but in all subjects. Educators lending support to this assertion believed that indiscipline among learners has actually generated a difficult classroom situation, making teaching and learning impossible. Sometimes this bad attitude leads to a poor learner-educator relationship, to the extent that some learners do not take instructions from educators. This is what participant F had to say in an interview:

'Lack of respect for educators is the most common problem they encounter. When an educator gives an instruction in class, learners blatantly refuse to obey, or sometimes protest in front of the educator and the rest of the learners. Blame this behaviour of disrespect on the abolishing of corporal punishment in our schools in the name of child right. Learners know educators cannot punish them, especially by caning, and I wish corporal punishment could be brought back.'

However, 28 educators (70%) did not consider indiscipline among learners as a factor worth consideration, and rated discipline in their schools as good. Most respondents 24 (60%) said the main problem was the learners' unwillingness to learn (the culture of learning in schools is very poor). The disruptive behaviour of learners leads to a refusal to study. In support of the data participant D remarked:

'Learners are no longer committed to learning because they are not motivated by academic work, but prefer social and political issues. Learners need to be forced to learn during examinations, even the internal examinations, and this makes them unprepared for examinations all the time.'

16 (40%) of the respondents did not agree with that assertion. Peer pressure was seen by two (5%) as a contributing factor in learners' performance. Learner motivation by the school environment contributes so much to eliminate peer pressure. Learners will consider their educators, teachers, principals and parents as role models, and thus cordial relations among these stakeholders help to eliminate peer influence. The data show that most schools (95%) are without peer influence.

4.4 Conclusions

The findings of the study have been analysed in this chapter. The first research question was answered by establishing the trend of learners' general performance in geography for the past five years, and in the sampled schools in the uThungulu District. The overall results reveal that the performance in geography in the uThungulu District was very good judging by the quantity and quality of the five-year average results in the Grade 12 final NCS examinations. Data collected on the factors influencing such good performance revealed a multiplicity of factors which were found to have enhanced and impeded performance. Four main factors were identified as directly related to teaching and learning in the classrooms: teachers' characteristics; resources for teaching, including one that is indirectly related to teaching, parental involvement in education; and the attitude of learners. The collected data were satisfactory in answering the primary research question.

The final chapter presents the discussions of the findings, recommendations to stakeholders, and a general conclusion to the study.

CHAPTER FIVE

DISCUSSIONS, RECOMMENDATIONS AND CONCLUSION

5.1 Introduction

This final chapter consists of findings and summaries from this study in an attempt to answer the fundamental research questions. The discussions of the findings provide the link between the reviewed literature in Chapter 2 and the analysis in Chapter 4, on how various factors relating to educators' qualifications, management and curriculum policies, parental involvement and learner commitment influence the performance of learners in geography in the uThungulu District. The discussion provides more in-depth understanding from the raw data collected from the questionnaires, interviews and document analyses which were analysed in Chapter 4. Various recommendations are made and directed at various stakeholders for improving performance in geography in the district. The chapter concludes with recommendations for future study.

5.2 Discussion of findings

5.2.1 Availability of educators and learner performance in geography

All forty schools who participated in the study had educators teaching geography. However, two educators representing 5% did not have any higher qualification in geography. This result suggests that geography educators are not available at all schools and teaching. This is in confirmation of findings by Mohammed (2014) reported shortage geography educators in Nigerian schools. The deployment of life sciences educators to teach geography in uThungulu district also confirmed the findings of Hanushek and Rivken (2004) who argue that in cases of unavailability of educators anyone is employed to fill the vacuum.

The finding also revealed that these two educators did have no qualifications in geography but the pass percentages of their schools were above average with learners scoring level six (6). This result support and defeat the argument raised by researchers over educators' subject content knowledge (SCK) and pedagogical content knowledge (PCK). A direct relationship has been established between educators' subject content knowledge and pedagogical content knowledge and learners' performance. This finding contravenes the arguments that educators with high level of subject matter (SCK) tend to prepare and teach well and contribute to higher learner achievement (Makgato & Mji, 2016). However, the assertion that educators with high pedagogical knowledge tend to teach and achieve results (Goldhaber & Brewer,

2000; Rice, 2004) is upheld by this finding. This result is not in anyway suggesting that any educator is capable of teaching geography

5.2.2 Educators' qualifications and learners performance in geography

The result from the research with regard to teachers' qualifications shows that most educators (72.5%) in the sample were qualified to teach. However, this figure falls below the average national (97%) and provincial (92%) number of qualified educators (Stats SA, 2013). The KwaZulu-Natal average of 92% has been described as the lowest in South Africa (DBE, 2012), and has been struggling to recruit qualified educators (Stats SA, 2013). The result therefore confirmed that there is a significant number of educators in the uThungulu District who do not conform to the Minimum Requirements of Teacher Education Qualifications Policy of 2007. The policy requires that all educators should be in possession of a B.Ed degree or an appropriate first degree with a one-year diploma qualification in education (DHET, 2011).

However, it was found that educators' qualifications are not significant for learner performance in geography in uThungulu District schools. A further ANOVA test conducted shows that the relationship between educators' qualifications and learners' performance is insignificant. The ANOVA calculation of $F(2) = 1.694$, $p \text{ value} = .163$ ($P > 0.05$) for this test suggests there is no relationship between the qualifications of educators and learners' performance in geography in the matric examination. The findings indicate that an educator's high qualification does not necessarily lead to more learners passing their final examination in geography. This could also mean that the highest qualifications were obtained in other fields, not necessarily in geography.

The findings are inconsistent with those of Akinsolu (2010) and Adeyemi (2009), who found educators' qualifications to be associated with learners' performance in final examinations in Nigeria. In South Africa, Mji and Makgato (2006) and Ncanywa (2014) also found educators' qualifications and learners' performance to be highly correlated. However, the findings in this study are in agreement with those of Goldhaber and Brewer (2000), who found a negative correlation between learners' performance and educators' qualifications in the US. The most recent research in developing countries by Hanushek and Rivkin (2006) and Glewwe, et al. (2011) also found no significant relationship between educators' qualifications and learners' performance.

What is intriguing about educators' qualifications and learners' performance is that the link cuts across all schools, both rural and urban, and therefore no one is disadvantaged. An educator with M.Ed was found teaching in a rural school, and educators with a diploma were found in urban and township schools.

There are possible reasons accounting for this finding. Each educator received different training from different institutions. The researcher is not questioning the quality of their training. As an educator mentioned earlier during the interview, the situation suggests that less qualified educators put more effort into learning the content before teaching, which suggests the teaching is being done through experience rather than academic qualification. Another possible reason for this finding being inconsistent with earlier researchers is the subject specificity of this research.

5.2.3 Educator teaching experience and learner performance in geography

Educators with more than five years of continuous teaching are considered to be experienced (Akinsolu, 2010). The results reveal that most of the geography educators in the sampled schools had considerable experience in teaching the subject in Grade 12. 72% of the educators had more than five years' teaching experience. As has emerged from the analysis, educators from the high-performing schools were found to have considerable teaching experience, and had been teaching consistently in their respective schools, whereas the low-performing schools were found to have educators with the least teaching experience and high geography educator turnover. Hence educators' experience was found to be associated with learners' performance in geography.

A statistical analysis of the data reveals a significant relationship between educators' years of teaching and learners' performance in geography in the NSC examination in the uThungulu District: $F(4) = 6.44$, $p \text{ value} = 0.001$; $p < 0.05$. This result confirms that educators' years of teaching experience influences learners' academic performance in geography in NSC examinations in uThungulu. It is conclusive that the more experienced the educators, the more they can handle the classroom and teaching dynamics to achieve results (Ncanywa, 2014).

This finding supports Adeyemi (2009) and Akinsolu (2010), who found that educators' teaching experience correlated significantly and positively with learners' academic

performance in Nigeria. It also corroborates the work of Hanushek (2005) and Darling-Hammond (2006) who found experienced educators influencing learners' academic performance in the USA. Similarly, Ncanywa (2014) recorded a significant relationship between learners' performance and educators' experience in teaching in the Eastern Cape of South Africa.

Notwithstanding the above conclusions, a study carried out by Glewwe, et al. (2011) found a weak relationship between teaching experience and learners' performance. Using meta-analysis (2011) the authors concluded from their study that there is a weak relationship between educators' teaching experience and learners' performance in mathematics.

Educators' teaching experience has proven beyond doubt to be a powerful tool for classroom management and delivery of lessons. The evidence from this study is that the educators' experience should combine with consistency of tenure: educators should spend more years in one school teaching the same subject. Following the English axiom 'experience is the best teacher', management of schools should deploy the experienced educators in the Grade 12 classes.

5.2.4 Educators' marking experience and learners' performance in geography

Tied to educators' teaching experience is their marking experience and its influence on learner performance in geography in the NSC examination in public schools in the uThungulu District.

Significant differences were observed in Table 4.8 with respect to educators with marking experience and the matric pass rate in their schools. It is expected that educators with marking experience tend to have the experience and ability to teach learners to answer final examination questions. From the test of equality $t(38) = 3.03$, $p(2\text{-tailed}) = 0.00$ ($p < 0.0005$). The result is significant: there is a significant difference in the matric pass rate according to educators' marking experiences. This finding shows that learners taught by educators with marking experience performed better than those who were taught by educators inexperienced in marking. Marking experience contributes greatly to educator competence in the assessment of learners, and significantly contributes to learners' performance in answering higher order questions that have always been a problem for most learners.

5.2.5 Educators' subject content knowledge and learners' performance in geography

The vast majority of respondents exhibit a very positive attitude towards the subject. Apart from two respondents (5%) who were found to have life sciences as their major teaching subject, but dislike teaching geography in Grade 12, the other 38 (95%) have a good positive attitude towards the subject.

However, an attitude toward the subject and actual teaching are two different things. This is clear from the finding that educators have diverse attitudes towards the three main topics in geography. 15% of the respondents have some problems with physical geography, and another 15% reported problems in teaching human geography. The vast majority (70%) of the respondents indicate problems in teaching map work. and its GIS component. This finding confirms the earlier work of Okwilagwe (2012) and Rilwani, et al. (2014), who found a positive attitude in geography educators in Nigeria, yet they were failing to handle map work effectively. This result also confirmed the chief examiners report on map work on a year-on-year basis:

Most candidates could not identify simple man-made and natural features on the maps and could not interpret the photos. Simple calculations involving gradient, vertical exaggeration and areas were problematic to learners. Similarly, the interpretation on the concepts of GIS shows misconceptions. (DBE, 2014: 77-83)

Educators expressed their dislike for the teaching of map work because of lack of resources in the schools. There are certain topics in map work that cannot be taught without topographical maps, drawing instruments and computers which were found to be absent in some schools. The topics on GIS were problematic to almost all respondents (12.5%). The result shows that learners in these schools would have a problem with map work in their final year examination. This finding is not limited to uThungulu District schools, as the general performance of map work in the NSC examination nationwide has been described as problematic (DBE, 2014).

5.2.6 Educator's teaching strategies and learners' performance in geography

The knowledge of teaching includes the interpretation of the subject content and ways to transmit the knowledge for learners to understand. The first step in teaching, is understanding what is to be taught and how it should be taught. The four most popular teaching methods: lecture, group discussion, question and answers and demonstration were employed and used

one way or another by each respondent in teaching geography. There is a relationship between teaching methodology and learners' performance in geography. Three of the methodologies (lecture, question and answer and group discussion) were found to be detrimental to learners' performance, the exception being the demonstration method. This means that the three methods should not be used too much in teaching geography. Instead, they should be used to complement each other. None should be used too much in isolation (Innes, 2012).

This finding confirmed the work of Weeden (2007), Adeyemi (2008) and Omoro and Nato (2014), who all agreed that learners must be exposed to lessons through demonstrations, and that the transmission methods (discussion, and question and answer) should be used less in teaching geography. According to Omoro and Nato (2014), learners enjoy lessons involving an interactive approach (demonstration, field trips, experimentation and projects) more than other methods, and they benefit learners' examination performance. Weeden (2007) believes that learners learn better if they are actively involved in the lesson: it sustains their interest and leads to good performance in an examination.

However, this finding is in contrast with the work of Adeyemi (2008), who found an expository method statistically significant in the performance of learners in geography in their final-year examinations in Ondo State in Nigeria. The author found other methods such as enquiry, deduction, induction, field trips, and lectures, in that order, to affect learners' performance.

5.2.7 Instructional materials and learner performance in geography

Resources and instructional materials are vital in the teaching and learning of geography. Four of the most important ones were identified, and respondents were asked to indicate their availability in their schools: these are textbooks, field equipment such as a prismatic compass, measuring tapes, cartographic materials such as maps, globes and drawing instruments, and above all a laboratory. The result shows a bleak picture and hence its influence on learners' performance.

Textbooks are very important teaching and learning materials and directly related to reading and writing (Fuller, 1987). The issue of textbook availability was responded to, and more than half the respondents (52.5%) indicated having an adequate supply of textbooks, but about 45% said they cannot cover all learners. The remaining respondents (3%) said

textbooks were unavailable. The finding in this study is that geography textbooks are available in most schools in the uThungulu District. This finding is consistent with the general textbook policy (though not, unfortunately, the practice) in the country, which stipulates that no school or learner shall be without a prescribed textbook (DBE, 2014). This is consistent with the findings in other African countries. Rilwani, et al. (2014) found the availability of geography textbooks in Nigeria schools to be consistent with learner performance in geography. The authors found that learners in schools with sufficient geography textbooks performed better than those lacking textbooks. The authors caution that the availability of textbooks is not a guarantee of good performance; results depend on how well or badly the educator has used them.

Contrary to the findings of Madiwalar (2012), who reported a shortage of geography textbooks in Ethiopia, the shortage reported in this finding is a result of school systemic failure. The respondents state that the Department did supply textbooks, but the schools failed to recover them from the previous learners; hence the shortage.

Field equipment like the textbook is very important for practical map work teaching. Measuring tools such as the tape measure, ranging poles and prismatic compass are among the fundamental tools required. Most respondents (65%) indicated inadequacy, and 25% of the respondents had never had a single field exercise because equipment was not available. However, 10% did have and use some equipment. This finding is not different from that of other researchers, who found geographical equipment completely missing from schools in other parts of Africa (Madiwalar, 2012; Rilwani, et al. 2014). Lack of this equipment in schools can be blamed on the educators concerned, since it is their responsibility to appeal to the school managements to buy equipment. Lack of it might in fact be due to educators not knowing enough about using it.

Drawing and measurements are closely associated with geography, especially during map work lessons. The study shows that most schools do not have many cartographic instruments. Of the 40 respondents, only 6 (15%) said they had been adequately supplied with topographical maps, atlases, globes and drawing instruments. Most respondents (50%) complained of shortage, and the remaining 35% said equipment was simply not available. This finding shows that most schools in the uThungulu District lack basic instruments and resources for map work. This seems to be a national phenomenon in that most learners fail to

answer questions on map and photo interpretation in the final examination. In the 2014 matriculation examination, only 44% of the candidates were able to answer and pass in map and photo interpretations (DBE, 2014).

Most respondents (60%) do not have a laboratory for their geography lessons. This has made it difficult to keep some tools and instruments for teaching and learning. Topics in geomorphology and climatology need a well-furnished laboratory for effective teaching and learning. It is unfortunate that only 10% of the respondents said they had one. Generally inadequate infrastructure is a national phenomenon. Buildings that could be used as laboratories have been turned into classrooms, pushing the equipment into the principal's office, and thus not using it. Well-equipped laboratories would motivate learners and educators, and enhance effective teaching and learning (Weeden, 2007).

Field trips are an integral part of teaching and learning in geography, when learners have hands-on lessons where physical features studied in books are made visible before them. Unfortunately, most schools do not have the funds to make use of this important resource. This is why most respondents (55%) have never undertaken field trips in their entire teaching career. Only 7.5% have taken some field trips, because money was made available. The remaining respondents had to ask learners to contribute money for the trip, which put much financial pressure on the learners and their parents. The school management did not fund them.

5.2.8 Educator-learner ratio and learners' performance in geography

33 educators (82.5%) did not have a problem with the class ratio, but seven did indicate having very large classes for geography lessons. The independent t-test result shows no statistical significant relationships between the means of the responses. The significant test shows equal variance in the means with $F(38) = 3.380$, $p = 0.004$. ($p < 0.05$). However, the significant test at equal variance revealed sig. (2-tailed) = 0.1 $p > 0.05$. This result shows no significant relationships between the means, indicating that the educator-learner ratio has no influence on learners' performance in geography in the NSC examination in public schools in the uThungulu District.

This finding is in confirmation of earlier work by Banerjee (2007) and Duflo, Dupas and Kremer (2008) on the impact of the learner-educator ratio on learner performance in India and Kenya respectively. Banerjee (2007) found no correlation between class size and learner

performance, and concluded that the teaching experience of the educator contributed more to performance, even in a large class. . Similarly, Duflo, et al. found no correlation between learner performance and the learner-educator ratio in Kenya

However, these results are contradicted by those of researchers such as, Raychaundhuri, et al. (2010), Kaloki (2012), Ajani and Akinyele (2014) and Ncanywa (2014) who found the learner-educator ratio to be an influence on learners' academic work. A study conducted by Ncanywa (2014) in the Eastern Cape on factors influencing learners' performance found that the learner-educator ratio influenced performance. Ajani and Akinyele (2014), in their studies on factors influencing the mathematics performance of learners in Nigeria, produced a positive correlation between the learner-educator ratio and performance in mathematics. The result indicated that larger classes tend to produce poor results than smaller classes. An earlier study done in Kenya by Kaloki (2012) on learner-educator ratio and learners' performance revealed that large classes produce poor results among learners. Raychaundhuri (2010), writing on factors affecting learners' performance in Agartala Municipal Council Area Schools in India, reveals that the higher the learner-educator ratio, the worse was the performance of learners.

The possible explanation for this finding might be that fewer learners are taking geography as an optional subject than other optional subjects. However, 17.5% of in the district are still battling with their learner-educator ratio. Most of the schools with a high ratio are located in rural areas or townships, whereas those with smaller classes are mostly in towns. The Department of Basic Education should, as a matter of policy, address this disparity, because overlarge classes have a negative impact on the supply of resources, and educators' ability to work and control their classes. A geography class needs to be the right size for effective teaching and learning during map work lessons. A small class would enable the educator to reach every learner in order to finish a lesson and the syllabus on time, and encourage friendly cooperation between learners and their educators.

5.2.9 English language proficiency and learner performance in geography

Most respondents (85%) agreed that English language proficiency was a strong contributor to learner performance in geography in the NSC examination in selected secondary schools in the uThungulu District. However, the remaining respondents (15%) did not agree. The t-test

performed shows the following result: $t(38) = 2.28$, $p = 0.03$, $(p) < 0.05$. This result shows positive and significant influence on learners' performance, and supports the earlier work of Mji and Makgato (2006), Baik and Greig (2009), Dhurumraj (2013) and Mitchel (2015).

In South Africa, separate studies conducted on the performance of learners in mathematics and physical sciences and English language proficiency by Mji and Makgato (2006) and Dhurumraj (2013) showed a positive correlation. An investigation into the causes of poor performance of learners in mathematics and physical sciences in District 3, Tshwane, by Mji and Makgato (2006) revealed English as a second language to be a predictor of learner performance. A similar study in Pinetown schools in Kwazulu-Natal by Dhurumraj (2013) on the use of English as the medium of instruction for native language speakers was found to influence learners' performance significantly. The finding was confirmed in the work of Mitchel (2015) on the effect of English language proficiency on biology MCAS performance in the USA that shows a statistical significance. Learners' performance was affected by their ability to speak and write English proficiently. However, the finding from this research is in sharp contrast with the work of Uyehara, Magnassen, Itano and Zhang (2007), who found no association between nursing performance and English language proficiency in Turkey, but found personal networking a factor influencing nurses' performance.

This finding reveals the disparity between the educational system in the uThungulu District in particular and the nation at large. The respondents (85%) stating English language proficiency as a factor influencing geography performance are from the previously disadvantaged schools, which are still struggling with the language as second language. The remaining 15% of the respondents are from the former model C schools and some township schools, where perhaps Afrikaans is a medium of instruction and examination. Those schools where the languages of instruction and examination are quite different from each other would have a problem. In some rural schools in the district, the local language dominates over English ((Mji & Makgato, 2006; Dhurumraj, 2013) as the official language for instruction in the FET band.

The above finding shows that learners taught in their mother tongues, such as Afrikaans, tend to perform better than those taught in two separate languages and examined in one, in this case isiZulu and English. This finding raises some serious questions of curriculum policy on language as a medium of instruction. If learner performance is to be improved, in particular

in geography, there is a need to take a second look at curriculum policy on the language of instruction. All learners must be treated equally, whatever their native language may be. No one group should be advantaged over others.

5.2.10 Parental involvement in education and learners' performance in geography

Poverty and parental involvement in their children's' education were found to be the main home factors influencing learner performance in geography in the NSC examination in the uThungulu District. 85% of the respondents indicate poverty as the main home influence on learners' performance in geography. Most schools in the uThungulu District are rural and farm schools and the parents of these learners are poor. The poverty-stricken homes are demoralising for learners as money and food are scarce (Hassan, 2009). This has made it difficult for parents to actively participate in their children's academic activities, resulting in homework not being done, a lack of teaching and learning materials, and a failure to discipline their children (Hassan, 2009).

Parental involvement was found to be a factor influencing learners' performance in geography in the uThungulu District. Most educators (80%) indicated that parents of learners did not care much about their children's education, and were not involved in school activities. This, however, was found to be true of most schools and their managements, who failed to involve parents in the affairs of the school. The findings from Table 4.2 show that only 25% of the respondents' schools regularly invite parents to attend meetings involving their children's academic affairs. The shocking finding was that about 7.5% of the respondents had never had a meeting with the parents in the last five years, though over half of the respondents (67.5%) did sometimes invite parents to see them.

Excluding parents from school activities adversely affects learners' performance (Hassan, 2009). According to the author, involving parents in school activities encourages learners to do well academically, and establishes a strong relationship between home and school, a sense of belonging in the minds of learners (Steinberg, 2006). The involvement of parents in school activities, especially in educator-parent meetings, enhances parental knowledge of the two environments, and this translates into their children's good performance (Mji & Makgato, 2006). From this finding it is very clear that very few schools engage parents in their affairs, and this has a bad effect on learners' results, as the respondents indicated.

5.3 Recommendations

The following recommendations are based on the findings from this study. These would help to improve educator quality, management of school resources and curriculum policies, strengthen the relationship between schools and parents, contribute to the motivation and counselling of learners, and finally encourage further research on the issues arising from the study.

5.3.1 Improving educator quality

Educators' qualifications were identified to be a strong predictor of learners' performance in geography in the uThungulu District. Quite a number of educators in the district are still without the departmental requirement to teach. The recommendation is that educators must be given study leave with pay to go and upgrade their academic qualifications. Combining teaching and learning has been very challenging to most of them, especially those in the rural areas, who have to wake up in the early hours of the day only to return at dusk.

In the case of the longstanding geography educators in the district, strengthening their content knowledge in map work skills, especially GIS, should be prioritised by the subject specialists through in-service programmes. Likewise, the newly deployed educators should be strengthened in their pedagogical knowledge. The researcher is recommending an established, professional, peer-reviewing centre to teach and improve map-work knowledge among geography educators.

Educators obtaining consistently good matric pass rates must be retained for a significant period of time. The most experienced and dedicated educators are leaving their schools for the well-endowed schools, and others are taking early retirement to have access to their retirement annuities. This clearly shows a lack of motivation among the experienced educators. There is a need for the Department of Basic Education to motivate these educators by means of long-service awards that will put some cash in their pockets. It will also motivate the young and upcoming ones to aspire to that distinction.

Since marking of the final NSC examination has been found to have contributed significantly to learners' performance, it will be of great effect if all educators can be involved in this exercise. The recommendation for educators' participation in marking will go a long way to improve both teaching and learning in the classroom. The marking experience will enable

educators to be precise in their teaching as they know what will be expected of the learners in their final matric examination. The opportunity to mark the examination will be all the more attractive as markers are paid for the work.

5.3.2 Curriculum-related factors

A small class size was found to be a factor influencing learners' performance in geography. The Department of Basic Education should, as a matter of urgency, build more classrooms in order to accommodate the large number of learners in schools, especially the previously disadvantaged schools, in order to facilitate a fair distribution of resources during lessons. More than one subject educator must be employed to teach geography in Grade 12 since this was found to have significantly influenced learner performance in schools. The additional educators must possess special knowledge in order to take on critical areas of the topic.

The language policy in the country is benefiting all learners when it comes to performance in the final matric examination. English as the medium of instruction, especially for learners who are second-language speakers, was found to have been detrimental to learners' performance. However, their counterparts who used Afrikaans as their first language and their medium of instruction and examination were found to have performed very well. Therefore there is a need to take a second look at the policy, but in the meantime the teaching and learning of English should be strengthened in the schools where it is a second language. Well-qualified educators should be employed by the Department to teach English as a second language to the local people. Moreover, the foundation phase educators should teach reading and writing effectively. The ability of learners to read and write determines their performance in geography. Geography educators must also improve their proficiency in the language of instruction since this will help explain geographical concepts well to learners.

The Department of Basic Education and school managements as a matter of urgency should provide schools in the uThungulu District with teaching and learning materials. Schools should be allocated funds to purchase basic equipment for learning and teaching, such as maps, globes, DVDs, audio tapes, software for GIS and enough textbooks to cover a shortage. The current textbook policy must be reviewed so that school principals can buy textbooks as and when they deem it necessary. More importantly, educators should be resourceful. There is an avalanche of resources available through the internet that can supplement their shortages, taking cognisance of the patent rights of the owners. Schools

must subscribe to websites where material will be made available to them. It must be noted also that the provision of these resources, especially computers and their accessories, should be accompanied by extensive training of educators to enable them to handle these resources, and not turn them into ‘white elephants’.

5.3.3 Improve parent-school relationship

Parental factors, including, among others, poverty, inability to visit schools and lack of general concern for their children’s education, are found to be responsible for poor performance in geography by learners. It is recommended that a strong parent and educator relationship be established in all schools. The school is a small community harbouring community members, and there is need for a strong tie between the two communities to enhance teaching and learning. Parents should also be sensitised through regular meetings and workshops about the importance of the relationship between them and the school and their roles as parents in the relationship.

Parents’ involvement in school activities would make them aware of some issues confronting the school and their children. The issue of discipline would also be addressed since reports on the unruly behaviour of their children would be made known to them through this relationship.

5.3.4 Recommendation for further studies

This study has highlighted a number of factors that influence learning, teaching and learners’ performance in geography in the final NSC examination in selected public schools in the uThungulu District. However, other relevant factors were not picked up by this study during data collection, and they need further investigation. An investigation which will expand on this study involving respondents such as learners, school management and parents is encouraged. Furthermore, rigorous large-scale research and evaluation, using more controlled experiments in determining the range of factors that influence the teaching and learning of geography, is also recommended.

5.4 Conclusion

Significant progress has been made with regard to improvement in quality education. Nevertheless, the quality of geography education for most learners is still far from satisfactory in the uThungulu District. This study set out to discover the performance trends in the study of geography in the uThungulu District for the period 2009 to 2014, and the

factors that have influenced these trends. It has highlighted the most significant predictors of geography performance within the uThungulu District. According to the available data, a number of issues have arisen and suggestions been made for the improvement of education in general and geography in particular. Apart from equity and access, which have improved significantly in the district and nationally, quality can also be improved by attending to educators' characteristics such as qualifications and professionalism; school management and curriculum policies; community and parental involvement in their children's education; and the behaviour of learners, especially the non-performing learners. If these challenges are addressed, the quality of education and performance in geography within the district will be significantly improved.

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APPENDICES

APPENDIX A

University of Zululand

P.O. Box 32

Empangeni

3880

THE CIRCUIT MANAGER

RE: REQUEST TO CONDUCT A RESEARCH PROJECT

I am a student currently studying for Master in Education at the University of Zululand. I am conducting a research as a requirement for award for the degree. I humbly seek for permission to conduct the research in some high schools in your management circuit. **The purpose of the research is to identify factors influencing learners' performance in geography in the Senior National Certificate Examination in UThungulu District schools.**

The research involves interviewing grade 12 geography teachers. Each interview section will not exceed 45 minutes. It will also involve analysis of NSC geography results from the period 2009-2014. The research will be conducted at a time when the schools are less busy.

Confidentiality and anonymity will be highly observed. Participation is voluntary and participants are free to withdraw from the research at anytime. Findings from this research are for the benefits of the Department of Education and the nation as whole.

Please do not hesitate to contact me or my supervisor if you need more clarifications.

Thank you for your co-operation.

Yours truly

(PKA Ahiaku, BA, Hon UCC, Hon UZ

Supervisor: D.W. Mncube (PhD)

Email: mangoees@yahoo.com.

MncubeD@unizul.ac.za

Cell: 0794477525

Cell: 0829324338

APPENDIX B

PERMISSION TO CONDUCT RESEARCH IN YOUR SCHOOL

University of Zululand

P.O. Box 32

Empangeni

3880

The Principal

PERMISSION TO CONDUCT RESEARCH IN YOUR SCHOOL

I am Philip Kwashi Atiso Ahiaku (Student number: 20120008) a registered student at the University of Zululand. I am currently undertaking Master in Education (MEd) with focus on geography education in high schools in UThungulu District.

This letter is requesting for permission to work with your teachers favourably. I would like to work with geography teachers who are currently teaching grade 12 with regards to my research topic: **Factors Influencing Learners' Performance in Geography in National Senior Certificate Examination in UThungulu District Schools.**

The insights gained from this research work will benefit education as a whole and geography education in particular both in the district and province, and probably the country as a whole.

Please do not hesitate to contact me or my supervisor if you need more clarifications.

Thank you for your co-operation.

Yours truly

(PKA Ahiaku, BA, Hon UCC, Hon UZ

Supervisor: D.W. Mncube (PhD)

Email: mangoees@yahoo.com.

MncubeD@unizul.ac.za

Cell: 0794477525

Cell: 0829324338

APPENDIX C

REQUEST FOR PARTICIPATION IN RESEARCH STUDY

University of Zululand

P.O. Box 32

Empangeni

3880

Dear participant

REQUEST FOR PARTICIPATION IN RESEARCH STUDY

I am Philip Kwashi Atiso Ahiaku (Student number: 20120008) a registered student at the University of Zululand. I am currently undertaking Master in Education (Med) with focus on geography education in high schools in UThungulu District.

This letter is requesting for permission to participate in the research study on **Factors Influencing learners' Performance in Geography in the National Senior Certificate Examination within UThungulu District Schools.**

The insights gained from this research work will benefit education as a whole and geography education in particular both in the district and province, and probably the country as a whole.

Please find attach a copy of the standard ethics protocol.

Thank you for your co-operation.

Yours truly

(PKA Ahiaku, BA, Hon UCC, Hon UZ)

Email:mangoees@yahoo.com.

Cell: 0794477525

APPENDIX D

STANDARD ETHICS PROTOCOL

I am Philip Kwashi Atiso Ahiaku (Student number: 20120008) a registered student at the University of Zululand. I am currently undertaking Master in Education (MEd) with focus on geography education in high schools in UThungulu District in Kwa-Zulu Natal Province.

Your willingness to participate in this research is very much appreciated. I would like to assure you that as a participant in this research, you are protected by ethics of research. Your rights to participate in this research include:

- Voluntary participation
- Refusal to answer questions any time
- Withdrawal from the research at any time
- Using language of your choice
- Your confidentiality and anonymity

Remember part or a whole of this information would be use for thesis and publication of journal articles. Your name or name of your school would not be used or published either in the thesis or the journal without your permission.

.....

Signature of participant

.....

Name of participant

.....

Date

APPENDIX E

APPROVAL LETTER FROM KZN DEPARTMENT OF EDUCATION



education

Department:
Education
PROVINCE OF KWAZULU-NATAL

Enquiries: Nomangisi Ngubane

Tel: 033 392 1004

Ref.:2/4/8/477

Mr PKA Ahiaku
PO Box 1481
EMPANGENI
1481

Dear Mr Ahiaku

PERMISSION TO CONDUCT RESEARCH IN THE KZN DoE INSTITUTIONS

Your application to conduct research entitled: **"FACTORS INFLUENCING LEARNERS' PERFORMANCE IN GEOGRAPHY IN THE NATIONAL SENIOR CERTIFICATE EXAMINATION IN PUBLIC HIGH SCHOOLS WITHIN UTHUNGULU DISTRICT"**, in the KwaZulu-Natal Department of Education Institutions has been approved. The conditions of the approval are as follows:

1. The researcher will make all the arrangements concerning the research and interviews.
2. The researcher must ensure that Educator and learning programmes are not interrupted.
3. Interviews are not conducted during the time of writing examinations in schools.
4. Learners, Educators, Schools and Institutions are not identifiable in any way from the results of the research.
5. A copy of this letter is submitted to District Managers, Principals and Heads of Institutions where the intended research and interviews are to be conducted.
6. The period of investigation is limited to the period from 20 July 2015 to 31 August 2016.
7. Your research and interviews will be limited to the schools you have proposed and approved by the Head of Department. Please note that Principals, Educators, Departmental Officials and Learners are under no obligation to participate or assist you in your investigation.
8. Should you wish to extend the period of your survey at the school(s), please contact Miss Connie Kehologile at the contact numbers below.
9. Upon completion of the research, a brief summary of the findings, recommendations or a full report / dissertation / thesis must be submitted to the research office of the Department. Please address it to The Office of the HOD, Private Bag X9137, Pietermaritzburg, 3200.
10. Please note that your research and interviews will be limited to schools and institutions in KwaZulu-Natal Department of Education.

UThungulu District

Nkosinathi S.P. Sishi, PhD
Head of Department: Education
Date: 14 July 2015

KWAZULU-NATAL DEPARTMENT OF EDUCATION

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

APPENDIX F: ETHICAL CLEARANCE CERTIFICATE

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



RESEARCH & INNOVATION

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ETHICAL CLEARANCE CERTIFICATE

Certificate Number	UZREC 171110-030 PGM 2015/178									
Project Title	Factors influencing learners performance in geography in the National schools certificate examination within uThungulu District									
Principal Researcher/ Investigator	PKA Ahiaku									
Supervisor and Co-supervisor	Dr DW Mncube					Dr MAN Duma				
Department	Social Scinces Education									
Nature of Project	Honours/4 th 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 proposal and the documents listed on page 2 of this Certificate.

- Special conditions:**
- (1) The Principal Researcher must report to the UZREC in the prescribed format, where applicable, annually and at the end of the project, in respect of ethical compliance.
 - (2) Documents marked "To be submitted" (see page 2) must be presented for ethical clearance before any data collection can commence.

The Researcher may therefore commence with the research as from the date of this Certificate, using the reference number indicated above, but may not conduct any data collection using research instruments that are yet to be approved.

Please note that the UZREC must be informed immediately of

- Any material change in the conditions or undertakings mentioned in the documents that were presented to the UZREC
- Any material breaches of ethical undertakings or events that impact upon the ethical conduct of the research

APPENDIX G: PLIAGARISM REPORT

Turnitin Originality Report
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[Wilmot, P.D., and C. Dube. "Opening a window onto school geography in selected public secondary schools in the Eastern Cape Province", South African Geographical Journal, 2015.](#)

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APPENDIX H: CERTIFICATE OF PROOF READING

CERTIFICATE

This is to certify that I, Alan Nigel Bell, am the editor of Philip Kwashi Atiso Ahiaku's M.Ed thesis entitled *Factors influencing learners' performance in geography in the national senior certificate examination in selected public high schools within uThungulu District*.

A, N. Bell BA (Hons) (Cape Town) MA (Rhodes)

Research Associate, University of Zululand

APPENDIX I: QUESTIONNAIRE FOR TEACHERS

The purpose of this questionnaire is to collect data on factors influencing learners' academic performance in geography in the NSC examination. Any information provided will be treated with uttermost confidentiality and will be used for academic purposes only. Kindly tick (✓) where appropriate or fill in the required information.

Name of school.....

Name of circuit..... **PART**

ONE: INFORMATION ON THE TEACHER

1. Gender [1] Male [] [2] Female []

2. Age [1] Less than 25 years [] [2] 25-34 years [] [3] 35-44 years []
[4] 45-54 years [] [5] Over 55 years []

3. What is your nationality? [1] South African [] [2] Non-South African []

4. Highest academic qualification

[1] PhD [] [2] Med [] [3] MSc [] [4] Bed []

[5] BA [] [6] BSc [] [7] Dip. []

[7] Others (please specify).....

5. How long have you been teaching geography in this school?

[1] Less than 1 year [] [2] 1-4 years [] [3] 5-7 years []

[4] 8-10 years [] [5] Over 10 years []

6. How long have you been teaching geography in grade 12?

[1] Less than 1 year [] [2] 1-4 years [] [3] 5-7 years []

[4] 8-10 years [] [5] Over 10 years []

7. Is geography your major subject? [1] Yes [] [2] No []

8. If No, what is your subject speciality?

.....

9. Do you mark final NSC examination paper?

[1] Yes [] [2] No []

PART TWO: TEACHING AND LEARNING RESOURCES

10. State, Adequate, Inadequate or Not available to the following resources in your school

- | | | | | |
|------|-------------------------|------------------|--------------------|-----|
| i. | Text books | [1] Adequate [] | [2] Inadequate [] | [3] |
| | Not available [] | | | |
| ii. | Field equipments | [1] Adequate [] | [2] Inadequate [] | [3] |
| | Not available [] | | | |
| iii. | Cartographic equipments | [1] Adequate [] | [2] Inadequate [] | [3] |
| | Not available [] | | | |
| iv. | Laboratory | [1] Adequate [] | [2] Inadequate [] | [3] |
| | Not available [] | | | |
| v. | Budget for trips | [1] Adequate [] | [2] Inadequate [] | [3] |
| | Not available [] | | | |

11. How often do you use teaching/learning aids in your lessons?

[1] Always [] [2] Rarely [] [3] Never []

[4] Not available

12. Is the allocated time adequate to complete the grade 12 syllabus?

[1] Yes [] [2] No []

13. If No, State how you solve this problem.....

.....

.....

14. State any other relevant teaching facilities use during geography lessons.....

.....
.....

PART THREE: TEACHER ATTITUDE TOWARDS GEOGRAPHY

15. Do you love teaching geography in grade 12?

[1] Yes [] [2] No []

16. How would you rate your teaching in grade 12?

[1] Very good [] [2] Good [] [3] Average []

17. Which topic(s) in the curriculum do you enjoy teaching?

[1] Physical geography [] [2] Human geography [] [3] Map work []

18. Which of the topic(s) would you consider problematic?

[1] Physical geography [] [2] Human geography [] [3] Map work []

19. Give reasons for liking and disliking your choices.....

.....
.....
.....

20. How would you rate your knowledge in GIS?

[1] Very good [] [2] Good [] [3] Average [] [4] Poor []

21. What teaching method do you employ in teaching geography? Indicate the frequency by using following terms:

- i. Lecture method [1] quite often [] [2] Often [] [3] Less often []
- ii. Group discussion [1] quite often [] [2] Often [] [3] Less often []
- iii. Question and answer [1] quite often [] [2] Often [] [3] Less often []

iv. Demonstration [1] quite often [] [2] Often [] [3] Less often []

PART FOUR: PARENT INVOLVEMENT IN ACADEMIC WORK

22. In the table below, indicate the extent to which your school engages activities of parents as provided. Use the scale below to respond:

A-Always **S- sometimes** **R- Rarely** **N-Never**

Home – school relationships	A	S	R	N
Inviting parents to discuss academic performance of their wards				
Advising parents on home environment factors that promote learning				
Parents offering moral support to educators and school management				
Parents providing all the necessary support materials to learners				
Reminding parents of their role in ensuring discipline among learners				

23. What in your view would you consider as the major factors hindering learners' performance in geography in your school?

.....

24. What measures would you recommend your school to take to improve learners' academic performance?

.....

Thank you.

APPENDIX J: INVENTORY FOR NSC RESULTS

Name of school.....

NSC PERFORMANCE FORM (2009-2014)

Year	Number Enrolled		Percentage Passed	
	Male	Female	Male	Female
2009				
2010				
2011				
2012				
2013				
2014				
The mean pass rate for the six years:				

APPENDIX K: INTERVIEW SCHEDULE FOR SUBJECT ADVISER

1. What is your experience with running of schools in the district, in terms of ;
 - a. Physical facilities
 - b. Human resources
 - c. Financial resources
2. How many schools are offering geography in the district?
3. What in your opinion accounts for other schools not offering geography?
4. What in your opinion are factors influencing learner's performance in geography in the NCS examinations within the district?
5. How does your office seek to contribute to the performance of learners in the geography?
6. What can schools, community, Department of Education and government contribute to improve teaching and learning of geography in the district?