

**INSTITUTIONAL FACTORS INFLUENCING PUPILS'
PERFORMANCE IN KENYA CERTIFICATE OF PRIMARY
EDUCATION IN PUBLIC PRIMARY SCHOOLS IN NAIVASHA
CENTRAL DIVISION, KENYA**

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A Research Report in Partial Fulfilment of the Requirement for
the Degree of Master of Education in Educational Administration

University of Nairobi

2013



DECLARATION

This research report is my original work and has not been presented for a degree in any other University.

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DEDICATION

I dedicate this work to my wife Mary Kirunu, my two sons Wilson Kabui and Victor Davis Mwangi and my two daughters Susan Wairimu and Christine Serah Wangari.

ACKNOWLEDGEMENTS

My gratitude and most sincere thanks go to the following people and institutions for their kind assistance and patience without which the study would not have been successful. First I would like to thank University of Nairobi which facilitated my completion of both coursework and research work. Secondly I would like to thank my supervisors Dr. Ursulla Okoth and Mr. E. Kanori who worked beyond their call of duty to ensure that the research project was completed satisfactory. Their guidance, professional advice and constructive criticism that resulted in this report. Similarly, the chairman Dr. Grace Nyaga and lecturers in the department of Administration and Planning who prepared the framework upon which this work was built. Their experience and commitment made the course to be highly successful.

I feel greatly indebted to the DEO Naivasha and the head teachers, teachers and standard eight pupils of public primary schools in Naivasha Central Division for their co-operation and participation in the study. May I register my special appreciation to my dear wife Mary Kirunu for her financial and moral support, my sons Wilson Kabui and Victor Davis Mwangi and daughters Susan Wairimu and Christine Serah Wangari for their prayers, encouragement and understanding when I had to be away from them when they dearly needed me. You showed me great love and offered me encouragement during the whole process of the research. I love you all.

Also I register my warm and heartfelt gratitude to my parents Wilson Kabui and Susan Wairimu who supported me financially and had never missed a word of encouragement to me. Also to my brothers Peter Wachuma and Josiah Thuku for their endless support towards my course. Deep appreciation is also expressed to James Maina who assisted in typing and printing my document. Above all I thank God through whose grace I was able to realize this long cherished dream.

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ABBREVIATIONS AND ACRONYMS

ATS	Approved Teacher Status
DEOs	District Education Office
EFA	Education for all
FPE	Free Primary Education
KCPE	Kenya Certificate of Primary Education
KNEC	Kenya National Examination Council
MDGs	Millennium Development Goals
MOEST	Ministry of Education Science and Technology
NARC	National Alliance Rainbow Coalition
PTA	Parents Teachers Association
SES	Social Economic Status
SMC	School Management Committee
TSC	Teachers Service Commission
UNDP	United Nations Development Programme
UNESCO	United Nation Education Scientific and Cultural Organization
UPE	Universal Primary Education

ABSTRACT

The purpose of this study was to investigate the factors influencing the performance of KCPE in public primary schools in Naivasha Central Division Naivasha District. The study was guided by four objectives which included establishing the extent to which teacher- pupil ratio influences performance, examining the extent to which pupil-book ratio influences learners performance, determining the extent to which frequent internal assessment influences performance of learners and lastly examining how physical resources influence performance of learners.

The research developed research questions to gather information in order to meet the objectives of the study. Related literature to the study was reviewed. The study was based on the ex- post factor research design focusing on public primary schools head teachers, teachers and pupils in Naivasha Central Division. The target population comprised of all the head teachers, teachers and pupils in all the 29 public primary schools in Naivasha Central Division. Data were collected by use of self administered questionnaires and data analyzed based on descriptive statistical method. A pilot study was conducted to test the reliability of the measuring instrument and was found suitable.

The study findings revealed that various types of factors in institutions that influenced performance of learners in national examinations included teacher-pupil ratio, pupil-book ratio, frequent internal assessment and physical resources such as libraries. The findings established that most schools in the study area are highly populated hence affecting the teacher- pupil ratio and pupil-book ratio which remained a concern of the head teachers and teachers is the area. It also came out that in almost all schools in the study area administer frequent internal assessments as a way of assisting and evaluating both the teachers and the learners' progress in syllabus coverage and in education attainment.

Based on the findings it was found that only a small percentage of the public primary schools in the area have physical resources such as libraries which can help improve performance of learners in national examinations. Most of the head teachers and teachers gave their opinion that the number of pupils attended to by one teacher affects pupils' performance either positively or negatively. The larger the class, the more demanding the class is and individual needs and interests of learners' especially slow ones are not adequately attended to. Smaller classes are comfortable to handle with teacher- pupil ratio of between 1:30 and 1:40 per class.

Head teachers and teachers gave their opinion about pupil-book ratio. Most of them agreed that there is a direct relationship between access to learning materials and performance of learners. The more a learner is exposed to books

the more the learner acquires more information hence improved learning outcomes. This was so to library resources where most of the heads and teachers termed it as a base and a rich environment for knowledge acquisition and exposure to information leading to improved learning outcomes.

Lastly the study concluded that frequent continuous assessment to pupils is one formative way of evaluating learners and teachers use it to impart exam answering skills to learners and also as a way of exposing learners to answering questions as the pupils /candidates wait to be summative evaluated during national examination. Thus frequent internal assessment is common to all public primary schools in the study area. It was therefore concluded that the level at which each of the head teachers and teachers is able to cope with the challenges in his / her school concerning those institutional factors that influence pupils performance in national examinations in public primary schools is reflected in the performance index of that school.

Taking the limitations and delimitations of the study the researcher made the following suggestions for further study; that a research should be carried out to investigate the effect of teacher-pupil ratio in relation to slow learners; a research should be done on the role of government policy in ordering textbooks by schools instructional materials select committee; and a research should be done to establish the relationship between head teacher's training and its effect on pupils' performance in national examinations. The major recommendations were that alternative ways of dealing with shortage of teachers, and pupil-book ratio should be sort by both the schools and the government. Head teachers should look for quality and relevant assessment tests that will add quality to their pupils. Schools should not ignore the importance of library resources and should therefore have library lessons in the main timetable. Lastly, TSC should basically recruit teachers to cater for staff establishment.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Education is the cornerstone of development in any given society in the world. Communities that have recorded progress lay their success to a vibrant system of education. Education in itself is an effective weapon against ignorance, poverty and diseases which are the root causes of restlessness throughout the world (Chetalam, 2004).

The goal of primary education is to provide access to quality education to all children of primary school going age on an equitable basis thus meeting the goal of Education for All (E F A) at this level (Ministry of Education, 2001).

Education, therefore, aims to provide a foundation for social and economic development. Children need education that will secure their social and economic wellbeing; an education that will be a true engine of social transformation, and enabling each individual student to realize his or her potential and live in dignity (Chetalam, 2004).

UNESCO, (2000) notes that education is important in social and economic development hence it is a basic right for every child without discrimination. Education is therefore a foundation to human development and is critical to broad based economic growth. However, these aims may not be adequately realized due to the influence of institutional factors such as teacher-pupil ratio, pupil-book ratio, frequent internal assessment, and library resources that

influence performance of education in Kenyan public primary schools. Classes with too many pupils are often disrupting to education and many students in a class results in a diverse field of students, with varying degrees of learning ability. Consequently, the class will spend time for less academic pupils to assimilate the information, when that time could be better spent progressing through the curriculum (Blatchford & Paul, 2011).

According to Schmitt and Lose (2012) on the relationship between teacher-pupil ratio and literacy learning outcomes in America, postulates that the trend analysis indicates that there is a reduction of literacy performance as group size increases. Therefore, the findings focused on how best to achieve optimum literacy outcomes for all learners in a timely manner and based on their individual needs. Smaller classes benefit all pupils because of individual attention from teachers. Pupils in large classes drift off task because of too much instruction from the teacher to the whole class instead of individual attention and low-attaining pupils are most affected (Blatchford & Paul, 2011).

In Pakistan, Arshad (2009) affirms that there is much variation and misallocation in teacher-pupil ratio, class size and per student expenditure among schools which leads to the wastage of resources and lower level of academic achievement. Therefore, reduction in student teacher ratio, class size and addition in per student's expenditure may lead to the effective use of school resource inputs and produce higher level of academic achievement. Schools are seriously lacking in teaching and learning resources and this is one

factor which has been hindering quality of education in primary schools. According to the 2006 National Assessment Survey report in Zambia, the majority of the pupils shared textbooks between 3 and 4 pupils. The ideal pupil-book ratio of two pupils per textbook remains a distant target in majority of schools (Daily Mail March 11, 2013).

In Malawi, after introduction of free primary education in 1994 found a rapid increase in enrolment which brought about an unprecedented stress on the existing resources in the sector. Pupil-teacher ratios, pupil-classroom ratios, pupil-textbook ratios and most other educational indicators reached unacceptable levels hence affecting performance of education (Demis, 2005). In Kenya, as a result high enrolment after introduction of FPE in 2003 and provision of free learning resources, one method that was adapted by the government to cater for teacher pupil ratio was to hire low paid local contracted teachers to supplement government- salaried teachers (Duflo & Dupas, 2007) However, the resulting overcrowding of pupils in schools as well as the influx of new students poses challenges to policy makers up to date.

Learning is driven by what teachers and pupils do in classrooms. Teachers have to manage complicated and demanding situations, channelling the personal, emotional and social pressures amongst a group of youngsters in order to help them to learn and to become better learners' in future through

frequent internal assessments. (Black & William, 1998). Therefore, standard is raised if teachers can tackle this task more effectively.

Bundy (2006) asserts that school libraries and public libraries should be pivotal to the 21st century educational experience and the bases for a positive attitude by young people towards information skills development, lifelong learning and enhancing their life chances. He notes that if it is right that schools should be maintained by the whole community for the well being of the whole, it is right also that library should be so maintained.

The aim of having library services in school is not only to provide a rich learning environment in terms of an appropriate range of resources but also in terms of developing the learning skills of pupils (Dorothy & Caroline, 2001). Therefore a more fundamental need for such understanding relates to the future planning of effective library in support of the curriculum.

The policy on Free Primary Education (FPE) introduced in Kenya in 2003 by National Alliance Rainbow Coalition (NARC) government aimed to improve participation, progression and completion rates (Chuck, 2009). Education for all (EFA) conference held in Dakar Senegal in April 2000 stated that performance in primary education fell below the desired levels. According to the conference large classes, inadequate educational materials, un-prepared teachers, inadequate training of teachers and poor running of institutions has contributed to primary education performance falling below expectations.

Learners in Naivasha Central Division, Naivasha District experience similar factors that influence their performance in KCPE. Such factors as diverse socioeconomic background of the learners, and parental education affect pupils' performance. In addition schools from Naivasha Central Zone have been performing better in KCPE examinations in the last five years than those from Maraigushu Zone (D.E.Os Office Naivasha). However, the neighbouring Maiella zone tend to do better than Central zone and Maraigushu zones despite having the same teachers and facilities, hence the need for the study. In addition Chetalam (2004) recommends that a research should be done to establish why some of the primary schools constantly do better than others during KCPE examinations.

1.2 Statement of the Problem

According to the Government of Kenya (2006) the policy objectives on education include ensuring that all children, especially the girls, those in difficult circumstances and those from marginalized or vulnerable group had access to free and compulsory primary education by 2010.

The introduction of Free Primary Education (FPE) in 2003 has caused an increase in enrolment of pupils joining the schools in Kenya. Studies that have been carried out on factors affecting performance of education in public primary schools reveal that social economic factors, parental education, student factors and environmental factors have a positive influence to

academic performance. However, this study examined the extent to which institutional factors influence performance of KCPE in public primary schools in Naivasha Central Division, Kenya.

1.3 Purpose of the Study

The purpose of the study was to investigate the factors influencing the performance of KCPE in public primary schools in Naivasha Central Division, Naivasha District.

1.4 Objectives of the Study

The study aimed at achieving the following objectives:

- i. Establish the extent to which teacher–pupil ratio influences performance of pupils in KCPE
- ii. Examine the extent to which pupil-book ratio influences learners performance in KCPE
- iii. Determine the extent to which frequent internal assessment influences performance of learners in KCPE
- iv. Examine how physical resources influence performance of learners in KCPE

1.5 Research Questions

From the foregoing objectives, the study sort to answer the following research questions based on the problem statement and the stated objectives.

- i. How does teacher-pupil ratio influence student’s K C P E performance?

- ii. How does pupil-book ratio influence performance of the learner in KCPE examinations?
- iii. How does frequent internal assessment influence performance of KCPE among learners?
- iv. How do physical resources influence performance of learners in KCPE examinations?

1.6 Significance of the Study

The findings would provide variable information to the Ministry of Education (MoE). The MoE may use the findings to influence education in the country. The findings may be used by the head teachers to influence educational outcomes. Also the findings may be used in teacher training institutions to provide the trainees with a bearing on what should be done to enhance performance of learners who come from different backgrounds. The findings may also stimulate interest of parents, sponsors and local leaders on realization of their impact on performance of learners in national examinations.

1.7 Limitations of the Study

The factors the study sort to examine were not limited to the study area only. The study would not be able to control the attitudes of the respondents because of the manifestations that may have already occurred. According to Ndwiga (2001) respondents at times give socially acceptable answers in order to avoid offending the researcher.

1.8 Delimitations of the Study

The study was conducted in Naivasha Central Division, Naivasha District and only in public primary school that were sampled. The area has twelve private primary schools that were not sampled which would otherwise give a clear comparison in performance between public primary schools and private primary schools. In addition to this, most of the schools are found within the escarpments, a condition which is quite unique and different from other neighbouring districts.

1.9 Basic Assumptions of the Study

In this study the researcher had the following basic assumptions;

- i. That the KCPE examination results would be an accurate and reliable measure of performance and good results are acceptable and satisfying to all stakeholders.
- ii. All schools had access to the same teaching and learning resources. Therefore, KCPE result should indicate a normal distribution curve in performance if all the stakeholders are involved in providing necessary learning environment which is conducive and which leads to good performance of national examinations.

1.10 Definition of Significant terms

Assessment refers to the process by which the quality of an individual work or performance is judged.

Frequent internal assessment refers to all those activities especially tests undertaken by teachers and their pupils in assessing themselves in order to provide a feedback.

Institution refers to the schools where pupils learn from.

Institutional factors refer to school attributes which influence performance of learners.

Influence refers to the ability of something to have an effect over something else so that a change is seen or felt.

Library resources refer to all those learning materials within the library that provide necessary information to both teachers and learners.

Performance refers to the student's academic attainment in the Kenya Certificate of Education (KCPE) examination. It is graded from the lowest E to the highest A.

Pupil-book ratio refers to the number of pupils sharing a text book in class for example 1:3

Teacher-pupil ratio refers to the number of pupils one teacher should attend to for effective learning for example 1:40

1.11 Organization of the Study

The study is organized into five chapters. Chapter one consists of background to the study, statement of the problem, purpose of the study, objectives of the study, research questions, significance of the study, justification of the study area, limitations, delimitations, basic assumptions of the study and definitions of significant terms as used in the study.

Chapter two comprises the literature review under subheadings: extent to which teacher-pupil ratio influences academic performance; extent to which teaching-learning resources affects learner's academic performance; the extent to which frequent internal assessment affects academic performance; how physical resources influences academic performance ; theoretical and conceptual frameworks to the study. Chapter three consists of the research methodology which is divided into the following areas; research design, target population, sample and sampling procedure, research instruments, validity of the research instruments, data collection procedures and data analysis techniques.

Chapter four comprises data analysis, interpretation and discussion of the findings while Chapter five consists of the summary of the study, research findings, conclusions, recommendations and suggestions for further research.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

In Kenya primary education currently lasts eight years and is offered to children ranging from 6 years of age. It is meant to equip the youth with relevant knowledge, skills and expertise to enable them play effective and production roles in the country. The ministry of education attempts to achieve this goal through developing and reviewing curriculum materials, providing teachers and organizing regular supervision of schools. Whereas some primary schools provide academic activities that lead to effective learning and sound academic achievement by students others do not (Republic of Kenya, 1992). Primary education marks the end of formal education for many children due to limited opportunities for secondary education. The primary school curriculum has continually been evaluated by KNEC to ascertain its relevance and quality through examinations. Since KCPE examinations are used as selection criteria for determining who joins the next level, they are quite competitive.

This chapter reviewed relevant literature under the following subheadings: extent to which teacher-pupil ratio influences academic performance; extent to which pupil-book ratio influences learner's academic performance, also the extent to which frequent internal assessment influences pupils' academic performance and how library resources influences academic performance of learners. The section also comprises summary of the literature review, theoretical and the conceptual frameworks for the study.

2.2. Teacher-pupil ratio and academic performance

School's structure, which is measured by class and school size is a school characteristic thought to affect students outcomes. Several researchers have hypothesized that smaller school size which is often associated with more personal attention , more opportunities for involvement, less anonymity for students, and a more caring academic environment, leads to positive behavioural and academic outcomes for students (Endya, 2007).

Research reviews have found that smaller classes benefit all pupils because of individual attentions from teachers while pupils in large classes drift off task because of too much instruction from the teacher to the whole class instead of individual attention and low attaining students are most affected. Under lower, teacher-pupil ratios, pupils spend more time in active academic responses and academic engaged time; teachers more often check for student understanding and provide greater task relevance, more feedback and more adaptive instruction. (Thurlow, 1989).

Examination performance is a multi-dimensional factor which have in the past caught the attention of different researchers. The factors that influence performance in different geographical areas are the same but it is the manipulation of these factors that influence performance either positively or negatively (Chelimo, 2005). The teacher- pupil ratio greatly influences the teaching profession and hence performance. Schools with low teacher-pupil

ratio greatly give individual attention to the pupils and there is an increased interaction which enables the learners to be motivated (Chelimo, 2005).

2.3 Teaching-learning resources and academic performance

Factors that have contributed to poor performance in schools include high teacher attrition, wide pupil-teacher ratio and pupil-book ratio as well as poor classroom usage (Daily Mail, March 11 2013) The Government of Kenya has tried to subsidize the cost of education by providing Free Primary Education (FPE). The policy on FPE introduced in Kenya in 2003 aimed at improving participation, progression and completion rates by providing free tuition and text books (Chuck, 2009).

The environment, teaching and learning resources and the personal characteristics of learners play an important role in their academic success. The school personnel, members of the families and communities provide help and support to students for the quality of their academic performance (Farooq, 2011). Thus families provide their children with extra learning materials in order to substitute for what they get in schools hence reducing pupil-book ratio. In addition student's effort towards educational achievement or attainment is characterized by the level of school attachment, environment and commitment displayed by students.

2.4 Frequent internal assessment and academic performance

Measuring the effect of the effort that students devote to education is important in that such effort contributes to their educational achievement and attainment. A number of researchers have shown that the amount of effort that students put into their schooling affects their academic outcomes (Endya, 2007). Assessment is the process by which the quality of an individual's work or performance is judged. In schools, assessment of learning is usually carried out by teachers on the basis of impressions gained as they observe their pupils at work or by various kinds of tests given periodically. When practiced as an on-going process, such assessment is known as continuous assessment.

Reasons for assessing pupils is to test how much is known about something supposedly learned, expose weaknesses in learning, and monitor teaching. It is also meant to maintain standards, motivate teachers and pupils, measure specific abilities for example reading, and discriminate between children of different ability. Assessments classify children, and predict the suitability of individual children for particular courses or careers. Thus educational testing provides factual information about children's abilities and performance. It also enables for meaningful comparisons and classifications to be made (Farrant, 1980).

2.5. Physical resources and academic performance

Empirical studies reveal that physical resources such as libraries give sound academic performance and actively support the teaching/learning processes

(Mnyero, 2007). Big schools with less facilities leads to overcrowding. Therefore a well used library has a positive impact on teaching/ learning despite the fact that the teaching/ learning process concentration is more on passing.

A Survey carried out in Australia confirms that they receive high use of library services from primary and secondary school students in particular including home schooled children. Libraries provide a wide range of services and resources to support students including professional reference assistance, internet access, on line homework tutoring, special collections, study spaces and homework centre and clubs (Bundy, 2006). Therefore, libraries and schools are on a par with each other in terms of what both learners and teachers are trying to accomplish which is to better educate the society and thus a library is an innovator and should play an integral and active role in that effort in every community.

Support for teaching and learning is at the heart of most academic library mission statements yet, never has it been more important for libraries to demonstrate evidence of this support. Libraries need efficient, methods for connecting students' use of the library with the learning outcomes that matter most schools and parents. Library/learning resources must be in reasonable proportion to the needs to be served, but numbers alone are no assurance of excellence. Of more importance are the quality, accessibility, availability and delivery of resources on site and elsewhere, their relevance to the institution's

current programmes, and the degree to which they are actually used (Rodriguez, 2012) The school library is central to learning and plays a key role as a place for encouraging innovation, curiosity and problem solving

School libraries make a difference to students understanding and achievement and provide support for teaching and learning throughout the school. The school library provides a model for inquiry learning and building knowledge and confidence in seeking and processing information. It is a fundamental resource for supporting students learning and a key support for teaching staff. It reflects and encourages collaborative learning and sharing of ideas hence school libraries are places for learning and thinking and play a key role in supporting and developing enjoyment of reading and acquisition of multiple literacy skills (National library of New Zealand, 2013). Thus, the school library provides information and ideas that are fundamental to functioning successfully in today's information and knowledge based society. Hence the school library equips students with lifelong learning skills and develops the imagination, enabling them to live as responsible citizens.

2.6 Summary of the Literature Review

This section has dealt with the various factors that influence examination performance not only in Kenya but also in other parts of the world as has been asserted by Thurlow(1989), Chelimo (2005) and Endya (2007). Four categories of factors have been examined namely those related to teacher-pupil ratio, which determines class size; researches on appropriate pupil-book ratio;

frequent internal assessment for provision of feedback and library resources which are vital in schools in order to enhance achievement and how they influences performance.

2.6 Theoretical Framework

This research has adapted systems theory. The proponents of systems theory were Whitehead and Bertalanffy (1925-1926) and they adapted systems theory approach in their work. A system is described as a complex of interacting components together with the relationship among them that permit the identification of a boundary but maintaining the process. A school is a system and a system consists of various components or subsystems which must function together for the system to work. Therefore, to enable teachers' effective networking, working in interdependent ways that contribute to the overall development of the school community will require an organizational form and set of operational principles that makes that possible.

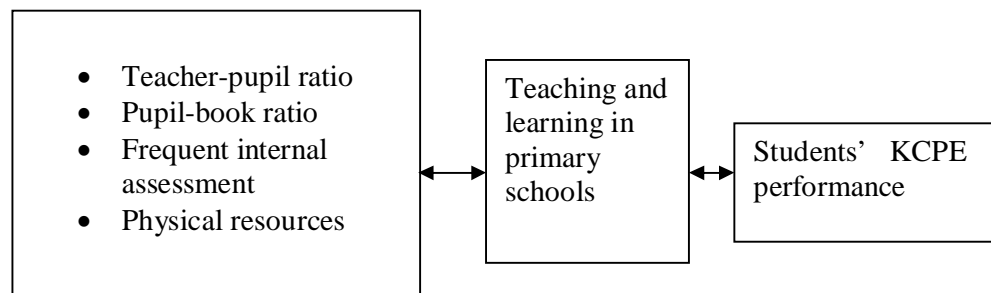
The school environment has attempted to pinpoint the effects that have revealed significant and consistent relationship with variables defining teacher performance. These important teachers characteristic include discipline methods, and control on emphasis on active instruction, an open and friendly atmosphere, well defined goals, higher expectations for achievement and an emphasis on overcoming feelings of futility and fatalism.

Institutional factors have effect on children’s achievement even when the influence of background factors such as social class and family size have been taken into account. A child’s home has particularly strong impact on school readiness. However, for success and attainment of educational goals, such factors as teacher-pupil ratio, which determines class size, appropriate pupil-book ratio, and continuous assessment for provision of feedback and library resources are vital in schools in order to enhance achievement.

2.7 Conceptual Framework

A conceptual framework shows the relationship between the independent and dependent variables. Further it shows any other factor that may have any effect of the two variables. The conceptual framework of the study below represents the interrelationship between independent and dependent variables in the study that influence pupils’ performance in KCPE.

Figure 2.1: Conceptual Framework on Institutional Factors Influencing Pupils Performance in KCPE, in Primary Schools.



The Conceptual frame work shows relationship between institutional factors (Independent variable) process and pupils' performance in KCPE examination (dependent variable)

From the figure the independent variables determine academic performance in KCPE examinations. They include; teacher-pupil ratio, pupil-book ratio, frequent internal assessment and physical resources. This therefore implies that performance in national examination is dependent on the independent variables. However these are not the only variables that influence performance but they are the ones that formed the basis of research for this study.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This section has dealt with the description of the methods that would be used to carry out the study. It is divided into eight sections. These are research design, target population, sample size and sampling procedure, research instruments, instrument validity, instrument reliability, data collection procedures and data analysis techniques.

3.2 Research Design

A research design is a logical and valuable way of looking at the world (Borg and Gall, 1996). In this study, the researcher used an ex-post facto research design. Ex-post facto research design is a method of testing out possible antecedents of events that have happened and cannot, therefore, be engineered or manipulated by the investigator (Cohen and Manion, 1994). An ex-post facto design was selected because the researcher would rely on past records of events and processes as they had occurred. In this particular case, the dependent variable which is the KCPE performance has already occurred such that the factors influencing its performance cannot be manipulated.

3.3 Target Population

The target population of a study is defined as all the members of a real or hypothetical set of people events or objects to which the investigator wishes to generalize the results of the research study (Borg and Gall, 1996). According

to the district education office Naivasha, Naivasha Central Division is composed of two administrative zones namely Central Zone and Maraigushu Zone. Central Zone consists of 13 Public schools while Maraigushu Zone has 16 Public schools. The study targeted 29 headteachers, 53 standard eight class teachers and 2301 standard eight pupils in the two zones.

3.4 Sample Size and Sampling Procedure

A sample is a small group selected for testing (Sommer, 1986). Sampling is a research technique used for selecting a given number of subjects from a target population as a representative of that population (Borg and Gall, 1996). The correct sample size depends upon the purpose of the study and the nature of the population under scrutiny (Cohen and Manion, 1994). Two schools were used for pilot study, one from each zone, while one boy's boarding school was exempted.

Mugenda and Mugenda (1999) suggest that a sample size of 30% of the target population is representative enough to allow for generalizations to be made.

30% of 11 schools in Central zone were sampled. Also 30% of 15 schools in Maraigushu zone were sampled. Each sampled school received a questionnaire for the head teacher, for standard eight class teachers and questionnaires for standard eight pupils. Table 3.1 shows distribution of schools in Naivasha central division

Table 3.1 Distribution of target population of each respondent in Naivasha central division.

Zone	Category	Target population	Sample
Central	Head teachers	13	4
	Teachers	26	8
	Pupils	1159	348
Maraigushu	Head teachers	16	5
	Teachers	27	8
	Pupils	1142	343

As represented in table 3.1, 9 head teachers, 16 classteachers and 691 pupils were selected to participate in the study as respondents. Schools from each zone were picked using simple random sampling.

3.5 Research Instrument

The researcher made use of self - administered questionnaire to obtain information from all selected respondents. The main advantage of using the questionnaire is that questions for each respondent were framed in similar manner, hence allowing uniformity for all respondents. Further, this instrument is suitable since all respondents are expected to be literate enough to read, comprehend and fill in the questionnaire without much difficulty.

Head teachers questionnaire had two sections. Section A contained items on demographic details of the respondents which included their age, gender and professional background information while section B contained question related to the objectives of the study. Class teacher's questionnaire also had two sections. Section A contained items on demographic details of the respondents which included their age, gender and professional background information while section B contained questions related to the objectives of the study. The pupil's questionnaire also had two sections. Section A contained items on demographic details of the respondents which include their age, gender and background information while section B contained questions related to the objectives of the study. The questionnaires had structured questions in section A where the respondents expressed their perceptions towards each of the items by ticking only one response and in section B both closed items where the respondent were required to choose between Yes and No answers and open questions where the respondent provided an answer and then an opinion on the questions asked.

3.6 Instrument Validity

Validity is the accuracy and meaningfulness of inferences, which are based on the research results. It is the degree to which results obtained from the analysis of the data actually represent the phenomenon under study (Mugenda & Mugenda, 1999). To test validity of the instrument, the questionnaires were pre-tested before the research had commenced. Pre-testing was carried out through piloting using members of two schools in Naivasha Central Division.

The aim of this exercise was to evaluate the content validity, clarity of test items and suitability of language used in instrument and the feasibility of the study (Mulusa, 1990).

3.7 Instruments Reliability

Reliability refers to precision, consistency and accuracy of the research instrument. It is therefore the degree of consistency that the instrument demonstrates (Best and Khan, 1998). The test cannot be valid if it is not reliable. The split half technique was used to establish the coefficient of internal consistency of the research instrument (Nachmias and Nachmias, 1996). This method involves splitting the items in the questionnaire into two halves – odd and even items. Here, scores on the odd-numbered items are correlated using the Pearson's Product Moment Correlation Coefficient obtained between the two subsets.

$$r = \frac{\sum xy - (\sum x)(\sum y)/N}{\sqrt{[\sum x^2 - (\sum x)^2/N][\sum y^2 - (\sum y)^2/N]}}$$

Where, $\sum xy$ = Sum of cross product of the values of each variable

$\sum x$ = Sum of x

$\sum y$ = Sum of Y

N = Number of parts of scores

$\sum x^2$ = Sum of x^2

$\sum y^2$ = Sum of y^2

$(\sum x)^2$ = Square of $\sum x$

$(\sum y)^2$ = Square of $\sum y$

The Spearman Brown Prophecy formula was used for the two to compensate for the fact that only half is used. The reliability coefficient for the full test was:-

$$Re = \frac{2r}{1+r}$$

Where, r = reliability

Re = reliability coefficient obtained by correlating the scores of the odd-numbered statements with the scores of the even-numbered statements. The closer a value is to 1.00 the stronger the reliability. Validity and reliability tests of the instruments were undertaken after the pilot study. Reliability was computed using Pearson's correlation co-efficient between the scores of the odd-numbered statements with the scores of the even-numbered statements after which Spearman's Brown prophecy formula was applied. Reliability was 0.8 and hence reliable.

3.8 Data Collection Procedure

A research permit to conduct the study was sought from National Council for Science and Technology. Thereafter the researcher visited the area District Education Officer as a courtesy call. A letter was written to all head teachers requesting for permission to undertake the study in their schools. Schools involved were visited and the researcher introduced himself to the respondents of each school who were informed of the study. The participants were assured of confidentiality. Respondents were issued with questionnaires which they were expected to fill the same day.

3.9 Data Analysis Techniques

The researcher first edited the data to inspect for completeness, accuracy of information and uniformity of information obtained. Then the items were classified, scored and totalled. Descriptive statistics such as percentage and frequency distribution tables were used to analyze the data. The results were reported through detailed descriptions and use of appropriate tables and figures. The analysis was based on the research questions that had been formulated at the beginning of the study.

CHAPTER FOUR

DATA ANALYSIS, INTERPRETATION AND DISCUSSION

4.1 Introduction

This chapter focuses on data analysis and interpretation of research findings. The section starts with response rate, demographic information then presentations on the research questions. Research questions were; how does teacher-pupil ratio influence student's K C P E performance; how does pupil-book ratio influence performance of the learner in KCPE examinations; how does frequent internal assessment influence performance of KCPE among learners and how physical resources influence performance of learners in KCPE examinations do.

4.2 Questionnaire Completion Rate

The instruments were administered through personal visits paid to the school by the researcher. Questionnaire completion rate is the proportion of the sample that participated as intended in all the research procedures. Out of the 9 head teachers sampled 8 (88.8%) returned the questionnaires. Out of the 16 sampled teachers 14 (87.5%) returned the questionnaire and out of 691 pupils 600(86.8%) returned the questionnaire. This percentage returned rate was above the recommended 80% by Mmaduakonam (1998) and hence deemed adequate for the study.

4.3 Demographic Information of the Respondents

This section covers the demographic information of the respondents namely the head teachers, teachers and pupils.

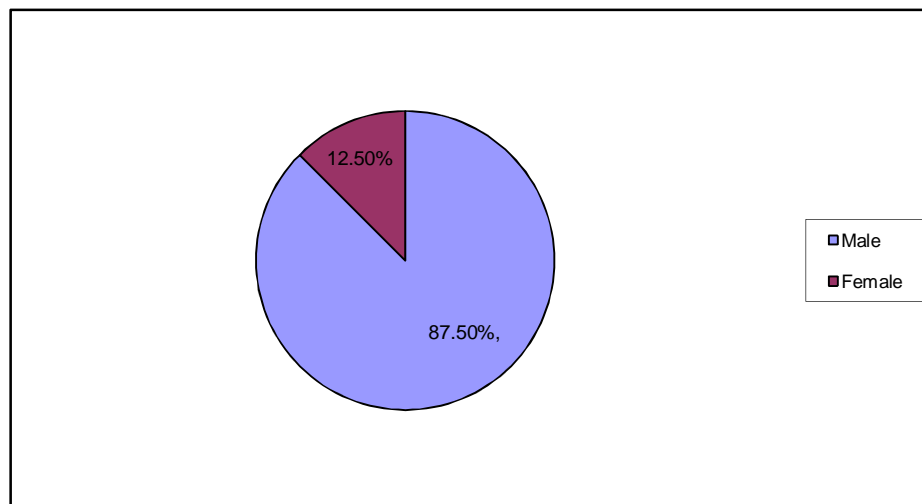
4.3.1 Demographic Information of Head teachers

Demographic information of the head teachers was based on their gender, age, experience and professional qualifications.

4.3.1.1 Head teachers by Gender

Data on the gender of head teachers indicated that 87.5% are male while 12.5% are female. The data indicates that most of the schools are headed by male head teachers. The data is presented in figure 4.1

Figure 4.1 Distribution of Head teachers by Gender



4.3.1.2 Age of Head teachers

The head teachers were also asked to indicate their age. The findings are presented in table 4.1

Table 4.1 Age of Head teachers

Age	F	%
Under 25 yrs	0	0.0
25-35	1	12.5
36-45	1	12.5
46-55	5	62.5
Over -55	1	12.5
Total	8	100.00

The data shows that majority of the head teachers 62.5% are aged between 46 and 55 years, 12.5% are aged between 25-35, 12.5 % are aged between 36-45, another 12.5% are aged over 55 years while none were under 25 years.

4.3.1.3 Professional Qualifications of Head teachers

The head teachers were, also asked to indicate their professional qualifications.

The findings are presented in table 4.2 below.

Table 4.2 Professional Qualification of Head teachers

Level	F	%
Postgraduate	1	12.5
Graduate	1	12.5
Diploma	4	50.0
Certificate	0	0.0
ATS	2	25.0
Total	8	100.00

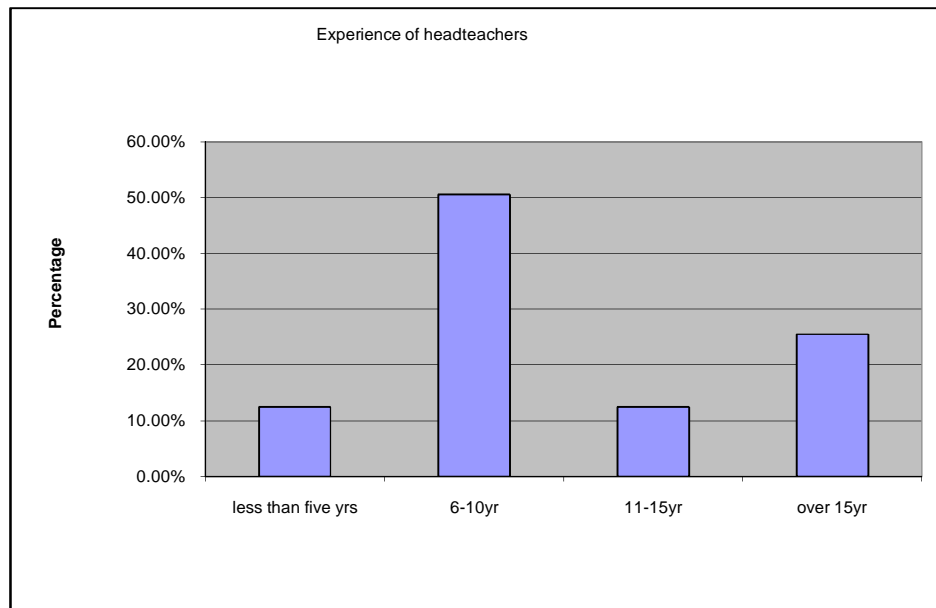
Data showed that most of the head teachers had diploma as their highest qualification as indicated by 50%. Other head teachers had other qualifications ranging from approved teacher status indicated by 25% while both postgraduate and graduate had a representation of 12.5%.

4.3.1.4 Experience of Head teachers

Head teachers were also asked to indicate their experience as heads of schools.

The findings are represented in figure 4.2 below.

Figure 4.2 Experience of Head teachers



Data on the experience of head teachers indicates that majority of them 50% have been head teachers for duration of 6-10 years, 25.5% have been head teachers for duration of over 15 years while the rest 12.5% has been head teachers for duration of 11-15 years and less than 5 years. The findings shows that even though majority of the head teachers have been heads for 6-10 years, others have served as head teachers for a considerable period of time hence have adequate information on K C P E national examination performance in public primary schools that they have served.

4.3.1.5 Number of Streams in Standard Eight

The head teachers were asked to indicate the number of streams in their top class. Their response are presented in table 4.3

Table 4.3 Number of Streams in Standard 8

Number of streams	F	%
7 streams	1	12.5
6 streams	0	0
5 streams	0	0
4 streams	0	0
3 streams	2	25.0
3 streams	4	50.0
1 streams	1	12.5
Total	8	100.00

Findings on the number of streams in the schools indicate that most of the schools have two streams in their standard 8 class as indicated by 50%. This suggests that schools in the area of study have a considerable large number of pupils hence increasing teacher- pupil and pupil –book ratios. Surprisingly one of the main schools in the area of study has seven streams in class eight with a candidature of 303 pupils in 2013.

25% of the schools have three streams while 12.5% of the schools have a single stream.

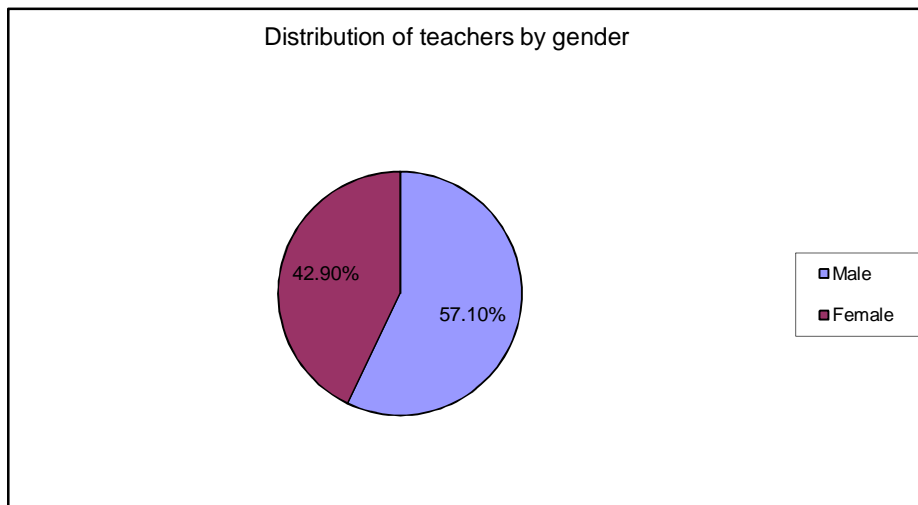
4.3.2 Demographic Information of Teachers

The demographic information of teachers was based on gender, age, professional qualifications and work experience or the duration of time that one has been a primary school teacher.

4.3.2.1 Teachers by Gender

Teachers were asked to indicate their gender and the findings are presented on figure 4.3 below.

Figure 4.3 Distribution of Teachers by Gender



Findings on the gender of the teachers indicated that 57.1% were male while 42.9% were female. These findings reveal that there are more male teachers than female teachers handling standard eight in the area of study.

4.3.2.2 Distribution of Teachers by Age

The teachers were further asked to indicate their age. Their responses are presented in the table 4.4

Table 4.4 Distribution of Teachers by Age

Experience	F	%
Below 25yrs	0	0.0
25-35	4	28.6
36-45	7	50.0
46-55	3	21.4
Over 55	0	0.0
Total	14	100.00

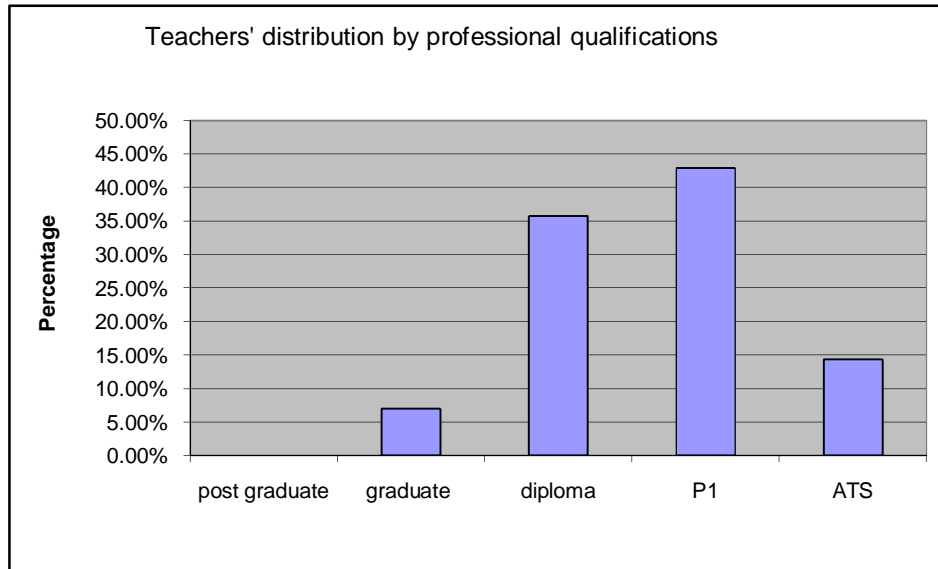
Data on the age of teachers indicates that 50% are between ages 36 and 45 years, 28.6% are between ages 25 and 35, 21.4% are over 45years

These findings shows that most of the teachers in the area of study are between ages 36 and 45 which could be considered to be a relatively young age capable of initiating strategies for implementing curriculum hence improve on national examination performance.

4.3.2.3 Professional Qualifications of Teachers

Teachers were asked to indicate their professional qualifications. The findings are presented in figure 4.4

Figure 4.4 Teachers Distribution by Professional Qualifications



Data show that majority of the teachers 42.9% are P1 certificate holders. The others hold professional qualifications such as diploma with 35.7% , ATS 14.4% and graduate 7.0%. These findings show that the teachers in public primary schools in the study area have the required professional qualifications for their job.

4.3.2.4 Duration of Time as Primary School Teachers

The teachers were further asked to indicate how long they have served as primary school teachers. The findings are presented in table 4.9

Table 4.5 Duration of Time as Primary School Teachers

Experience	F	%
Less than 5 years	2	14.4
6-10years	4	28.8
11-15years	3	21.1
Over 15 years	5	35.7
Total	14	100.00

Findings on the duration of time that the teachers have been primary school teachers indicates that 37.5% have been primary school teachers for over 15 years, 28.8% have been primary school teachers for between 6 and 10 years, 21.1% for between 11 and 15 years while 14.4% of the teachers have a work experience of less than 5 years. This is a clear indication that majority of the teachers have been teaching for a long period while few new teachers have been recruited as teachers.

4.3.3 Demographic Information of Pupils

The demographic information of pupils was based on gender and age.

4.3.3.1 Pupils by Gender

Pupils were asked to mention their gender. The responses are as indicated in table 4.6

Table 4.6 Pupils by Gender

Gender	F	%
Boys	314	52.4
Girls	286	47.6
Total	600	100.00

The number of boys who participated was 314 (52.4%) and girls 286 (47.6%). Their ages ranged from 12 years to 17 years. Over aged pupils in school may be as a result of repetition, delayed starting of the learner in standard one or as a result of free primary education (FPE) which is less strict on age.

4.3.3.2 Parents' Education

Pupils were also asked to mention the level of education of their parents. The findings showed that in general most of the parents had attained secondary school education. However, more fathers had attained secondary school education than mothers. The findings showed that most mothers had attained primary school education. Some fathers had diploma education. Only one family that was noted where both parents were degree holders.

4.3.3.3 Parents' Occupation

Pupils were also asked to mention the occupation of their parents. Most parents in study area are farmers. Surprisingly, most of the pupils mentioned that their mothers carry out farming activities than they mentioned about their fathers. In addition most parents in Central zone are business people than in neighbouring Maraigushu zone.

4.3.3.4 Marks in the Previous Exam Done

When asked to mention about the marks they got in their last exams,. Table 4.7 shows distribution of marks by pupils in the last exam that they did.

Table 4.7 Distribution of Marks in the Previous Exam Done.

Marks	F	%
Below 200	14	2.5
200-250	50	8.3
251-299	221	36.8
300-349	190	31.6
350-399	116	19.3
400-449	9	1.5
Total	600	100.00

The findings showed that majority of the pupils attain a mark ranging from 251 to 349 represented by 36.8%, 31.6% attain a mark ranging from 300-349, 19.3% attain a mark ranging from 350-399, 8.3% attain a mark ranging from 200-250,

2.5% below 200 marks while 1.5% attains a mark of over four hundred marks.

The data showed that in some schools in the study area, there are weak pupils who need extra attention and at the same time there are strong pupils who can perform well in national examinations.

4.4 Information about K.C.P.E 2012 Performance and Enrolment of Candidates in 2013.

This section aimed at finding out how different public primary schools performed in KCPE 2012 and the current enrolment of candidates who will sit for KCPE in 2013.

4.4.1 Information about School KCPE Performance

Head teachers were asked to mention the mean scores their school attained in Kenya Certificate of Primary Education in 2012. The findings are presented in the table 4.8.

Table 4.8 KCPE Mean scores of Public Primary Schools in Naivasha Central Division

Mean level	F	%
Below 150	0	0.0
151-200	1	16.7
201-249	2	33.3
250-299	3	50.0
300-349	0	0.0
350-400	0	0.0
Total	6	100.00

The finding shows that majority of the school in study area attained a mean of between 201 marks and 299 marks which totals to 83.3 %. However there is

still an indication that there are some few schools that did not attain a mean of over 200 marks in the study area as indicated by 16.7%. The findings also showed that rarely have the public schools in the study area attained a mean 300% and over in national examinations.

4.4.2 Information about Schools' KCPE Enrolment in 2013

Out of the six schools that were able to provide KCPE mean scores in 2012, they were also able to indicate the candidature in 2013. The findings are presented in table 4.9

Table 4.9 Schools Candidature in 2013

Candidates	F	%
Less than 25	0	0
26-35	0	0
31-35	0	0
36-40	0	0
41-45	0	0
46-50	1	16.7
Above 50	5	83.3
Total	6	100.00

The findings shows that majority of the public schools in the study area have registered more than 50 candidates to sit for KCPE in year 2013 which is indicated by 83.3%. Only few public schools, 16.7%, which have registered

below 50 candidates to sit for KCPE 2013. This is an indication that most of the schools in the study area have large standard eight classes.

4.5 Findings of the Study

Data presented in this section was as a result of analyzing the research questions which were set to help attain research objectives. Four objectives were set and the first one aimed at establishing the extent to which teacher-pupil ratio influences performance of pupils in national examinations. The second objective aimed at examining the extent to which pupil-book ratio influence learners' performance in national examination and the third objective aimed at determining the extent to which frequent internal assessment influences performance of learners in national examination while the fourth objective aimed at examining how physical resources influence performance of learners in examinations.

From these objectives the research questions are restated and evidence linked to their testing is presented in the subsections that follow.

4.5.1 How does Teacher- Pupil Ratio Influence Students KCPE Performance?

Head teachers were asked to indicate the teacher -pupil ratio in their schools.

Table 4.10 indicates what public primary schools in the study area are having as teacher- pupil ratio as was provided by head teachers.

Table 4.10 Teacher- Pupil Ratio in 2013

Ratio	F	%
1:10	0	0.0
1:20	0	0.0
1:30	1	12.5
1:40	2	25.0
1:50	3	37.5
Above 1:50	2	25.0
Total	8	100.00

The findings shows that majority of the public primary schools in the study area have fifty pupils per class represented by 37.5%.The findings also reveal that only 12.5% of the schools in the study area that have an average of thirty pupils per class. In addition it is worth noting that there are highly populated schools in the study area which have over fifty pupils per class which is represented by 25%. However 25% of the public schools in the study area have a considerable ratio of 1:40 pupils per class. As a result of these ratios, the researcher observed that those highly populated schools had devised methods of reducing the teacher- pupil ratio by having up to seven streams in standard eight, where each room had fewer candidates than if they were put in single or double stream.

4.5.1.1 Comparison of Comfort Ratio between Heads teachers and Class teachers.

Both the head teachers and teachers were asked to mention the teacher pupil ratio that they would fill comfortable and the findings are presented in table 4.11

Table 4.11 Comparison of Comfort Ratio between Heads teachers and Class teachers.

Heads	F	%	Teachers	F	%
comfort ratio			comfort ratio		
1:20	0	0	1:20	2	14.3
1:30	5	62.5	1:30	5	35.7
1:40	3	37.5	1:40	7	50.0
1:50	0	0	1:50	0	0.0
Above 1:50	0	0	Above 1:50	0	0.0
Total	8	100.00		14	100.0

The findings reveal that while 5(62.5%) of the head teachers would be comfortable with a teacher- pupil ratio of 1:30, 7(50%) of the teachers would be comfortable with a teacher- pupil ratio of 1:40. The heads would have opted the ratio possibly because of other school commitments that they have to attend to. However 37.5% of the heads are comfortable with a ratio of 1:40 while 35.7% and 14.3% of the teachers are comfortable with a ratio of 1:30 and 1:20 respectively.

Both heads and class teachers were asked to give their opinions on whether teacher-pupil ratio influences pupils' performance in national examinations.

The responses given indicated that 95.5% of the respondents agreed to the item and gave reasons to their response as that a class of too many pupils is not well attended and that slow learners tend to be left behind .In addition the responses given mentioned that in small classes it is possible to reach every child's needs. One of the respondents stated that, "This is because teacher-pupil contacts during the lesson matters a lot. The lesser number of pupils in a class, the easier the work of the teacher. The teacher will be able to reach every pupil." The remaining 4.5% of the respondents did not give their opinion towards whether teacher-pupil ratio influences performance of learners in national examinations or not.

4.5.2 How does Pupil-Book Ratio Influence Performance of the Learner in KCPE Examinations?

Head teachers were asked to indicate how pupil-book ratio is in their schools.

Table 4.12 shows distribution of pupil-book ratio in schools in the study area.

Scale used for the ratio: **1.** 1:1 **2.** 1:2 **3.** 1: 3 **4.** 1:4 **5.** 1:5
6. 1:6

Table 4.12 Distribution of Pupil – Book Ratio

Subject	English		Kiswahili		Mathematics		Science		s/studies		CRE	
Ratio	F	%	F	%	F	%	F	%	F	%	F	%
1:1	0	0.0	0	0.0	0	0.0	1	12.5	0	0.0	0	0.0
1:2	4	50.0	3	37.5	3	37.5	0	0.0	0	0.0	0	0.0
1:3	4	50.0	5	62.5	5	62.5	4	50.0	4	50.0	3	37.5
1:4	0	0.0	0	0.0	0	0.0	3	37.5	4	50.0	5	62.5
1:5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
1:6	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Total	8	100	8	100	8	100	8	100	8	100	8	100

The findings reveal that English subject had most of the text books in the schools. The sharing of English text books is between 1:2 and 1:3 which is represented by 50%. Rarely are schools having a ratio of 1:1 in English textbooks. However no schools have a ratio of between 1:4 and 1:6 in English subject. In Kiswahili and Mathematics, the findings reveal that majority of schools have a pupil-book ratio of 1:3 (62.5%) while only few schools have attained a pupils-book ratio of 1:2 (37.5%) in both Kiswahili and Mathematics subjects. In science subject 50% of the schools in the study area have a ratio of 1:3, 37.5% have a ratio of 1:4 while 12.5% have a ratio of 1:1. However, no school has a ratio of between 1:5 and 1: 6 in science subject.

In Social studies, 50% of the schools have a pupil textbook ratio of 1:3 and another 50% has a pupil- textbook ratio of 1:4 which means that most of the social studies text books are either shared among three pupils or four pupils. In

C R E 62.5% of the schools have a pupil-textbook ratio of 1:4 while 37.5% of the schools have CRE textbooks in the ratio of 1:3.

From the findings it is clear that hardly has any pupil got a set of recommended textbook for all the subjects. The findings further indicate that most of the textbooks in schools are for English, Kiswahili and Mathematics while few copies are provided for Science, Social studies and CRE. When pupils were asked to mention whether their parents have bought them textbooks, 57.1% responded that they have their own text books either in school or at home while the remaining 42.9% said they have no own textbooks but rely on textbooks provided in schools.

The head teachers, teachers and pupils were asked to give their opinions whether pupil-book ratio influences pupils' performance in national examinations. Both the head teachers and class teachers provided their responses and 95.5% agreed that pupil-book ratio influences pupils performance in national examinations. The remaining 4.5% declined to comment. On the side of pupils 42.9% agreed that textbooks influence their performance in examinations while 57.1% of the pupils were not aware whether or not, textbooks influence their performance in examinations. Further the findings revealed that each subject in class eight in the study area had been allocated a teacher. The teachers provided homework to the learners, and marked it once done by the pupils.

4.5.3 How does Frequent Internal Assessment Influence Performance of KCPE among Learners?

Head teachers were asked to mention how frequent they usually assessed their standard eight pupils. The findings are presented in table 4.13

Table 4.13 Frequency of Assessing Pupils.

Duration	F	%
Weekly	0	0.0
Fortnight	4	50.0
Monthly	4	50.0
Termly	0	0.0
Total	8	100.00

The findings showed that the schools in the study area assessed their learners either in a fortnight (50%) or on monthly basis (50%). Schools in the study area did not assess their pupils neither on weekly basis nor on termly basis.

4.5.3.1 Source of Assessment Tests

When asked to mention their sources of assessment tests, head teachers gave the following sources as represented in table 4.14

Table 4.14 Source of assessment tests.

Source	F	%
Subject panels	4	33.3
Past papers	2	16.7
Local shops	0	0.0
Exam printers	3	25.0
Education office	3	25.0
Total	12	100.00

The findings showed that 33.3% of the assessment tests were prepared by subject panellists, 25% of the assessment tests were bought from exam printers and another 25% of the exams were got from the area education office. 16.7% of the assessment tests are past papers found within schools. Further the findings showed that no school buys exams from local shops.

However, it is clear that some schools have more than one source of assessment tests which is either meant to create a variety of assessment tests or facilitate frequent continuous assessment of learners. All the heads and teachers who responded agreed that frequent internal assessment influences learners' performance in national examinations hence the need for continuous assessment. They also mentioned that it makes it possible for the teacher to determine the pupils' progress. In addition, the comments further said that frequent internal assessment makes pupils to revise consistently and get used to doing examination thus excel in national exams. Respondents further said

that assessment makes it possible for the teacher and the learner to follow the performance. This feedback makes each one of them to put in more effort and that frequent internal assessment create an atmosphere of competition and serves as a measuring rod to syllabus coverage, achievement of objectives and evaluation of teaching methods which leads to improvement where affected.

Pupils were also asked to comment about frequent internal assessment. 100% of the pupils agreed that they do assessment tests in their schools either twice in a term namely midterm exam and end term exam, thrice in a term or even more than thrice in a term. They agreed that after every assessment test done follows provision of results of exams and revision of the same. When asked whether continuous assessments tests influences their performance and attainment of marks, 28.6% agreed that continuous assessment influences their performance in exams while 71.6% are not aware whether frequent continuous assessment influences their performance or not.

4.5.4 How do Physical Resources Influence Performance of Learners in KCPE Examination?

On these research question, the researcher asked questions about library resources in public primary schools in the study area. The findings revealed that of all those schools visited, there was no library within the school compound. As a result, schools within the study area did not have a teacher librarian hence difficult to plan for library lessons.

Despite lacking library resource within public primary schools in the study area, they have few supplementary leaders (story books for learners). Of the available supplementary readers 33.3% of the pupils are allowed to borrow reading materials while the rest 67.7% do not borrow supplementary reading materials. The findings revealed that there is hardly any library lesson in the main timetable, though only few schools have lessons for library in their main timetable. The findings further revealed that 16.7% of the schools have enough reference books while 83.3% of the schools in the study area do not have enough reference books. When asked to comment about library resources and performance, 83.3% of the heads and class teachers agreed that library resources influences performance of pupils in national examinations but 16.7% declined to comment. 47.6% of the pupils agreed that library resources influence their performance in examinations while 52.4% of the pupils are not aware whether library resources influence their performance in examinations or not.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction.

This section focuses on summary of the study, conclusions, recommendations and suggestions for further research.

5.2 Summary of the Study

The purpose of this study was to focus on the factors that influence the performance of the Kenya certificate of primary education in public primary schools in Naivasha Central Division, Naivasha District. The specific objectives of this study were to establish the extent to which teacher - pupil ratio influences pupils performance and also to examine the extent to which pupil –book ratio influences learners performance. The study also aimed at determining the extent to which frequent internal assessment influences performance of learners and lastly, the study examined how physical resources influence performance of learners in national examinations.

The study intended to find out whether teacher-pupil ratio, pupil-book ratio, frequent internal assessment and physical resources such as libraries are some of the factors in public primary schools that influence performance of learners in national examination. Performance of a school depends on how the head teacher plans, organizes and coordinates the activities of the school as well as motivating his /her teachers.

The head teachers need to improve on their management skills in order to uplift achievement standards of schools even with limited resources in their schools. Being innovative and making maximum use of locally available resources can be a solution to some of the challenges that hamper performance of pupils in national examinations.

In order to arrive to these findings from the study, research questions were postulated. Literature review relevant to this study provided the basic guidelines providing the necessary background for the study. It covered institutional factors that influence pupils' performance in national examinations and other studies relevant to the research. The research design used was ex.-post factor. It involves studies that investigate possible cause and effect by observing an existing condition and searching back in time for plausible causal factors. Cohen and Manion (1994) defined ex- post facto research as a method of testing out possible antecedents of events that have happened and cannot, therefore, be engineered or manipulated by the investigator.

Random sampling was used to select respondent from a population of about 29 head teachers, 53 teachers and 2301 pupils. The sample consisted of 9 head teachers, 16 teachers and 691 pupils. A sample of 30% of each category of respondents was selected as is suggested by Mugenda and Mugenda (1999). Random sampling was used in selecting schools, teachers and pupils as respondents from each school. Questionnaires for head teachers, teachers and

pupils were developed and used to gather pertinent information from the respondents.

The questionnaires had two sections. Section A on demographic data and section B and questions related to the research questions. Once the data was collected, analysis was done using frequencies, percentages tables and graphs. The questions asked involved Yes and No answers and a provision of an opinion / suggestions to the responses chosen at the end of every section of research questions. Validity and reliability tests of the instruments were undertaken after the pilot study. Reliability was computed using Pearson's correlation co-efficient between the scores of the odd- numbered statements with the scores of the even- numbered statements after which Spearman's Brown prophecy formula was applied reliability was applied. Reliability was 0.8 and hence reliable. Descriptive statistics such as frequencies, percentages, frequency distribution tables and graphs were used to describe data collected during the research. Explanation of analysis using percentages and frequencies has been provided after every table.

5.3 Research Findings

The findings showed that only few new teachers are being recruited because only 14.4% of the teachers who responded have worked for less than five years. Thus the findings revealed that the teacher-pupil ratio continues to be high due to less teachers being recruited whereby if enough teachers were

recruited in schools would reduce the teacher-pupil ratio to a more easily manageable ratio.

The findings also showed that most schools in the study area have not yet attained a pupil-book ratio of 1:2 but majority of the schools have a pupil – book ratio of 1:3. Thus according to the opinions of the respondents, the findings revealed that it makes it difficult for both teachers and pupils to attend to homework effectively due to shortage of textbooks. To solve the problem of textbooks the findings revealed that parents in the study area provide their children with textbooks. In this study about 57.1% of the pupils who responded said that their parents had bought them textbooks which they used either in school or at home. Thus, parents' involvement in buying textbooks for their children can be termed as an alternative way to the problem of pupil-book ratio in the study area.

The findings showed that frequent internal assessment is a major boost to good performance in national examinations. The rate at which frequent continuous assessment is carried out in schools in the study area showed that most of the pupils in standard eight are either assessed within a fortnight or on monthly basis and usually do an average of three assessment tests per term.

It also showed that pupils usually got a feedback of the exams that they had done, revised with their teachers and made a progress of their performance as the teachers monitored their learners as well as ensuring syllabus coverage.

The study showed that library resources in public primary schools in the study area were very much inadequate. Only few schools which had entered a library lesson in their main timetable. Reading and reference materials were found inadequate in most of the schools in the study area. The findings therefore showed that if enough supplementary reading materials were provided to schools in the study area they would possibly experience improved quality of teaching and learning in their schools and hence improved performance of pupils in national examination.

5.4 Conclusion

Based on the research questions it was concluded that various factors which to a great extent include teacher-pupil ratio, pupil-book ratio, frequent internal assessment and physical resources are factors that influence pupils' performance in KCPE national examinations in public primary schools in Naivasha central division, Naivasha district.

Most of the head teachers and teachers gave their opinion that the number of pupils attended to by one teacher affects pupils' performance either positively or negatively. The larger the class, the more demanding the class is and individual needs and interests of learners' especially slow ones are not adequately attended to. Smaller classes are comfortable to handle with teacher- pupil ratio of between 1:30 and 1:40 per class.

Head teachers and teachers also gave their opinion about pupil-book ratio. Most of them agreed that there is a direct relationship between access to learning materials and performance of learners. The more a learner is exposed to books the more the learner acquires more information hence improved learning outcomes. This was so to library resources where most of the heads and teachers termed it as a base and a rich environment for knowledge acquisition and exposure to information leading to improved learning outcomes. Lastly the study concluded that frequent continuous assessment to pupils is one formative way of evaluating learners and teachers use it to impart exam answering skills to learners and also as a way of exposing learners to answering questions as the pupils /candidates wait to be summatively evaluated during national examination. Thus frequent internal assessment is common to all public primary schools in the study area.

5.5 Recommendations

Based on the findings it is recommended that there should be alternative ways of dealing with shortage of teachers such as recruiting PTA teachers to ease burden on already existing teachers in schools. Head teachers should work hand in hand with school managing committees (SMC) in order for them to take care of PTA teachers by providing their wages. Head teachers and SMC should look for alternative ways of reducing pupil-book ratio by either involving parents in buying supplementary books, purchasing recommended textbooks by the government through the most current orange book as well as

maintain the already existing text books in stores. Schools should device ways and means of recovering lost or damaged books by pupils.

Heads teahers should look for quality and relevant assessment tests that will yield to their pupils as expected and those that will finally lead to academic excellence. This will eventually help improve the overall performance of Naivasha district in national examinations. Schools should not ignore the importance of library resources and should therefore have library lessons within their main timetable which would otherwise help to great extent slow learners as they get exposed to a variety of reading and learning materials with the assistance of a teacher librarian. The Ministry of Education should ensure funding of FPE is done in time so that schools can budget for teaching and learning resources. These resources can help reduce shortage of books in schools hence reduction of pupil-book ratio. It should also ensure that schools have libraries which are a source of knowledge to learners. Lastly, Teachers Service Commission should basically recruit and register teachers. The commission should be actively engaged in teacher appraisal and training. This would be a motivator for teachers to join and remain in the profession.

5.6 Suggestions for Further Research

Taking the limitations and delimitations of the study the researcher makes the following suggestions for further research:

- i. The effect of teacher-pupil ratio in relation to slow learners

- ii. An investigation on the role of government policy in ordering textbooks by schools instructional materials select committee.
- iii. Relationship between head teacher's training and its effect on pupils' performance in national examinations.

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APPENDICES

APPENDIX A:

INTRODUCTION LETTER

Kabui S. Kirunu

P.O.Box117

North Kinangop

The Head teacher/Class teacher/ Std 8 Pupils

**REF: REQUEST FOR ASSISTANCE ON FILLING RESEARCH
QUESTIONNAIRES**

I am a student at Nairobi University doing a Masters Degree in Educational Planning and Administration. I am carrying out an academic research on institutional factors influencing performance of Kenya Certificate of Primary Education in public primary schools in Naivasha central division, Naivasha district. Congratulations for being chosen to participate. All the information will be for purpose of academics only and identity of respondents will not be disclosed.

Your assistance and cooperation will be greatly appreciated.

Thank you in advance for your assistance.

Yours faithfully,

Kabui Samuel.

APPENDIX B

HEAD TEACHERS' QUESTIONNAIRE

This questionnaire seeks to gather information to be used in a study of institutional factors influencing KCPE performance in public primary schools in Naivasha central division, Kenya. You are kindly requested to fill in the questionnaire indicating your honest response by ticking (✓) against your option and filling in the blank for those questions requiring your answer. Your responses will be used for the purpose of this study only. To ensure complete confidentiality, please do not write your name or that of your school anywhere on the questionnaire.

Please tick (✓) the information most applicable to you.

Section A. Personal Information.

1. What is your gender Male () Female ()
2. What is your age in years? under 25 () 25 -35 () 36 – 45 ()
46- 55 () over 55 ()
4. Which of the following best describes your professional status?
Post graduate level () Graduate level () Diploma level ()
Certificate level-P1 () P2 () P3 () other.....
5. How many years have you served as a school head teacher?
Less than 5 years () 6-10 years () 11-15 years () over 15 years ()

Section B

Part I: Teacher-Pupil Ratio

1. What was your school's 2012 KCPE mean?.....
2. How many candidates had you in 2012?.....
3. How many candidates do you have in 2013?.....
4. How many streams are there in your school?.....
5. What is the teacher-pupil ratio in your school?.....
6. Are you aware of the recommended teacher-pupil ratio in any given class by the government? Yes () No ()
b) If yes what ratio?.....
7. Which teacher-pupil ratio is comfortable to you in carrying out your work?
1. 1:10() 2. 1:20() 3. 1:30() 4. 1:40() 5. 1:50() 6. 1:60()
8. Do you think teacher-pupil ratio influences pupils performance in national examinations? Yes () No ()
9. Give reason(s) to your response.....
.....
.....

Part II. Pupil-Book Ratio

10. What is the average pupil- book ratio in Std 8 in your school according to subject? Fill in the number that corresponds to the ratio in the table

Scale: 1.1:1 2.1:2 3.1:3 4.1:4 5.1:5
6.1:6

Subject	1	2	3	4	5	6
English						
Kiswahili						
Mathematics						
Science						
Social studies						
CRE						

11. Do you think pupil –book ratio influences pupil’s performance in national examinations? Yes () No ()

12. Give reason(s) to your response

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

Part III: Frequent Internal Assessment

13. How frequent do you assess your Std 8 pupils?

1. Weekly () 2. Fortnight () 3. Monthly () 4. Termly ()

14. Where do you usually get your assessment test from?

1. Subject panels () 2. Past papers () 3. Local shops ()

4. Exam printers () 5. Education office ()

15. Is internal assessment important to learners? Yes () No ()

16. Do you think frequent internal assessment influences pupils performance
in national examinations? Yes () No ()

17. Give reason(s) to your response.....
.....
.....

Part IV: Library Resources

18. Do you have a library in your school?

Yes () No ()

19. Do you have enough supplementary leaders in your school?

Yes () No ()

20. Do you have a teacher librarian in your school?

Yes () No ()

21. Do you have time schedule for library classes

Yes () No ()

22. Do you have sufficient reference books in your school library?

Yes () No ()

23. Do you think library resources influence pupils' performance in national examination?

Yes () No ()

24. Give a reason to your response.

.....
.....

Thank you very much for your cooperation.

APPENDIX C

CLASS TEACHER'S QUESTIONNAIRE

This questionnaire seeks to gather information to be used in a study of institutional factors influencing KCPE performance in public primary schools in Naivasha central division, Kenya. You are kindly requested to fill in the questionnaire indicating your honest response by ticking (✓) against your option and filling in the blank for those questions requiring your answer.

Your responses will be used for the purpose of this study only. To ensure complete confidentiality, please do not write your name or that of your school anywhere on the questionnaire.

Please tick (✓) the information most applicable to you.

Section A.

Personal Information.

1. What is your gender Male () Female ()
2. What is your age in years? under 25 () 25 -35 () 36 – 45 ()
3. 46- 55 () over 55 ()
4. Which of the following best describes your professional status?
Post graduate level () Graduate level () Diploma level ()
Certificate level-P1 () P2 () P3 () other.....
5. How many years have you served as a teacher?
Less than 5 years () 6-10 years () 11-15 years () over 15 years ()

Section B

Part I: Teacher-Pupil Ratio

1. What was your school's 2012 KCPE mean?.....
2. How many candidates had you in 2012?.....
3. How many candidates do you have in 2013?.....
4. How many streams are there in your std 8?.....
5. What is the teacher-pupil ratio in your school?.....
6. Are you aware of the recommended teacher-pupil ratio in any given class by the government? Yes () No ()
b) If yes what ratio?.....
7. Which teacher-pupil ratio is comfortable to you in carrying out your work?
1. 1:10() **2.** 1:20() **3.** 1:30() **4.** 1:40() **5.** 1:50()
6. 1:60()
8. Do you think teacher- pupil ratio influences pupils performance in national examinations? Yes () No ()
9. Give reason(s) to you response.....
.....
.....

Part II. Pupil-Book Ratio

10. What is the average pupil- book ratio in Std 8 in your school according to subject? Fill in the number that corresponds to the ratio in the table

Scale: 1.1:1 2.1:2 3.1:3 4.1:4 5.1:5
6.1:6

Subject	1	2	3	4	5	6
English						
Kiswahili						
Mathematics						
Science						
Social studies						
CRE						

11. Do you think pupil –book ratio influences pupils performance in national examinations? Yes () No ()

12. Give reason(s) to your response

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

Part III: Frequent Internal Assessment

13. How frequent do you assess your Std 8 pupils?

1. Weekly () 2. Fortnight () 3. Monthly () 4. Termly ()

14. Where do you usually get your assessment test from?

1. Subject panels () 2. Past papers () 3. Local shops ()
4. Exam printers () 5. Education office ()

15. Is internal assessment important to learners? Yes () No ()

16. Do you think frequent internal assessment influences pupils performance
in national examinations? Yes () No ()

17. Give reason(s) to your response.....
.....
.....

Part IV: Library Resources

18. Do you have a library in your school?

Yes () No ()

19. Do you have enough supplementary leaders in your school?

Yes () No ()

20. Do you have a teacher librarian in your school?

Yes () No ()

21. Do you have time schedule for library classes

Yes () No ()

22. Do you have sufficient reference books in your school library?

Yes () No ()

23. Do you think library resources influences pupils performance in national examination?

Yes () No ()

24. Give a reason to your response.

.....

.....

.....

Thank you very much for your co-operation

APPENDIX D

PUPIL'S QUESTIONNAIRE.

This questionnaire seeks to gather information to be used in a study of institutional factors influencing KCPE performance in public primary schools in Naivasha central division, Kenya. You are kindly requested to fill in the questionnaire indicating your honest response by ticking (✓) against your option and filling in the blank for those questions requiring your answer.

Your responses will be used for the purpose of this study only. To ensure complete confidentiality, please do not write your name or that of your school anywhere on the questionnaire.

Please tick (✓) the information most applicable to you.

Section A

Background Information.

1. Your sex Male () Female ()
2. Your age in years ()
3. What is your father's level of education
Primary () Secondary ()
Diploma () Degree ()
4. What is your father's occupation?
5. What is your mother's level of education?
Primary () Secondary ()
Diploma () Degree ()
6. What is your mother's occupation?

7. How many marks did you get in the last exam?

Section B

Part I : Teacher – pupil ratio

8. How many pupils are in your Std 8 class?

1. Less than ten () 2.10 – 20() 3.21- 30() 4.31-40() 5. 4-50 ()
6. Above 50()

9. How many teachers are in your school?

1. Less than ten () 2.10 – 15() 3.16- 20() 4.21-25 () 5. 26-30 ()
6.Above 30()

10. Do you have a teacher for every each subject in your class?

Yes () No ()

11. Do your teacher(s) give you homework?

Yes () No ()

12. Do your teachers mark your homework?

Yes () No ()

13. Does the number of pupils in your class eight affect your performance?

Yes () No ()

Part II: Pupil- Book Ratio

14. Do you have enough textbooks for each subject in your class?

Yes () No ()

15. Do you have your own textbooks in school or at home?

Yes () No ()

16. About how many pupils share one textbook in your class?

- 1.1:1 2: 1:2 3. 1:3 4. 1:4 5. 1:5 6. 1:6

17. Do you think textbooks affect your performance in examinations?

Yes () No ()

Part III: Frequent Internal Assessment

18. Do you do examinations in your school?

Yes () No ()

19. How regularly do you do exams in your Std 8 class?

1. Once in a term() 2. Twice in a term() 3. Thrice in a term()

4. More than thrice in a term()

20. Do you revise with your teacher exams done?

Yes () No ()

21. Do you get exam results?

Yes () No ()

22. Do you think doing exams regularly affects your performance?

Yes () No ()

Part IV: Library Resources

23. Do you have a library in your school?

Yes () No ()

24. Do you have a library lesson in your class timetable?

Yes () No ()

25. Do you have enough supplementary readers (story books) in your school library?

Yes () No ()

26. Are you allowed to borrow books from the school library?

Yes () No ()

27. Do you think the use of supplementary readers (story books) affect your performance in examinations?


Yes () No ()

Thank you very much for your cooperation

APPENDIX E:

Research Authorization

REPUBLIC OF KENYA



NATIONAL COUNCIL FOR SCIENCE AND TECHNOLOGY

Telephone: 254-020-2213471, 2241349, 254-020-2673550
Mobile: 0713 788 787, 0735 404 245
Fax: 254-020-2213215
When replying please quote
secretary@ncst.go.ke

P.O. Box 30623-00100
NAIROBI-KENYA
Website: www.ncst.go.ke

Our Ref: **NCST/RCD/14/013/923** Date: **3rd June 2013**

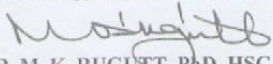
Kabui Samuel Kirunu
University of Nairobi
P.O Box 92-0902
Kikuyu.

RE: RESEARCH AUTHORIZATION

Following your application dated 28th May 2013 for authority to carry out research on "*Institutional factors influencing pupils' performance in Kenya Certificate of Primary Education in public primary schools in Naivasha Central Division, Kenya.*" I am pleased to inform you that you have been authorized to undertake research in Naivasha District for a period ending 31st August, 2013.

You are advised to report to the District Commissioner and District Education Officer, Naivasha District before embarking on the research project.

On completion of the research, you are expected to submit **two hard copies and one soft copy in pdf** of the research report/thesis to our office.



DR. M. K. RUGUTT, PhD, HSC.
DEPUTY COUNCIL SECRETARY

Copy to:
The District Commissioner
The District Education Officer
Naivasha District


"The National Council for Science and Technology is Committed to the Promotion of Science and Technology for National Development".

APPENDIX F:

Research Authorization from D.E.O

MINISTRY OF EDUCATION

Telephone: 0202352776
Fax No: 254 0202352776



DISTRICT EDUCATION OFFICE,
NAIVASHA,
P. O. BOX 2053 – 20117.
NAIVASHA.
Date: 12TH JUNE. 2013.

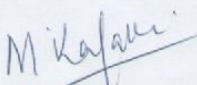
Ref. MOE/NVS/GEN/112/98

Kabui Samuel Kirunu
University of Nairobi
P.o Box 92- 0902
KIKUYU

RE: RESEARCH AUTHORIZATION

Following your request to conduct a research on “**Instutional factors influencing pupils' perfomance In Kenya Certificate of Primary Education in public Primary schools in Naivasha Central Division in Kenya** ”, authority is hereby granted to visit schools and interact with the school communities.

You will however be required to give a copy of your findings to this office on completion of your studies.


LEONARD M. KABAKI
FOR DISTRICT EDUCATION OFFICER
NAIVASHA

MOE-ISO 9001:2008 Certified

APPENDIX G:

Research Authorization from D.C

**OFFICE OF THE PRESIDENT
PROVINCIAL ADMINISTRATION**

Telegrams: DISTRICTER" Naivasha
Telephone: Naivasha 050-2020014
When replying please quote



THE DISTRICT COMMISSIONER
NAIVASHA DISTRICT
P.O. BOX 11
NAIVASHA

Ref. No. COR. 3/4 VOL. I/138

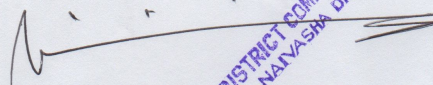
13th June 2013

TO WHOM IT MAY CONCERN

RE: RESEARCH AUTHORIZATION
SAMUEL KIRUNU KABUI ID NO. 13210993

The above named person has been authorized to carry out research on institutional factors influencing pupils' performance in Kenya certificate of primary education in public primary schools in Naivasha central division for a period ending 30st August 2013.

Kindly accord him necessary assistance.


M. K. KIONI
FOR: DISTRICT COMMISSIONER
NAIVASHA DISTRICT

DISTRICT COMMISSIONER
NAIVASHA DISTRICT

CC:

District Officer
Naivasha Central Division

**APPENDIX H:
Research Permit**

PAGE 2 PAGE 3

Research Permit No. NCSTRCD/14/013/923

THIS IS TO CERTIFY THAT **Date of issue** **3rd June, 2013**

Prof./Dr./Mr./Mrs./Miss/Institution **Fee received** **KSH. 1000**

Kabui Samuel Kirunu

of (Address) University of Nairobi

P.O Box 92-0902, Kikuyu.

has been permitted to conduct research in

Location **District**

Naivasha **Rift Valley**

Province


on the topic: Institutional factors influencing

pupils' performance in Kenya Certificate of

Primary Education in public primary schools

in Naivasha Central Division, Kenya.

for a period ending: 31st August, 2013.



[Signature]
Applicant's Signature

[Signature]
For Secretary
National Council for
Science & Technology

CONDITIONS

- 1. You must report to the District Commissioner and the District Education Officer of the area before embarking on your research. Failure to do that may lead to the cancellation of your permit**
- 2. Government Officers will not be interviewed with-out prior appointment.**
- 3. No questionnaire will be used unless it has been approved.**
- 4. Excavation, filming and collection of biological specimens are subject to further permission from the relevant Government Ministries.**
- 5. You are required to submit at least two(2)/four(4) bound copies of your final report for Kenyans and non-Kenyans respectively.**
- 6. The Government of Kenya reserves the right to modify the conditions of this permit including its cancellation without notice.**

REPUBLIC OF KENYA

RESEARCH CLEARANCE PERMIT

GPK60553mt10/2011 **(CONDITIONS—see back page)**