

**EFFECTS OF FREE PRIMARY EDUCATION ON THE QUALITY OF
EDUCATION IN PUBLIC PRIMARY SCHOOLS IN NAIVASHA
DISTRICT, KENYA**

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**A Research Project submitted in Partial Fulfillment of the Requirements for
the Degree of Master of Education in Educational Planning.**

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DECLARATION

This research project is my original work and has not been submitted for degree in any other university

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DEDICATION

This work is dedicated to, my parents, Edward Munyi and Elizabeth Nyambura brothers; Peter and Samuel, Sisters; Leah and Jane, and to Bernard and Son Adrian.

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ABBREVIATION AND ACRONYMS

D.E.O	District Education Officer
D.O	District Officer
EFA	Education For All
FPE	Free Primary Education
GOK	Government of Kenya
MOEST	Ministry of Education Science and Technology
MDG's	Millennium Development Goals
UPE	Universal Primary Education

ABSTRACT

The purpose of this study was to find the effects of Free Primary Education of the provision of quality education in public primary schools in Naivasha District. The objectives of the study were; to examine the extent to which class size affects the provision of quality education in public primary schools under free primary education, to assess how the adequacy of textbooks under the free primary education influences the provision of quality education in public primary schools, to analyze the extent to which classroom environment affects the provision of quality education in public primary schools under free primary education and to examine how the adequacy of the sanitation facilities affects the provision of quality education in public primary schools under free primary education. The study employed descriptive survey design. The researcher targeted all public primary school head teachers, teachers and pupils as the respondents for the study. The study sample comprised of 30 schools, 30 head teachers, 164 teachers and 380 pupils. Random Simple sampling technique was used to select the schools, teachers and the pupils. Two instruments were used to collect data, three sets of questionnaires; head teachers, teachers and pupil's questionnaires and a document analysis guide. The data collected was analyzed using the descriptive statistics were frequency tables and percentages were used to present data. The study revealed that, the Free Primary Education had brought about large classes of more than 50 per class with others having over 80 pupils which adversely affected the teaching learning processes. Text books though provided by the government were still few to allow for provision of quality education. The classroom environment in most of the schools was not very conducive to allow for quality teaching and learning processes, while the sanitation facilities required major improvement in most of the schools. The study made recommendations that the parents should be made to take responsibility of the text books given to their children in school and take it as their duty to replace lost books soonest possible. This would help minimize losses and lower text book ratios among the pupils. The government should increase amount of resources to enable expansion of classrooms and improve on the conditions of the existing ones and employ more teachers this would help reduce the teacher pupils' ratios hence improving the teaching learning processes. The sanitation facilities should as well be improved to give a more conducive learning environment

CHAPTER ONE

INTRODUCTION

1.1 Background to the study

Education is often viewed as one of the primary drivers of economic development. It has an impact on individual productivity, employment economic growth and social equity when looked at as an investment (Martinez, 2010). Education, and particularly primary education, also promotes achievement of all of the other Millennium Development Goals (Barbara, Bruns and Ramahata, 2003). It's thus this value and benefits of education that explains why developing nations aided by developing partners have invested a lot of money in education aiming at achieving MDG's of UPE by 2015. The United States of America and the United Kingdom for example provides free elementary and secondary education and highly subsidized tertiary education (GOK, 2005).

The introduction of Free Primary Education by the Kenya government in 2003 is an indication of its commitment to international treaties advocating for Education For All in which it is a signatory and which has eventually seen enrollments increase in public primary schools (World Bank, 2004). Although the policy of FPE has received a lot of praise and has positively affected the enrollments, it has generated commonly observed phenomenon across the world in education systems which include, the unavailability of physical facilities, school furniture, equipment and teachers, among others. This has led to large class sizes and

overburdening of teachers, hence negatively affecting the quality of education (Ogola, 2010; MOEST, 2012).

Educational quality has been defined in many ways. The 2000 Dakar Framework for Action for instance, defined quality education as, desirable characteristics of learners (healthy, motivated, students), processes (competent teachers using active pedagogies), content (relevant curricular) and systems (good governance and equitable resource allocation). It as well emphasized on the need to improve all aspects of quality of education in order to achieve measurable outcomes for all especially in literacy, numeracy and essential life skills.

Adams 1998, defines educational quality as inputs (number of teachers, number of textbooks), processes (amount of direct instructional time, extent of active learning) outputs (test scores, graduation rates) and outcomes (performance in subsequent employment). He also looks at it as the attaining of specific targets and objectives which are based on an institutions reputation, the extent to which schooling influences change in student knowledge, attitudes, values and behavior.

Ngware, oketch & Alex, (2008) outlines teacher pupil ratio, textbooks, classroom space, and school environment as indicators of quality education among many others. Mostly quality of education in primary schools is measured in terms of achievement that is distinctive output or scores in standard tests, completion of program, participation, dropout and repetition rates (Michaleowa, 2001; Kanyongo, 2005)

Class size is one of the primary aspects that measures educational quality. Agrist and Lavy in 1999 analyzed data from Israeli public schools and used class size predicted by an Israeli class size rule on recommendation made by Moses Maimonides (a 12th century Talmudic scholar) that forbids class size of more than 40 in the reading and Mathematics scores of fifth grades. They found that reducing the class size by 6 pupils increased reading scores from 0.2 to 0.5 standard deviation and Maths scores from 0.1 to 0.3 9 (Hyukuk, Paul and Melissa, 2012) Huebler 2008, in his presentation at the International Education statistics on pupil teacher ratio, argued that in large classes, the quality of education suffers since individual attention is not possible. In 1980's the student Teacher Achievement Ratio (STAR) project in Tennessee (United States) which covered almost 12,000 students from kindergarten to grade 3, over a four year period, to study the impact of class size on pupil achievement, showed that reducing class size had a positive impact on pupils academic achievement, especially for children from disadvantaged social backgrounds (GMR, 2005).

One of the major stumbling blocks on the delivery of quality education is shortage of textbooks and instructional materials. Without textbooks the skills, concepts and content required by the curriculum cannot be taught (Ghana education sector report, 2004). UNESCO asserts that improvement in the quality of education depends to a great extent on whether relevant and high quality books and other learning materials can be made available to teachers and students (Oakes and

Saunders, 2002). According to Fuller (1985) studies in California found that, instructional materials especially textbooks and library activities are consistently related to quality of education as they are a source of essential information and the basis for examination and appraisal. Lockheed and others (1986) reported on their analysis of longitudinal data in the second International Mathematics Study conducted by IEA entailing pretests and posttests to study text book use in Thailand found that students reported using textbooks often, scored significantly better on achievement tests.

NASIMLA (2010) in a recent study in Kenya sated that about (67%) of primary schools had adequate text books and availability of teachers guide was rated at sixty point seven percent. They argued that pupils who had their own text books were more likely to perform better than those who had no text book or had to share with two or more other pupils.

Taylor and Vlastos (2009) developed a theory regarding the relationship between environment and design within the classroom. They referred to the physical environment of the classroom as the “silent curriculum” and hold strongly to the belief the classroom environment contributes to a quality education (Brittany and Katie (2011). The classroom is the immediate management environment for formal knowledge acquisition (Sunday, 2012). It plays an important role in students' cognitive and affective development (Baek and Choi, 2002). If a classroom is not properly organized to support the type of schedule and activities

a teacher has planned, it can impede the functioning of the day as well as limit what and how students learn. However, a well-arranged classroom environment is one way to more effectively manage instruction because it triggers fewer behavior problems and establishes a climate conducive to learning (Caroline and Elizabeth, 2010).

A study by the Ministry of Education, New Zealand 2004, in an attempt to understand the influence of classroom environment on learners outcomes, found that a well spacious classroom supported teaching and learning hence greater student achievement.

Educational potential is undermined when schools lack water, sanitation and hygiene promotion (UNESCO, 2008). With the advent of free primary education in Zambia for example, enrolments increased by over 60% in just 6 years and although many new classrooms were built, schools water and sanitation facilities are often insufficient to cope with the increase in enrolment. A recent study showed that total of 1349 did not have facilities while 502 schools did not have toilets affecting over a million pupils (SNV, Netherlands Development organization, case studies, 2009). Many girls thus could not remain in school and absenteeism was rampant hence a big gender gap and low academic achievements. World Health organization (1997) argues that lack of adequate water and sanitation facilities in schools create unsafe environments where diseases are transmitted. For example, children with worm infection have lower

marks in school than un-infected ones (Nokes et al, 1992; Nokes and Bundy, 1993).

The ministry of education in Kenya has set the minimum standard for provision of toilets as part of school sanitation facilities. The minimum number of toilets in a school is 4 for the first 30 pupils, thus a ratio of 25:1 and 30:1 for girls and boys respectively (GOK, 2000).

1.2 Statement of the problem

The government of Kenya has shown commitment to the provision of quality education and training as a human right for all Kenyans in accordance with the Kenyan law and the international conventions, such as the Education For All (EFA) goals, and is developing strategies for moving the country towards the attainment of these goals (Ingubu and Wambua, 2011). Together with other development partners, it has made tremendous efforts towards provision of Education For All through the implementation of FPE. The government has provided learning resources like textbooks, employs teachers and provides learning spaces. Despite all this efforts, issues of inadequacy still arise. Teachers are not enough, classrooms are still congested and some schools do not have enough sanitation facilities.

Naivasha district has 68 public primary schools. It has a pupil's population of 44,224, with 22761 boys and 21,463 girls. The textbooks are still a problem as

many pupils end up not replacing lost books due to lack of proper replacement policies in many of the schools. Classroom environments and sanitation facilities are still challenging to the teaching learning processes in many of these schools. The study sought therefore to find out if class size, text books, classroom environment and sanitation facilities has affected the quality of education in this district.

1.3 Purpose of the Study

The purpose of the study was to investigate the effects of free primary education on the provision of quality education in public primary schools in Naivasha district Kenya.

1.4 Objectives of the study

The study was guided by the following objectives;

- a) To examine the extent to which class size affects the provision of quality education in public primary schools under free primary education.
- (b) To assess how the adequacy of textbooks influences the provision of quality education in public primary schools.
- (c) To analyze the extent to which classroom environment affects the provision of quality education in public primary schools under free primary education.

(d) To examine how the adequacy of the sanitation facilities affects the provision of quality education in public primary schools under free primary education.

1.5 Research questions

The research questions were as follows;

(i) To what extent does the class size affect the provision of quality education in public primary schools under free primary education?

(ii) How does the adequacy of text books influence provision of quality education in public primary schools?

(iii) To what extent does classroom environment affect the provision of quality education in public primary schools under free primary education?

(iv) How does adequacy of sanitation facilities affect the provision of quality education in public primary schools under the free primary education?

1.6 Significance of the study

The study findings may provide information to the Ministry of Education policy and planning, which may assist in addressing issues affecting provision of quality education in public primary schools under the free primary education. The findings may give direction on measures to be taken in addressing and ensuring quality in public primary schools through improvement in the funding strategies

and priorities. The head teachers and the school committees may use the findings in the schools strategic plans which may help improve on the quality of education in their schools.

1.7 Limitations of the study

Some questionnaires were not fully filled and some others were not returned. The study was done when most of the schools were doing their monthly assessment examinations. Most of the teachers were invigilating and marking examinations hence questionnaires were left to be given out by the head teachers. This resulted to some of questionnaires missing during collection day as head teachers were in a work shop outside the district. This also coincided with the schools ball games hence finding some teachers during collection of questionnaires was not possible.

Since attitudes are related to self-image and social acceptance, responses were not being genuine due to social desirability of respondents wanting to preserve a positive self-image.

1.8 Delimitation of the study

The study was delimited to public primary schools in Naivasha district. Those that were involved were primary school head teachers and teachers drawn from the public primary schools since they are the implementers of the Free Primary Education. The study was also be delimited to only four of the many factors that

determine quality of education; the class size, the textbook ratios, classroom environment and the adequacy of sanitation facilities.

1.9 Basic assumptions of the study

(i) The study assumed that class size and text books affect the provision of quality education in public primary schools.

(ii) That the classroom environment and sanitation facilities are contributes to the provision of quality education in public primary schools.

1.10 Definition of terms

Class size - The number of pupils in a teacher's room daily for whom the teacher is accountable.

Classroom environment- Includes, desks, air circulation, types of floor and lighting.

Pupil's achievement- The grades attained from tests and examinations.

Quality of education - quality inputs quality processes and quality outputs

Quality inputs- Number of teachers, text book ratios, number of desks and adequacy of sanitation facilities.

Quality outputs- High examination performance, disciplined pupils, high participation

Quality processes- Teaching that enable learners to develop cognitive skills in a conducive and friendly environment.

1:11 Organization of the study

The study comprises of five chapters. Chapter one consists of the background of the study, statement of the problem, purpose of the study, objectives of the study, research questions significance of the study, limitations and delimitations of the study, basic assumptions and the definition of significant terms. Chapter two comprises of review of related literature and the conceptual framework. Chapter three covers a description of research methodology used. This comprises of the research design, target population, sample and sampling procedure, research instruments, data collection procedures and lastly the data analysis techniques. Chapter four presents data analysis and discussion of the study findings and lastly chapter five gives a summary of the findings, discussions and conclusions.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This section covers related literature an over view of the rationale for Free Primary Education, an over view of quality education, classroom size, text book ratios, classroom space and sanitation facilities and their effects on the provision of quality education in public primary schools. It also covers the theoretical and conceptual Framework of the study.

2.2 The Rationale for the Provision of Free Primary Education

Beginning with the Universal Declaration of Human Rights in 1948, the goal of universal primary education (UPE) has been on the agenda of numerous international treaties and United Nations conference declarations. The Dakar Framework for Action and the United Nations Millennium Declaration, which both were adopted in 2000 reaffirmed this goal and set 2015 as the target date for achieving Education for All. The provision of primary education, is universally recognized as a human right and a public good, and is generally seen as the responsibility of the state. Historically, however, in many societies varieties of organizations (for example, religious authorities, private philanthropy,

organizations and the private sector) initiated primary provision and have played a critical role in its expansion (Manzoor, 2010).

Primary education enables people to participate in social economic and political activities of their communities to their fullest potential (Webster, 2000). Quality primary education develops the capacity to learn, to read and use math, to acquire information, and to think critically about that information. It is also the gateway to all higher levels of education that train the scientists, teachers, doctors, and other highly skilled professionals that every country, no matter how small or poor, requires. Research also indicates the contributions of primary education to better natural resource management, including conservation of the tropical rain forest (Godoyand Contreras 2001) and more rapid technological adaptation and innovation.

In Western Europe during the industrial revolution era the government introduced UPE to largely strengthen and drive the capitalistic machinery (Ssekamwa and Lugumba, 2001). In Africa the first education program begun as part of the colonization process and was largely supported by the missionaries. Most governments have thus committed a large proportion of their budgets toward the provision of education but generally in the UPE programs (Ssekamwa and Lugumba, 2001).

2.3 An Overview of Quality Education

The concept of 'educational quality' as it relates to education within the developing world has been subjected to increasing debate, beginning initially with the World Declaration on Education for All (EFA) at the Jomtien Conference in 1990. It identified quality as a prerequisite for achieving the fundamental goal of equity. While access to education has been the primary focus of earlier declarations, the Dakar Framework recognized the quality of education as a prime determinant in the attainment of Education for All. The Framework's expanded definition of quality set out learner characteristics (health, motivation), enabling inputs (teachers and human resources, among them), as well as dimensions of teaching and learning that contribute to literacy, numeracy, life skills and social benefits (Joel and Jeffery, 2007). While the notion of quality was not fully developed, it was recognized that expanding access alone would be insufficient for education to contribute fully to the development of the individual and society. Emphasis was accordingly placed on assuring an increase in children's cognitive development by improving the quality of their education (Yaw, 2005; George, Hillary and Michael, 2008)

The inclusion of universal education in the millennium development goals in goal two is an indication of world nations concern for giving quality education to all targets age groups (Steer and Wathne, 2009; Webster, 2000). Quality education hence is thus becoming a major concern and an endeavor for many developing

countries. Some scholars have defined quality of education in terms of the extent to which and the manner in which aims and functions of education are achieved and realized. Aims are the anticipated effects of learning and functions refer to what the schools are expected to accomplish (Vedder 1994).

Quality of education is seen to decline and it manifests itself in low pass rates, high dropout rates, underdeveloped skills where pupils leave schools still unable to read, write and unready for self-employment or being employed (Shoko, 2010; Michaelowa, 2001).

2.4 The view of Class Size and the Provision of Quality Education

Class size has been an important issue in discussions and dialogue on quality of education as well as issue of financing education, especially teacher numbers and remuneration. In Africa as many countries introduce UPE education, class size has been a major challenge for ministries of Education and Finance, (Kariuki and Guantai, 2005). There has been vigorous and widely reported debate over the educational consequences of class sizes. In the US, the debate has centered on the efficacy and cost effectiveness of class size reduction initiatives, while in UK debate has been more about the negative effects of large classes, with much of it being about the relationship between large classes and academic outcomes which is an indicator of quality of education (Anderson, 2000; Finn and Archilles 1999, Grissmer, 1999). Research on pupil-teacher ratios suggest that there is a tendency

for teachers to devote less time to group instruction and more on individual instruction in smaller classes (Betts & Shkolnik, 1999)

Anderson (2000) in his comprehensive model links small pupil-teacher ratios with great student achievements, more instructional time, greater pupil-teacher engagement and more in depth treatment of content. Logically therefore, a small class will increase the amount of time a teacher can use on handling individual pupils and on instruction (Bennett, 1996).

2.5 Contribution of Text Books on the Provision of Quality Education

In many countries of the developing world, the textbook is the major, if not the only, medium of instruction. It is the main resource for teachers, setting out the general guidelines of the syllabus in concrete form, providing a guide and foundation to the content, order, and pacing of instruction, supplying exercises and assignments for students to practice what they have learned. It is both a source of essential information and the basis for examination and appraisal (Ian, 2000)

Evidence suggests that textbooks are a central part of classroom life in much of the world, although more so in some subjects like Languages and Mathematics than in like Physical education (Naumann et al, 2006). Their availability thus is a great factor that impacts on quality of education as documented in several studies in Africa on positive effects of text books on learning achievements (UNESCO,

2004). National and international research has established the overall educational importance of textbooks and instructional materials. In California, textbooks and instructional materials are particularly important because they are the primary means through which students gain access to the knowledge and skills specified in the State Content Standards that are at the heart of California's K-12 education system. In the US, for example, teachers spend 70 to 90 percent of the total instructional time delivering content in text books (Applebee et al, 1987; Arment, 1986; Wade 1993). In Nicaragua and Philippines testing in early 1980's found that students with text books scored higher, by about one-third of a standard deviation, than students without those resources (Lockheed, 1993) and in an experiment in Philippines in thirty schools it was found that provision of text books significantly reduced dropouts (Global Monitoring Report,2005). Books are thus in short essential to achieving the goal of Education for All. However students have limited access to them despite millions of dollars that have been spent on programs of books provision (Montagnes, 2000).

World Bank in particular stated that the availability and use of text books was one of the most consistent indicators of achievement (Heyneyman et al1978; Heyneman and Loxey, 1983; Fuller, 1987). Text books support educational development and quality upgrading has been recognized by the governments throughout developing world through their development partners (World Bank, 2001). Lockheed and others (1986) reported on their analysis of longitudinal data

(entailing pretests and posttests to study text books use in Thailand. They analyzed data from the second international Mathematics Study (SIMS) conducted by the international Association for the Evaluation of Educational Achievements (IEA) and found that students of teachers who reported using text books often scored significantly better on achievement tests.

2.6 Contribution of Water and Sanitation Facilities on the Provision of Quality Education

School water, sanitation and hygiene education initiatives have a profound impact on the health of children, on learning, the teaching environment, and on girls' education. They are directly related not only to physical, mental and social health but ultimately to economic and social development (UNICEF/IRC, 2005).

Educational potential is undermined when schools lack sanitation and hygiene promotion. In Latin America, it is estimated that at least 25% of schools do not have drinking water facilities and one-third do not have sufficient sanitation facilities of good condition (UNESCO, 2008). It should be noted that school sanitation is a contributing factor towards provision of quality education. It affirms the fact that children have a right to basic facilities such as toilets, safe drinking water, clean surrounding and information about hygiene, with creation of such conditions children come to school, enjoy learning, and take concepts and practices of hygiene back to their families (Marielle, 2004).

With the advent of free primary education in Zambia, enrolments increased by over 60% in just six years. Though many classrooms were built, school water and sanitation facilities were not sufficient to cope with the increase in enrolment. Pupils in Zambia use water from contaminated sources or walk along distance to get safe water (Shantuka, 2009). Many pupils remained at home as a result of water borne diseases hence compromising the quality of education.

The ministry of education has thus set the minimum standard for provision of toilets as part of school sanitation facilities. The minimum number of toilets in a school is 4 for the first 30 pupils, thus a ratio of 25:1 and 30:1 for girls and boys respectively (GOK, 2000). A study in Nairobi schools by Ngware et al (2008) signifies a high pupil-toilet ratio in public primary schools.

2.7 Classroom Environment in Relation to the Provision of Quality Education

The quality of education has been reflected not only in the subjects taught and achievement levels reached but also on the learning environment. Most researches have agreed the total environment should be comfortable, pleasant and psychologically uplifting to support the academic process (Adeyemo, 2012). Classroom environment has been referred to as a space or place where there is dynamic participation and interaction between teachers and students.

The main concerns of the physical classroom space include safety and accessibility to learning, arrangement of furniture and the teachers' use of physical resources. Adequate space allows the teacher and student to plan a display of work, and facilitate group work by an improved movement in class (Ngware, Oketch and Ezeh, 2008). According to UNESCO, the minimum student space should be 1.5 square meters with one desk, which translates to 67.5 square meters for a room expected to hold 45 students. Classrooms enter into a transaction with human beings such that in a well arranged and spacious room a teacher is apt to see a real classroom which impacts on how he/she interacts with his/her pupils (Duncanson, Janice and Charles, 2009). Student behavior is paramount to their educational achievements.

Research has shown that a well-organized classroom permits more positive interactions between teachers and children, reducing the probability that challenging behaviors will occur (Martella et al, 2003). The way in which children perceive their surrounding greatly affects how they will perform, therefore, it is imperative that instructors and administrators thoroughly examine the physical space with an eye towards making improvement that will benefit the teaching and learning there in (Brittany, Allen & Katre Hussiek, 2011). Taylor and Vlastor (2009) referred to the physical environment of the classroom as the 'silent curriculum', meaning that the space in the classroom has power to facilitate and enhance the learning process in ways similar to those of the overt curriculum.

2.8 Summary of Literature Review

This chapter discusses a summary of the related literature to the study. It has thus found out that the quality of education is determined by various factors as class size, availability of text books, classroom environment and water and sanitation facilities. It identified that, although the right to education has been reaffirmed in many occasions since proclamation of the universal declaration of Human rights in 1948, many international instruments remain silent about qualitative dimension of learning. Many governments in developing countries have introduced Free Primary Education which has enhanced access to education for both boys and girls. However, acquisition of learning outcomes in literacy, numeracy and essential life skills are still low. The primary sub-sector has continued to experience many challenges which include: high pupil-teacher ratio, overcrowded classrooms, occasional teacher and pupil absenteeism. The fall of quality education therefore has turned to be a worldwide problem which is working against the United Nations movement for Universal Primary Education aimed at achieving Education for All. The researcher therefore seeks examines the impact of FPE on the provision of quality education.

2.9 Theoretical Framework

This study is based on the educational production function theory. It looks at the manner in which inputs from students, parents, teachers, schools and many other sources are translated into student's achievements.

A production function allows an analysis of the inputs and results. It looks at the education as a process that can be assimilated to the production process of any good service. Various factors and inputs combine in different ways giving rise to different amounts and qualities of a final or finished good. A function in education consists of the relationship between the amount of entrances, and the amount and quality of exits by the productive process. In order to know these results statistical studies are done by means of econometric measurements of the results obtained by the students. This can be done the final product to recognize its quality looking at certain skills acquired throughout the education process. An educational production function is defined as follows:

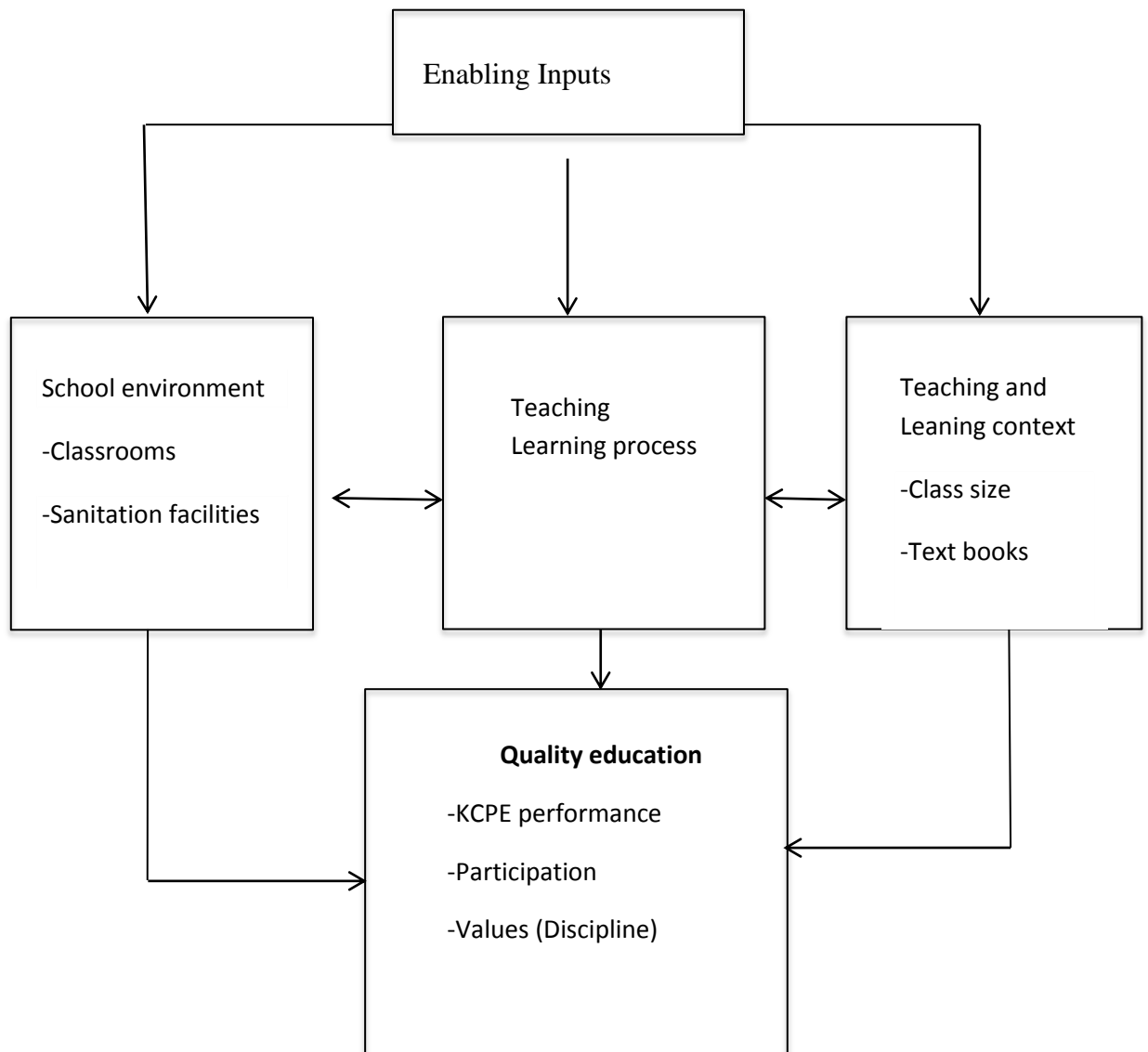
$$A = f(X_1, \dots, X_m, X_n, \dots, X_v,)$$

where A is the output and X is the factors of inputs(Hanshek. 2007) in this study, the educational resources are the inputs teachers (X₁), textbooks (X_m), classroom environment(X_n) and sanitation facilities(X_v). The output A is the pupil's performance, admission to secondary schools, participation and students behavior that all denote quality education.

2.10 Conceptual Framework.

This conceptual framework illustrates the variables that are in play in the provision of quality education in public primary schools with the FPE.

Figure 1 A frame work for understanding educational quality



In this conceptual framework, the independent variables which are generally the inputs of teaching and learning process include the teaching learning resources and which includes the teachers, text books, classrooms and the sanitation facilities.

The interaction of these variables with effective teaching and learning processes produces outputs such as good performance in academic and personal values, which are indicators of quality education.

CHAPTER THREE

RESEARCH METHDODOLOGY

3.1 Introduction

This section outlines the methodology that was used in the study. It includes research design, target population, sample size and sampling procedure, research instruments, instrument validity and reliability of the instrument, data collection procedure and data collection and data analysis procedure.

3.2 Research Design

This study used descriptive research design. Gay (1981) defines descriptive research as a process of collecting data in order to test the hypothesis or to answer questions concerning the current status of the subjects. This design helped establish association between Variables without attempting to change behavior or conditions. It was proper in determining the degree to which variables are associated with or for making predictions regarding the occurrence of social or physical phenomenon (Malek and Massoud, 2011). It was appropriate in this study as it helped in finding out the current status the quality education.

3.3 Target population

The target population was all the public primary schools in Naivasha District, all the head teachers, teachers and pupils. The district has 68 public primary schools, 44 224 pupils, 824 teachers and 68 head teachers. The head teachers were selected as they play a major role in the planning and running major school projects. Class teachers are the chief implementers of the curriculum and interact with the pupils in the day to day school activities.

3.4 Sample Size and Sampling Procedures

Sampling is the act, process or technique of selecting a suitable sample, or a representative part of a population for the purpose of determining parameters or characteristics of the whole population (Ary, Jacobs, Razavieh & Sorensen, 2006). This study took 30 schools as per Borg and Gal (1983) who suggests that for descriptive studies, 30 cases are the minimum number to work with. Simple random sampling was used to select the schools. All the head teachers in the thirty schools participated in the study. Mugenda and Mugenda suggest a sample of 10% is enough for descriptive studies, however the researcher took 20% of the 824 teachers hence, a total of 164 teachers participated in the study. 5 to 6 teachers were selected from every school by the simple random sampling was used to select the teachers. Krejcie and Morgan's table (1960) was used to select

the number of pupils of pupils. It suggests a sample of 380 for a population of 40,000, and since the pupils' population was 44,224, the researcher took 380.

3.5 Research Instruments

The researcher used questionnaires and a document analysis procedure to collect data. According to Orodho (2005), questionnaires were considered to be the most suitable instrument for descriptive research for they would require less time, are less expensive and permits collection of data from a wide geographical area. The researcher used three types of questionnaires; head teachers' questionnaires teachers' questionnaire and students' questionnaire. The head teachers and teachers' questionnaires had two parts. Part one gathered information about their demographics while part two answered questions in relation to quality education. Pupils' questionnaire had one part combining both demographics and questions on quality education. The document analysis guide was be used to collect data on the number of pupils per class, the KCPE performance, number of pupils who joined National schools and the number of teachers in the school. This was to ensure the true picture was captured incase information from the questionnaires had gaps.

3.5.1 Instrument Validity

The researcher adopted the content validity procedure to determine the validity of the instruments. According to Mugenda and Mugenda, (2003), content validity is a measure of the degree to which data collected using a particular instrument represents a specific domain of content of a particular concept. They further state that the unusual procedure in assessing content validity of a Measure is to use professional or expert in this field. to ensure content validity the researcher had the questionnaires appraised by the project supervisors who are also senior lectures in the school of Education; Department of Education and Planning, university of Nairobi. Their contributions and suggestions were made use of and ambiguous questions were clarified and new questions were added. A pilot study was conducted in three schools which did not participate in the final study. Three schools were selected through simple random sampling, 3 head teachers from those schools, 16 teachers and 38 pupils participated in the study. This sample was as per Musula (1990) who says that piloting should involve 10% of the total Sample. After piloting, ambiguous questions were modified and others discarded

3.5.2 Reliability of the Instrument

Kombo and Tromp (2006) concur with Mugenda & Mugenda (1999), when he defines reliability as a measure of how consistent the results from a test are. The researcher used test-retest technique to test reliability of the instrument. This is a

technique of administering the same instrument twice in the same group of subjects. The questionnaires were administered to the same selected sample again after one week. After test-retest was done, the Pearson's product moment correlation was used to determine correlation coefficient. The correlation coefficient was 0.7 was sought hence considered appropriate as it was close to 1. This was to show whether the scores of the two tests would correlate. The formula for determining is as provided below.

$$r = \frac{\sum [(x-x)(y-y)]}{N \delta x \delta y}$$

Where, x was the score of the first test 1 while y was the score on test

3.6 Data Collection Procedure

The researcher after the approval of the proposal obtained a permit from the National Council of Science and Technology, authorizing her to carry out the research. The researcher then presented the permit to the D.E. O and the D.O for clearance. The researcher then visited the schools to ask for permission from the head teachers and arrange for the appropriate days for data collection. The researcher then visited the schools and collected the questionnaires. The

questionnaires were self-administered and the respondents were requested to hand in the completed questionnaires after a week.

3.7 Data Analysis Technique

Mugenda and Mugenda (2003) say that data obtained from research must be cleansed, coded and key punched. The researcher thus on collecting the questionnaires examined each of the items for completion and organized the data as per research questions, coded the data and developed code sheets. The study generated both qualitative and quantitative data. Qualitative data was coded entailing the identification of categories and themes and then organized into quantitative data. The statistical package for statistics for social science (SPSS) was then used to give descriptive statistics that was calculated in frequencies and percentages and the presented in tables and graphs. The data was then organized as per the objectives and other characteristics. Similarities and differences in the different sets of data was also sort to look for exceptions and contradictions around a particular theme. A summary of the results was then developed and conclusions drawn.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND INTERPRETATION

4.1 Introduction

This chapter presents findings of the study on the effects of Free Primary Education on the provision of quality education in public primary schools in Naivasha district. To achieve this, several objectives were laid down which are going to guide this analysis and interpretation in relation to the data collected from the field.

4.2 Questionnaire Return Rate

The study involved 30 primary schools out of the sixty eight public primary schools in the district. The questionnaires used were in three categories; head teachers questionnaires, teachers' questionnaires and the pupils' questionnaires. Thirty head teachers were involved in the study. One hundred and six four teachers were also involved and three hundred and eighty pupils. 30 questionnaires were administered to the head teachers, 27 were filled and collected back translating to 90% return rate. Out of the 164 questionnaires issued to the teachers, 133 were collected, translating to 81.1% return rate. Out of the 380, questionnaires given to pupils, 318 were returned which translates to 83.3%. On average, the questionnaire return rate was 84.9%.

4.2 Demographic Data of Respondents

The data presented here was obtained from head teachers, teachers and pupils questionnaires. Frequencies and percentages have been used to describe the data as shown.

4.2.1 Gender of teachers and pupils

One hundred and thirty five teachers indicated their gender. The information is presented in Table 4.1

Table 4.1 Gender of Teachers in Naivasha District

	Frequency	Percent%
Female	79	58.5
Male	56	41.5
Total	135	100.0

Table 4.1 shows that the number of Female teacher is more than male as it formed 58.5%. This shows a significant gap in the achievement of gender parity.

Table 4.2 Pupils Gender

	Frequency	Percent
Male	184	57.9
Female	134	42.1
Total	318	100.0

Table 4.2 shows that the number of male pupils is higher indicated by 57% than that of the female which is 42.1%. This fact was also noted from the data obtained at the District office that showed a higher number of boys than girls.

4.2.2 Age composition of respondents

Head teacher were asked to indicate their age bracket. The findings are presented in table 4.3.

Table 4.3 Head teachers' age distribution

	Frequency	Percent%
31-40 Years	9	33.3
41-50 Years	10	37.0
50 Years and above	8	29.6
Total	27	100.0

From Table 4.3 is evident that majority of the head teachers 65.6% are 41 years and above. This may imply that majority of them have a great experience of the effects of Free Primary Education.

Teachers were also asked to indicate their age bracket. The findings are as per Table 4.4

Table 4.4 Teachers age distribution

	Frequency	Percent%
21-30 years	28	20.7
31-40 years	62	45.9
41-50years	35	25.9
50 and above	10	7.4
Total	135	100.0

Table 4.4 depicts that most of the teachers 79.2% are above 31 years. This may imply that most teachers may be able to evaluate the effects of Free Primary Education on the quality of education, as they may have been in working when it was implemented.

4.2.3 Years of Service in Current Station

Head teachers were asked to give the number of years they had served in the current station and their responses are as per Table 4.5

Table 4.5 Years of Service of Head Teachers

	Frequency	Percent
3 Years and below	12	44.4
4-6 Years	7	25.9
7-9 Years	6	22.2
10 and above	2	7.4
Total	27	100.0

From Table 4.5 it can be inferred that most head teachers had served in the current station for less than 3 years. This may bring about limitations to their responses in some schools where head teachers are newly transferred as they may not have well learnt all the school's information.

Teachers were also asked to give the number of year worked in the current station and the responses are as per Table 4.6

Table 4.6 Teachers Years of Service in Current Station

	Frequency	Percent%
3 Years and below	37	27.4
4-6 Years	50	37.0
7-9 years	25	18.5
10 and above	23	17.0
Total	135	100.0

From Table 4.6, it can be inferred that most teachers 37% had worked in the current station for more than four years. This gives a good considerable duration to give information on the provision of quality education in the given schools.

4.2.4 Academic Qualification of the Respondents

Head teachers were required to give their academic qualifications and their responses are as per Table 4.7

Table 4.7 Head teachers' qualifications

	Frequency	Percent%
P1	2	7.4
S1	4	14.8
ATS	12	44.4
DIP	6	22.2
Bed	3	11.1
Total	27	100.0

From Table 4.7, the only 7.4% of the head teacher are P1 holders. This may imply that the schools were staffed with highly qualified heads of institutions that would be in a position to manage the FPE program efficiently to ensure provision of quality education.

Class teachers were also asked to indicate their academic qualifications. The findings are as per table 4.8

Table 4.8 Teachers academic qualification

	Frequency	Percent%
p1	58	43.0
S1	8	5.9
ATS	19	14.1
Dip	29	21.5
Bed	21	15.6
Total	135	100.0

From Table 4.8, it can be depicted that 57% of teachers are above P1 certificate holders. This shows a strong work force that is capable of delivering towards quality education.

4.4 Objectives of the study

The study was guided by the following four objectives; to examine the extent to which class size affects the provision of quality education in public primary schools under free primary education, assess how the adequacy of textbooks influences the provision of quality education in public primary schools, analyze the extent to which classroom environment affects the provision of quality education in public primary schools under free primary education and to examine how the adequacy of the sanitation facilities affects the provision of quality education in public primary schools under free primary education in Naivasha district.

4.4.1 Effects of class size on the provision of quality education

The implementation of Free Primary Education in Kenya witnessed a 39% increase in enrolment from 5.9 million in 2002 to 8.2 million in 2008, incorporating 2.8 million children into the school system. This has seen class sizes increase, leading to high pupil teacher ratios and high teacher work load among others. The researcher therefore sought to establish the class size and its effects on the quality of education.

The head teachers were asked to indicate the number average number of pupils per class as a result of FPE. The numbers are analyzed on frequencies and percentages on Table 4.9

Table 4.9 Head teachers' responses on the number of pupils

	Frequency	Percent%
0-40	2	7.4
41-50	3	11.1
51-70's	17	63.0
80 and above	5	18.5
Total	27	100.0

From Table 4.9, it can be inferred that as result of FPE, majority of the classes 81.5% have over 51 pupils per class. According to Benbow, Mizrachi, Oliver & Said 2007, an ideal class size is of pupil teacher ratio of 40:1, classes of over 50 with others with 80 pupils and above possess a major drawback in the provision of quality education. This is because individual attention may not be possible hence slow learners may end up unattended to as require.

The teacher is the locus of classroom instructional activity and curriculum delivery. Teachers are the front-line service providers in education.

The head teachers were thus asked to comment on the number teachers in relation to the number of pupils per class in their schools. The head teachers' comments are as per Table 4.10

Table 4.10 Head Teachers Comments on number of teachers

	Frequency	Percent
Adequate	0	0
Inadequate	27	100.0
Total	27	100.0

From Table 4.10, it can be inferred that all the schools 100% had inadequate number of teachers. This affirms the rationale for the Kenya vision 2030 document, which proposed an additional 28,000 teachers be recruited under its flagship project by 2012 to address the shortage. The inadequate number of teachers directly resulting from high enrolments after the Free Primary Education may imply that the large class sizes have resulted to high pupil teacher ratios that can greatly affect the quality of education.

Head teachers were also asked to give the number of teachers the school had employed to assist reduce the teachers work load as a result of the class sizes in their schools. The findings are as per Table 4.11

Table 4.11 Number of teachers employed by PTA

	Frequency	Percent
1-2 teachers	13	48.1
3 teachers	3	11.1
4 teachers	5	18.5
more than five	6	22.2
Total	27	100.0

From Table 4.11, indicates that all the schools have employed at least one PTA teacher. This may indicate that most schools have a teacher shortage. This concurs with the UNESCO's 2005 national representative study of implementation of FPE in Kenya that revealed that, the average schools visited had a teacher shortage of two or three teachers. The results also supports report by Ruto (2011), for Uwezo initiative, that stated that most schools had an average teacher shortage of more than four posing a great draw back to pupils' performance.

Since the class size has a direct effect on teacher pupil interaction, the researcher sought to find out whether the teachers were able to give individual attention to the pupils during the teaching learning process. The teachers were therefore asked if they were able to give individual attention pupils they had in class. Their responses are as per Table4.12

Table 4.12 Teachers responses on individual attention to pupils

	Frequency	Percent
Always	9	6.7
Sometimes	74	54.8
Not possible	52	38.5
Total	135	100.0

Table 4.12 clearly shows that, only 6.7% of the teachers were able to give individual attention to the pupils. These findings concurs with Wamukuru, Kamau and Ochola 2006, who found that large classes as a result of FPE, affected classroom interaction because teachers would not be able to give individualized attention to all pupils, and as well take control of their classes. This also confirms the findings by Wax (2003) that found that many pupils in Kenyan public schools never had a chance to formally meet their teachers outside the classroom. Without individual attention on pupils it becomes difficult for the teachers to identify pupils' weaknesses and assist them accordingly. This would affect the quality of education.

The researcher also wanted to find out whether the class sizes would allow for pupils home work. Pupils were also asked to indicate how often they were given homework and their responses were are as per the Table 4.13

Table 4.13 Pupils responses on homework

	Frequency	Percent
Every day	56	17.6
Weekly	209	65.7
Not given at all	53	16.7
Total	318	100.0

From table 4.13, it can be inferred that only 17.6% were given homework on daily bases. This findings also relates to study by UNESCO's 2005, where the research team labeled 60% of the schools in Kenya as overcrowded hence making it difficult for the teachers to give adequate assignments to test what has been taught. Without homework teachers may not be able to make a follow up on whether the pupils understood what was learnt. This may affect pupils' academic performance.

Pupils were also asked whether the given homework was marked. Their responses are as per Table 4.14

Table 4.14 Pupils responses on marking of homework

	Frequency	Percent
Daily	16	5.0
Sometimes	137	43.1
Never	165	51.9

Total	318	100.0
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From table 4.14, it is evident only 5% of the work given for homework was marked sometimes while 51% was never marked. This findings agree with those of Betts & Shkolnik,1999 on class size suggest that there is a tendency for teachers to devote less time to group instruction and more on individual instruction in smaller classes. This can greatly hinder the teacher from identifying whether what he/she taught was understood or not. A self-evaluation by the teachers enables him are her to identify pupils weaknesses and thus assist them accordingly. This may also assist the teacher in identifying weaknesses in his or her pedagogy hence device ways of improving on them to give quality teaching and learning. This may greatly affect the quality of education.

4.5 Influence of text books on the provision of quality education

The FPE program is underscored by the fact that out of FPE funds, 64% of the fund is earmarked for the purchase of text books, supplementary readers and reference materials among other items. This is towards meeting the government's objective of achieving a text book ratio of 1:2. The study thus sought to find the influence of text books on the provision of quality education. Head teachers were thus asked to give the average pupil book ratios in their school and their responses are as per Table 4.15

Table 4.15 Head teachers' responses on average pupil text book ratios

	Frequency	Percent
1:2	3	11.1
1:3	10	37.0
1:4 and above	14	51.9
Total	27	100.0

From Table 4.15, it can be inferred that majority of the schools 51% had a text book ratio of 1:4 and above. This may imply that although the government has made efforts to reduce this ratio to 1:2, the findings indicate that many schools have not reached that ratio. According to Fuller (1985) studies in California found that, instructional materials especially textbooks and library activities are consistently related to quality of education as they are a source of essential information and the basis for examination and appraisal. Text books are an effective means of improving educational achievements especially in medium terms. Without enough text books then the quality of education is jeopardized.

The finding from the head teachers was also confirmed by the teachers who were asked to give an approximate number of text books shared by pupils in the subjects that they teach and the responses are as per table 4.16

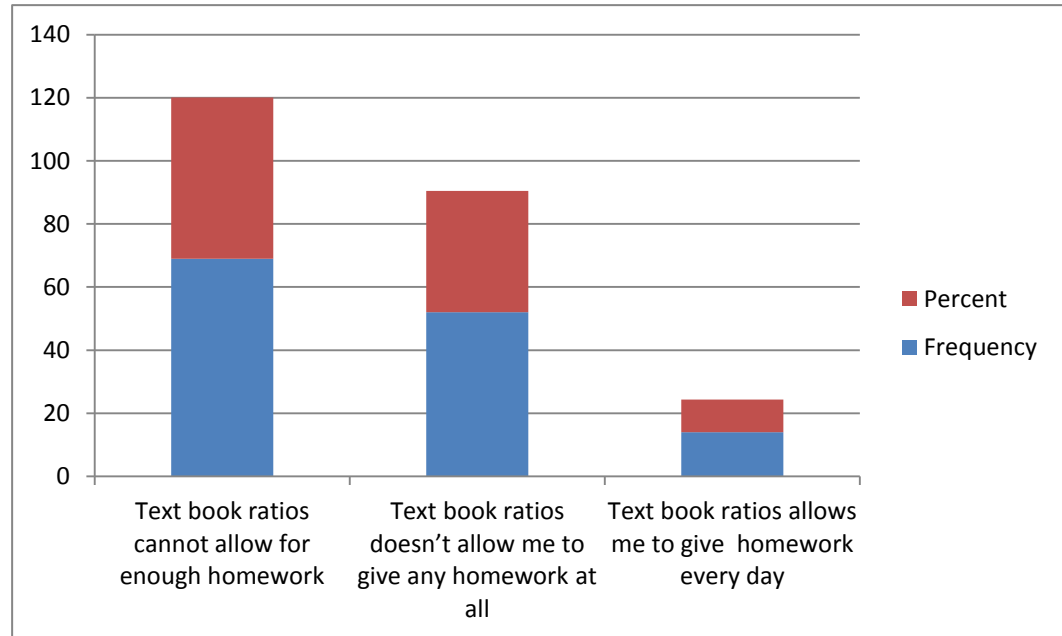
Table 4.16 Teachers responses on the textbook ratios in their subjects

	Frequency	Percent
0-2	24	17.8
3-4	65	48.1
5 and above	46	34.1
Total	135	100.0

From table 4.16, it can be seen that most schools 48% had a text book ratio of 1:4. This response confirms those of the head teachers. Since text books can have a significant impact on educational achievements even when not mediated by a qualified and experienced teacher, the ratios in some subjects can hinder educational achievements hence a compromise on the quality of education.

Teachers were also asked to relate the text book ratios with their ability to give home work. Their responses are as per Figure 1

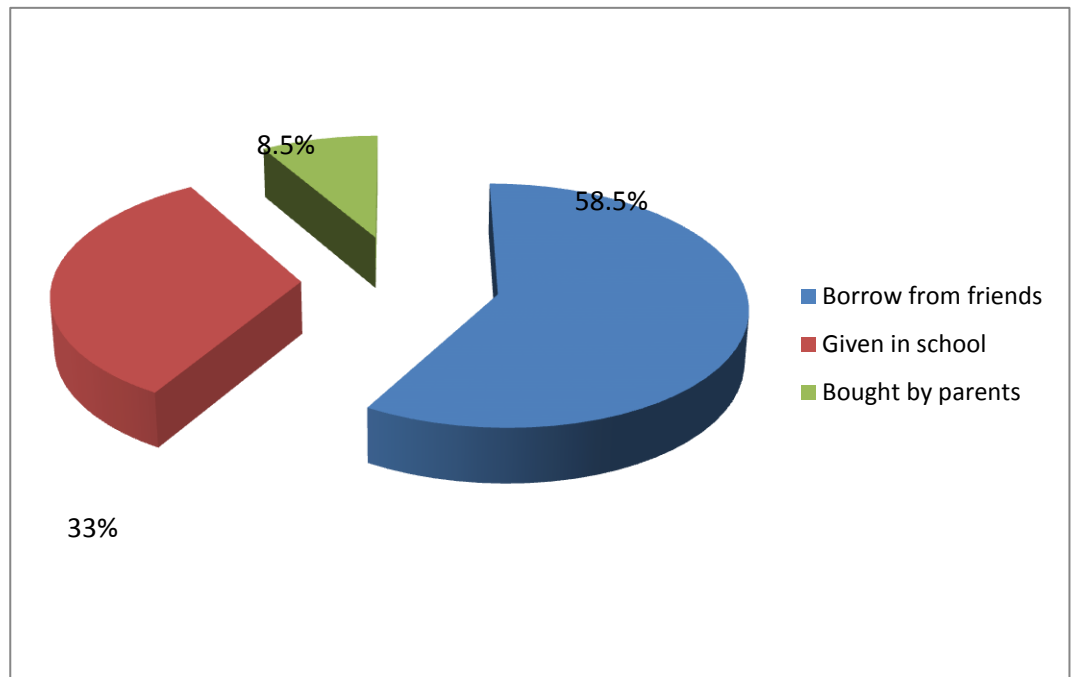
Figure 1 Teachers comment on textbook ratios and homework



From Figure 1 it is indicative that, majority of the teachers did not give enough homework because the number of text books in the subjects that they taught would not allow for enough homework. Text books not only allow for homework but can also give pupils an opportunity to read on their own hence promoting their personal reading habits. Reading promotes writing skills hence improves the literacy skill in pupils. Inadequate text books ratios may therefore imply that quality of education in public primary schools could be wanting.

Pupils were asked to give the source of the books that they used to do the homework given by their teachers. The findings are as per Figure 2

Figure 2 Sources of Text Book for Pupils Homework



From Figure 2, it can be said that, majority of the pupils borrowed text books to carry out their homework. This means that though the government has made efforts to provide text books under the free primary program, the text book ratios still need to be looked into.

They were also asked to comment on the number of text books their parents had bought them, their responses were as per Table 4.17

Table 4.17 Pupils responses on the number of text books bought by parents

	Frequency	Percent
Few	59	18.6
very few	17	5.3
None	242	76.1
Total	318	100.0

From table 4.17, it is clear that 76% of the parents did not make any effort of buying their children any text books that would aid them in their homework or help them learn on their own. Only 23.9% had bought a few books for their children. The implementation of FPE by the government by taking away off parents the responsibility of paying any school levies has made many parents not bother much towards helping in the academic achievement of their children. This may affect the provision of quality education, which should lather be a collective responsibility.

The researcher wanted to find out whether the text books provided under the FPE program assisted in the teaching learning process. The head teachers were thus asked to rate the contribution of text books provided by the government to the teaching learning process. Their responses were as per Table 4.18

Table 4.18 Head teachers' responses on contribution of text books

	Frequency	Percent
Strongly agree	16	59.3
Agree	8	29.6
Disagree	3	11.1
Total	27	100.0

From Table 4.18, 59% of the head teachers strongly agreed that text books contributed to quality teaching and learning in the schools. The head teachers responses agrees with Ubogu, 2003, who found out that text books enabled the pupils to follow the teachers sequence of presentation and aids in understanding of lessons. This also agrees with studies in developing countries that have stated that text books have a significant influence on the teaching and learning process that have a positive effect on school effectiveness (Psachalopoulous and Woodhall,1985). Inadequacy of text books may therefore have a great draw back towards the achievement of quality education.

4.6 The Extent to Which Classroom Environment Affect the Provision of Quality Education.

The learning environments including the classroom and other school facilities have as effect on the quality of education provided in schools. With the implementation of FPE enrolments went up but the physical facilities including

the classrooms were not a component of government grants in the FPE support. The number of classrooms was not increased corresponding to increase in students. Classrooms meant for 30 pupils are packed with three times of the number of students. This came with the shortage of desks and uncomfortable learning environments that encourages distraction and reduces teachers and pupil's motivation in the teaching and learning process. The study thus sought to assess the influence of classroom environments to the provision of quality education under the FPE program.

The head teachers were therefore asked to rate the condition of the classroom environments after the FPE with their ability to contribution to the provision of quality education in their schools. The findings were as per Table 4.19

Table 4.19 Head teachers' responses on condition of classroom environments

	Frequency	Percent
Very conducive	6	22.2
Fairly conducive	17	63.0
Not conducive	4	14.8
Total	27	100.0

From the table Majority of the head teachers 63% defined the condition of the classroom environments fairly conducive. Studies have shown that comfortable and safe environments, clean air and comfortable seating arrangements are important for academic achievement. Sifuna, 2005 noted that FPE brought about overcrowding in classrooms which made it hard for them to write while teachers

could not move around the class to reach children with ease. Without proper classroom environments quality teaching and learning processes may not be possible.

Pupils were asked to tell whether the spaces on their desks were enough for them to comfortably write on and do experiments. Their responses are as per Table 4.20

Table 4.20 Pupils responses on the nature of their desks

	Frequency	Percent
Yes	122	38.4
No	196	61.6
Total	318	100.0

Table 4.20, indicates that 61.6% of the pupils’ desks are not comfortable to neither write on nor perform experiments. Brittany and Katie 2011 referred to the physical environment of the classroom as the “silent curriculum” and hold strongly to the belief the classroom environment contributes to a quality education. Uncomfortable desks for the pupil’s pose great concern on the quality of education in these schools.

The teachers were asked to rate the extent in which various aspects of classroom environment effect given various indicators of quality. These indicators included, performance, teaching learning processes and the teacher and pupils’ motivation.

The teachers' responses on the effects classroom environment on the performance of pupils are as per Table 4.21

Table 4.21 Teacher responses of their rating on the extent in which classroom environment affect performance

	SA		A		D		SD	
	F	%	F	%	F	%	f	%
No of desks	82	60.7	45	33.3	7	5.19	1	0.7
Lighting	10	7.4	40	29.6	56	41.5	29	21.5
Floor	5	4	22	16.3	40	29.6	68	0.4
Air circulation	10	7.4	45	33.3	30	22.2	50	37.0

From Table 4.21, the findings indicate that the majority of teachers (60.7%) strongly agree that number of desks in a class affect the performance of students. This implies that that the number of desks is an important physical resource that enhance quality education, since if the number of desks are inadequate then the classrooms tend to congest and the teachers are not able to deliver effectively, this may also lead to indiscipline cases. These findings agree with Wachira et.al, 2011 who found that teachers concentrated much on dealing with issues of congestion in classes other than on improving quality education. The majority of the teachers 64% did not agree that lighting influenced pupils performance, 50.4% of tem

strongly disagreed that type of floor influenced pupils' performance, while air circulation in the class was not considered very key to the performance of pupils. Although some studies have shown air circulation, lighting in class and type of floor determined how pupils perform, most teachers did not agree with those findings.

Teachers rating of their rating of the extent in which class room environment affects curriculum delivery are as per Table 4.22

Table 4.22 Teachers responses on how classroom environment affect curriculum delivery

	SA		A		D		SD	
	F	%	F	%	F	%	f	%
No. of desks	76	56.3	20	14.8	22	16.3	17	12.6
Lighting	20	14.8	78	57.8	19	14.1	18	13.3
Floor	7	5.2	50	37.0	73	54.1	5	3.7
Air circulation	33	24.4	64	47.4	20	14.81	18	51.4

From Table 4.22, it can be inferred that 56% of the teachers strongly agreed that number of desks in the class affected curriculum delivery. Inadequate number of desks, improper lighting, and air circulation in classes are vital in quality teaching and learning in the classes. These findings affirm those of UNESCO 2005, which indicates that a good classroom environment promotes quality teaching and

learning processes. The classroom environments in most of the schools may thus hinder the provision of quality education.

Teachers' responses of their rating on the extent in which classroom environment affects motivation of teachers and pupils are as per Table 4.23

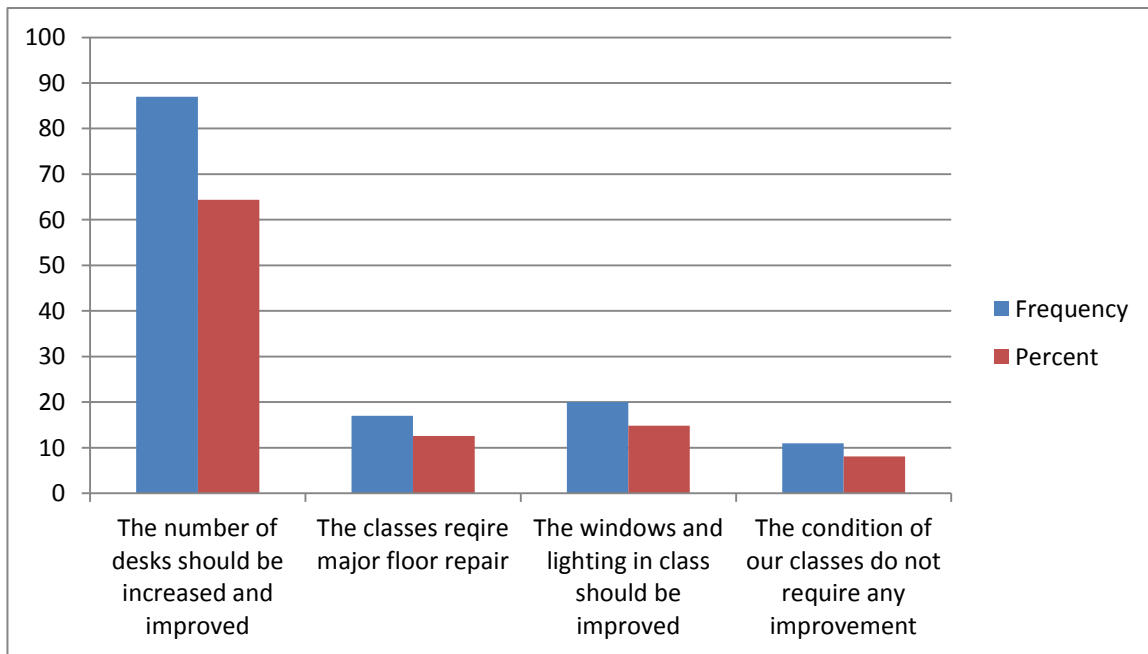
Table 4.23 Teachers responses on how classroom environment affect motivation of teachers and students

	SA		A		D		SD	
	F	%	F	%	F	%	F	%
No of desks	45	33.3	54	40	24	17.8	12	8.9
Lighting	13	9.6	45	33.3	56	41.5	21	15.6
Floor	28	20.7	56	41.5	35	25.9	16	11.9
Air circulation	22	16.3	54	40	34	25.2	25	18.5

Form Table 4.23, it can be inferred that 73.3% of teachers agree that number desks and their arrangement affects teachers and pupils motivation. Arnold, 1991 states that lack of motivation results to poor teaching and maintenance of discipline. Findings on effects of FPE identifies that, 59.7% of teachers are not motivated. Duncan, 2009 affirms that a good classroom environment permits more positive interaction between teachers and pupils hence reducing probability that challenging behavior will occur among pupils. A disciplined class motivates both the teacher and the pupils hence probabilities of providing quality education.

The teachers were asked to choose from the options areas in their classrooms that they thought required major improvement. They responded as per figure 4

Figure 4 Teachers responses areas of improvement in classrooms



From the responses in Figure 4, it can be inferred that most aspects that make a comfortable learning environment were inadequate in most of the schools.

However, 64.4% of the schools require comfortable and enough desks for the pupils to write on. Adeyemo, 2012 states that many researchers agree that the total learning environment should be comfortable, pleasant and psychologically uplifting to support the academic process. A good classroom environment requires, well arranged and enough desks for the pupils, good lighting, enough air circulation and even good types of floor. All this combined will bring about, good academic performance; teaching and learning will be made more effective with highly motivated learners and teachers' hence controlling absenteeism and indiscipline among pupils. This may as well reduce wastage, which compromises the quality of education.

4.7 Adequacy of Sanitation Facilities on the Provision of Quality Education

The government policies have resulted in the increased enrolment in schools severely straining the existing sanitation facilities in schools and compounding the sanitation problems of the schools without such facilities. These facilities are

over stretched as there has not been corresponding expansion of the same with the influx of pupils with the FPE. Water and sanitation facilities are increasingly recognized as fundamental for promoting appropriate hygiene, behavior and pupils wellbeing. The researcher thus sought to assess the adequacy of sanitation facilities on the provision of quality education.

The head teachers were asked if number of pupils latrines met the standard and number as per the governments requirements. They were require to rate the extent to which their schools had met those requirements. The results were as per Table 4.24

Table 4.24 Head teachers rating on standards of latrines in schools

	Frequency	Percent
To a great extent	6	22.2
Fairly	19	70.4
Far from standards	2	7.4
Total	27	100.0

According to their responses, 70.4% had fairly met the government’s requirements of the standards of pupils’ latrines. These findings agree with Shantuka, 2009, who stated that school water and sanitation facilities were not sufficient to cope with the increase in enrolment of pupils after the

implementation of FPE. Provision of adequate water and sanitation facilities coupled with proper hygiene in schools are essential for enhancing effective learning attracting enrolment in schools, particularly girls. Proper sanitation facilities in schools can thus greatly contribute into meeting the EFA and MDG's that emphasizes on access, equity and quality of education.

Both the teachers were asked whether the sanitation facilities were adequate for the number of the pupils. They responded as per the Table 4.25

Table 4.25 Adequacy of sanitation facilities by teachers

	Frequency	Percent
Adequate	63	46.7
Inadequate	72	53.3
Total	135	100.0

From Table 4.25, majority of the teachers 53.3% of the teachers stated that the sanitation facilities were inadequate. Most of the pupils 75% also stated that the sanitation facilities were inadequate. Adequacy of sanitation facilities helps in improving hygiene in schools and reduces the chances of pupils getting infected by diseases. Enough number of latrines also reduces the time spent by pupils queuing for the facilities hence avoiding wastage of time. Inadequate number of sanitation facilities therefore affects the quality of education since quality does

not only measure by how pupils perform in examination but also on time management.

Teachers were asked to give rate the contribution of water and sanitation facilities upon given aspects that promote quality education. The findings were as per the Table 4.26

Table 4.26 Teachers ratings on the contribution of sanitation facilities to various aspects of quality education

	SA		A		D		SD	
	F	%	F	%	F	%	F	%
Pupils academic performance	49	36.0	74	54.8	9	6.7	3	2.2
Participation	54	40	56	41.5	17	12.6	8	5.9
Pupils health	72	53.3	52	37.8	5	3.7	7	5.2

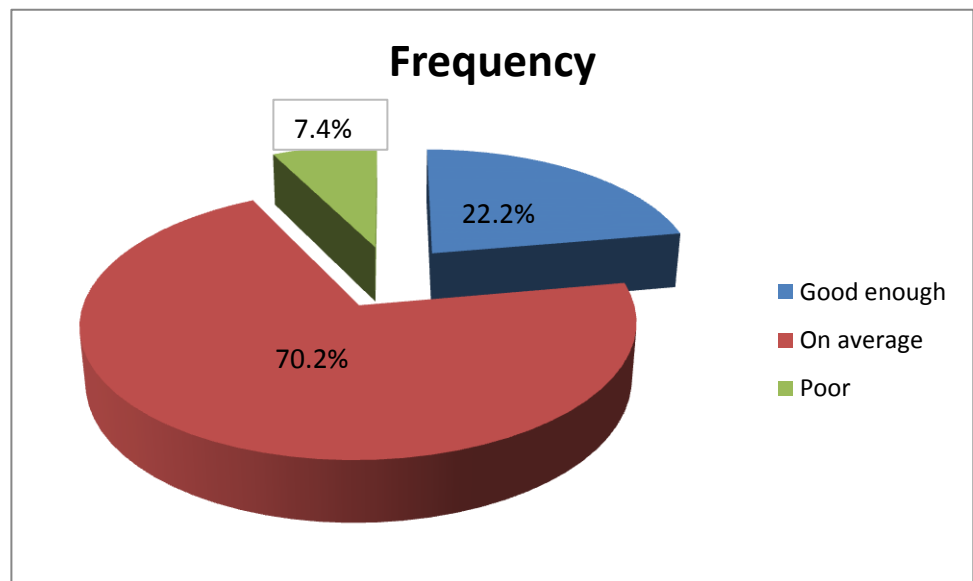
From table 4.26, 54.8% of the teachers agreed that sanitation facilities contributed to the academic performance. These responses may imply that sanitation facilities contribute to the provision of quality education. They concur with Marielle 2004 which states that proper sanitation facilities make children to go school, enjoy learning, and take concepts and practices of hygiene back to their families. They are in agreement with studies that have shown that quality education is not only

determined by performance but is also determined by the environments in which learners interact with. This includes a clean water supply and proper sanitation facilities for a good healthy learner.

Head teachers asked to relate the status of sanitation facilities in their schools to the extent in which they may contribute to the provision of quality education.

They responded as per the figure 5

Figure 5 Head teachers rating on the relationship of sanitation facilities to quality education



From Figure 5, it can be inferred that, majority of the schools sanitation facilities would fairly contribute to quality education. To achieve quality education water and sanitation facilities require to meet the require standards in their numbers and

condition. These findings may imply that these conditions are not yet reached and may affect the learning process of learners. This may as well greatly affect their academic performance.

Teachers were asked to choose the options that best suited the sanitation facilities in their schools in terms of improvement. Their choices were as per the table 4.27

Table 4.27 Teachers comments on the schools sanitation facilities

	Frequency	Percent
Pupils sanitation facilities in our school require major improvement in condition and Numbers	113	83.7
Sanitation facilities in our school require only a slight improvement	18	13.3
Sanitation facilities in our school are in good condition and enough for the pupils	3	2.2
Total	135	100

From Table 4.25, it can be inferred that majority of the schools sanitation facilities required a major improvement on the condition of the toilets and in their number. This was denoted by 83% of the teachers. Only 2.2 % of the teachers felt that the sanitation facilities were in good condition. . With the number of pupils

increasing with the FPE many schools experience sanitary conditions that vary from inappropriate and inadequate sanitary facilities to the outright lack of latrines and safe water for drinking and support to hygiene promotion. When pupils absent themselves from schools as a result of poor health contracted from poor hygiene conditions in schools, they end up missing lessons and this may affect their academic performance as well. This implies that schools may not have considered sanitation facilities as a component that contributes to quality education. This therefore may affect the quality of education in public primary schools.

CHAPTER FIVE

SUMMARY OF THE DISCUSSIONS AND CONCLUSION

5.1 Introduction

This chapter is synthesis of the entire research project. It presents a summary of findings, discussions and conclusions.

5.2 Summary of the Findings

The study sought to examine four specific objectives namely, to examine the extent to which class size affects the provision of quality education in public primary schools under free primary education, assess how the adequacy of textbooks influences the provision of quality education in public primary schools, analyze the extent to which classroom environment affects the provision of quality education in public primary schools under free primary education and to examine how the adequacy of the sanitation facilities affects the provision of quality education in Naivasha district.

It is clear from the findings that Free Primary Education has a great effect on the quality of education in most of the public primary schools in Naivasha. From the findings, majority of the schools 63% have a class size of 50pupils and above as a result. It was identified that 74% of the schools do not have enough teachers with all the schools having employed at least one teacher PTA teachers with others

even employing more than five. Majority of the teachers neither give individual attention to the pupils nor mark their work regularly due to the large class that they have.

Although the government funds the free primary education through provision funds for text books, the study indicates that majority of the schools have a text book ratio of 1:4. These ratios were found to affect teachers' ability to give enough homework to the pupils. 58.5% of the pupils were found to use borrowed text books to enable them complete the home work given by their teachers. 76.5% of the parents have not bought extra books for their children. The study established that text books contributed greatly toward the provision of quality education.

The FPE has brought overstretching of resources including the classrooms and desks in most schools. Findings indicate that classroom environments in most of the schools are not good enough to promote quality teaching and learning processes. The number of desks was found to contribute more to the academic performance of the pupils compared to other aspects like the lighting, air circulation and type of floor. It was also found that, classroom environment determined teachers and pupils' motivation, and the way pupils behaved in class and also their discipline. Most teachers suggested that more desks were required in order to promote quality n their schools. Head teachers, teachers and even the

pupils all stated that the condition and the number of desks needed to be increased and their conditions improved.

The study indicates that majority of the schools 55.5% had a continuous clean water supply. In most schools, pupils' latrines did not meet the government's standards in their numbers and conditions. The findings also indicated that majority of the teachers 54.8 percent agreed that sanitation facilities contribute to the provision of quality teaching and learning by reducing absenteeism especially in the girls and reducing incidents of diseases among pupils. Majority of the head teachers affirmed that sanitation facilities in their schools were not in condition to absolutely support the provision of quality education.

5.3 Conclusions

The following conclusions were made by the study,

Although the Free Primary Education increased enrolments in the schools, the quality of education in public primary schools remains a challenge.

The class sizes in many public primary schools as a result of FPE are still too large to enable the provision of quality education. Teachers encounter by challenges and are not able to give individual attention to the pupils, little or no homework given at all, and even the little homework remains unmarked. This is a big draw back towards the provision of quality education.

Text books provided by the government contribute greatly to the provision of quality education in public primary schools. However a great challenge arises on the text book ratios that are affected by lost text books that are never replaced.

The classrooms environments in public primary schools are overcrowded and their status can least contribute to the provision of quality education. Number of desks and their conditions remain wanting and thus something should be done to ensure that they are in good condition to ensure a comfortable learning environment.

Sanitation facilities are also not enough in many of the schools and that most of them required to be increased and their conditions improved as the study established that they also contribute to the provision of quality education.

5.4 Recommendations

5.4.1 Policy recommendations

From the study findings the following recommendations were made,

- i) The government should increase resources in these schools to improve the teacher-pupil ratio and as well ensure that more classes are built.
- ii) The public primary schools should encourage, parental responsibility over the lost text books to ensure that the lost books are replaced as soon as they are lost.

iii) The learning environments should be improved as they are seen to contribute toward the provision of quality education in schools.

5.5 Suggestions for further study.

The following are suggestions for further research,

i) The study was done in public primary schools hence other researchers could carry out a comparative study of public primary schools and private primary schools on factors influencing the provision of quality education.

ii) The study only examined four variables named, class size, classroom environment and sanitation facilities. Further studies should consider factors like, parents level of education, teachers' level of qualification and the economics activities in the region.

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APPENDIX A

LETTER OF INTRODUCTION TO RESPONDENT

University of Nairobi,

P.O Box 30197

Nairobi

Dear Sir/Madam

REF: COLLECTION OF DATA

I am a post graduate student at the University of Nairobi pursuing a master degree Educational planning. I am carrying out a study on the effects of FPE on the provision of quality education in public primary schools in Naivasha district.

I hereby write to kindly ask you to grant me permission to collect data in your institution. I would wish to assure you that information collected will only be used for this study only.

Yours faithfully

JOYCE MUNYI

APPENDIX B: QUESTIONNAIRE FOR HEAD TEACHERS

SECTION A: DEMOGRAPHIC INFORMATION

You are kindly requested to complete this questionnaire by indicating your honest response by placing a tick [] against your response.

1. Which age bracket do you belong?

21-30 years [] 31-40 years [] 41-50 years [] 50 years and above []

2. How many years have you served in the present school?

3 years and below [] 4-6 years [] 7-9years []

10-15 years []

3. What is your professional qualification?

P1 [] S1 [] ATS [] DIP [] Bed []

Any other (specify).....

Section B: Effects of FPE on the provision of quality education.

4. What is the current average No. of pupils per class with the FPE?

5. What is the average current text book ratio in your school?

1:2 [] 1:3 [] 1:4 []

6. Is there a continuous clean water supply for your school throughout the week enough for the number of pupils in your school?

Yes [] No []

7. How would you rate the number of teachers in your school in relation to the number of pupils since the introduction of FPE?

Adequate []

Inadequate []

8. In which way does the number of teachers in your school impact of the quality of education?

(a) Positively []

(b) Negatively []

9. Kindly state the number of PTA teacher your school has employed if any, to assist in the teaching learning process in your school.

2 []

3 []

4 []

More than five []

10. To what extent do you agree with this statement; *Text books provided by the government under the FPE have helped in improving the quality of education in the school.*

Strongly Agree []

Agree []

Disagree []

strongly Disagree []

11. Do parents in your school contribute to ensure provision of a quality education for their children by immediately replacing lost books?

A good number do []

Very few do []

None at all []

12. Rate the contribution of text books towards the KCPE performance in your school

(a) Greatly contributes []

(b) Contributes []

(c) Doesn't contribute []

13. What is your view about the condition of the classrooms, learning environment in your school in providing quality education.

They are conducive enough [] They are fairly conducive []

They are not conducive []

14. Kindly desks per class in terms of their numbers and suitability in promoting quality education in your school.

Adequate [] fairly adequate [] inadequate []

15. How can you rate the classroom environment in these classes in relation to pupils discipline and academic performance? Kindly tick [√] you're rating

Excellent [] Good [] Average [] Poor []

16. Has your school met the standards in numbers and condition of the pupils' sanitation facilities as per the government recommended ratios?

To a great extent [] Just Fairly [] Not at all []

17. Kindly give your rating on these statement "sanitation facilities contribute to the provision of quality education by reducing cases of absenteeism mainly for girls"

Strongly agree [] Agree [] Disagree [] strongly disagree []

19. What is your genera rating of the state of sanitation facilities in your school?

Good [] average [] Poor []

THANKYOU

APPENDIX C: QUESTIONNAIRE FOR TEACHERS

Section A: Demographic information

(Please indicate responses by ticking [] in the appropriate answers and avoid biases in your opinion. Your information will be highly confidential)

1. What is your gender?

Female []

Male []

2. Which age bracket do you belong?

21-30 years []

31-40 years []

41-50 years []

50 and above []

3. How many years have you worked in this station?

3 years and below []

4-6years []

7-9 years []

10 and above []

4. What is your professional qualification?

P1 []

S1 []

ATS []

DIP []

BED []

Section B: FPE and its impact on quality of education

5. Please indicate the average number of pupils in your class.....

6. Does this number of pupils enable you give individual attention during teaching and learning in the class? Kindly tick one []

Always []

sometimes []

Not possible at all []

7. How often do you give homework to your pupils?

Always []

Sometimes []

Never []

8. Approximately, how many pupils share one textbook in the subjects that you teach?

9. Kindly mark the option that best suits the number of text books in your subject in relation to amount of homework given.

Number of text books cannot allow for enough homework []

Number of text books cannot allow for any homework []

Number of text books allows me to give homework always []

10. Do these text books improve the pupils individual learning habits? Kindly tick one

[✓]

Greatly []

fairly []

Not at all []

11. In your opinion how are the schools classroom environments in relation to the teaching and learning process?

Very conducive []

Conducive []

Not conducive []

12. Kindly rate the following classroom environment perception on the following by putting either i, ii, iii or iv depending on the alternative that you chose.

(i) Strongly agree (SA) (ii) Agree (A) (iii) Disagree (D) (iv) Strongly disagree (SD)

(a) To what extent do you agree to the aspects of the classroom below on their effects on pupils' performance?

Classroom environment	SA	A	D	SD
Number of desks affects performance				
Lighting affects performance				
Type of floor affects performance				
Air circulation				

(b) To what extent would you agree that the following aspects of the classroom below on their effect on curriculum delivery?

Classroom environment	SA	A	D	SD
Number of desks affects performance				
Lighting affects performance				
Type of floor affects performance				
Air circulation				

(b) To what extent do you agree that to following aspects classroom environments motivate teachers and pupils?

Classroom environment	SA	A	D	SD
Number of desks affects performance				
Lighting affects performance				
Type of floor affects performance				
Air circulation				

13. In which areas do you think the current classroom environments require improvement to allow movement and comfort? Kindly tick one area.

Number of desks should be increased in number and condition []

The classes require Major floor and walls repair []

The ventilations and lighting school be improved. []

The classes do not require any improvement []

14. In your opinion how can you rate the adequacy of water and sanitation facilities in your school? (Tick one)

Adequate []

Inadequate []

15. Give your opinion about the contribution of water and sanitation facilities on the following by indicating i, ii, iii or iv denoted by the following.

(i) Strongly agree (ii) Agree (iii) Disagree (iv) Strongly disagree

(a) Water and sanitation facilities contribute to the pupils' academic performance ()

(b) Water and sanitation facilities reduce absenteeism particularly for the girls ()

(c) Water and sanitation reduces the incidences of diseases on pupils ()

16. What is your opinion on the condition of sanitation facilities in your school?

Sanitation in our schools calls for a major improvement []

Sanitation facilities in our school require just a slight improvement []

Sanitation facilities in our school do not require any major improvement []

APPENDIX D: PUPILS QUESTIONNAIRE

Kindly indicate a tick[√] where necessary

1. Kindly state your sex Male [] Female []

2. In which class are you?.....

3. How many text books have you been given in school? Kindly tick the range.

1-3 [] 4-5 [] 6 and above []

4. Where do you get text books that you use for your homework?

Borrow from friends [] Text books given in school []

Text books bought by my parents []

5. About how many text books have your parent bough for you?

1-2 [] 3-4 [] None []

6. How often do your teachers give you homework?

Every day [] weekly [] Not given at all []

7. The home work given by the teacher is marked.

Daily [] at times [] Not marked at all []

8. Is the space on your desk enough for you to write on and carry out experiments?

Yes []

No []

9. What would you say about the adequacy of sanitation facilities in your school?

They are adequate []

They are not adequate []

10. Does your school have a clean water source for use throughout the week?

Yes []

No []

Appendix E: Document analysis sheet

1. No of pupils in the school BoysGirls.....
2. No of teachers employed by the government.....
3. No of teachers employed by the PTA if any
4. The KCPE results for:

Year	2007	2008	2009	2010	2011	2012
------	------	------	------	------	------	------

No of candidates

KCPE mean score

5. No of children who scored 300-399

2007.....

2008.....

2009.....

2010.....

2011.....

2012.....

6. No of pupils who scored Marks for National schools

2007-

2008-

2009-