

**DETERMINANTS OF STUDENTS' PERFORMANCE AT NATIONAL  
EXAMINATIONS (KCSE) IN PUBLIC AND PRIVATE SECONDARY SCHOOLS IN  
CENTRAL DIVISION, MACHAKOS DISTRICT, KENYA**

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**DECLARATION**

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This research project has been presented for examination with my approval as the University Supervisor.

  
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11-08-2010  
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## **DEDICATION**

To my Wife. Agnes Mualuko, children: Carol Ndila and Mercy Kamene.

## ACKNOWLEDGEMENTS

I am greatly indebted to my supervisor Mr. Daniel Komo Gakunga who worked patiently with me from the beginning of this project. Constantly providing me with meaningful advice and criticism. His guidance facilitated the virtues of patience and dignified humility. I am grateful for the kind assistance I received from my lecturers in the Department of Educational foundations, colleagues, and librarians.

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My heart felt gratitude to my wife, Agnes Mualuko who took care of our children during my very busy study schedules. As for my children, words fail me for their understanding during my many times of absence.

Finally, but, then, how could I be sitting here and writing these acknowledgements, if God almighty through, the grace of my Lord and Saviour Jesus Christ, had not kept me alive and well, in the first place?

## ABSTRACT

Poor performance of students in KCSE examinations have been a concern for education stakeholders for a long time. This has been particularly been brought about by the glaring difference between KCSE performance in public and private schools. Various reasons have been listed as the causes of poor performance.

It is against this background that this study purposely sought to determine how physical facilities, teaching and learning resources, students' socio- economic background and parents' participation in student activities affect the performance of students in KCSE examinations. The problem of the study was that if these factors that cause poor students' performance are not treated with the urgency they deserve, there will be wastage of resources and time, overburdening of parents, no further academic mobility, lack of job opportunities and mediocrity of the students. The major objective of the study was to investigate the determinants of students' performance at national examinations (KCSE) in public and private secondary schools in Central Division, Machakos District.

Data was collected using questionnaires since the study design used was the survey method. Purposive sampling was employed to generate a sizeable sample to be used in the study. The subjects included students, class teachers and head teachers. Descriptive statistics were used to analyze the data. The findings were presented using frequency tables and percentages.

The results indicated that physical facilities, teaching and learning resources, students' socio-economic background and parents' participation in student activities affected the performance of students in KCSE examinations. However, students in public schools were the most affected in their performance because they performed poorly.

Conclusions and recommendations, including suggestions for further research were made on the basis of these findings.

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## **LIST OF ABBREVIATIONS**

- B.Ed** : Bachelor of Education.
- D.E.O** : District Education Officer.
- K.C.S.E** : Kenya Certificate of Secondary Education
- M.Ed** : Master of Education.

## CHAPTER ONE

### INTRODUCTION

#### 1.1 Background of the study

In Kenya, Education and training have continued to be given a very high priority in the country's National Development Plans in order to educate and prepare enough people to fill middle and high level positions in the private and public sectors of the economy. Since independence in 1963, there has been rapid expansion of education (Appleton et al., 1999). Student enrolment in secondary schools has increased rapidly with much of the expansion a result of the establishment of community schools. With this expansion has come the need for education reforms.

The education system in Kenya is largely examination oriented. The quality of education tends to be evaluated in terms of the number of students passing national examinations (Eshiwani, 1993). According to statistics given by the examinations council, in 2009, 120,793 candidates scored mean grades of C plain and above. The rest scored C minus and below, with 5,918 scoring mean grade E. In addition, some 337,404 candidates sat the exams in 5,600 centres.

Poor performance of students at Kenya Certificate of Secondary Education (KCSE) examinations over the years in Central Division of Machakos District has raised an urgent concern to the researcher (Table 1.1). For example, out of 2,128 candidates who sat for 2007 KCSE examinations, only 530 or 25% scored C+ and higher, while 1,598 or 75% scored C plain and below. One thousand one hundred and twenty four or 53% of the candidates scored D+ and below, while 1,004 or 47% scored C plain and above. If this problem of poor performance is not treated with the urgency it deserves, the opportunities that would have otherwise been available

for the students to advance academically or in job placement will become foreclosed. This in the long run will make it difficult for Central Division of Machakos District to participate fully in national development.

**Table 1.1: Central Division 2007 KCSE Analysis**

Entry	G r a d e s												M/S	M/S	M/S
	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	E	2007	2006	2005
2128	2	27	79	122	132	168	199	275	328	371	366	59	4.1494	4.2048	4.2401

Source: DEO's Office Machakos, 2009

C+ and above = 530

C Plain and below = 1598

Total = 2128

**Legend**

A=12, A-=11, B+ = 10, B=9, B-=8, C+=7, C=6, C-=5, D+=4, D=3, D-=2, E=1

Eshiwani (1983) and Maengwe (1985), pointed out that the adequacy of physical facilities such as classrooms, workshops, laboratories, libraries, lockers, chairs, swimming pools, playing, and sporting fields influence students' performance at KCSE examinations. They noted that students in spacious classrooms write with ease, while teachers are able to reach at the individual students as they sit working at their places. This enhances performance compared to students in an over crowded classrooms who find it hard to write, while the teachers cannot move around with ease to reach the students as they sit working at their places.



Teaching and learning resources have been identified to have a direct bearing on students' performance at national examinations (KCSE). Teaching and learning resources include textbooks, exercise books, charts, chemicals, dusters, and other materials which facilitate teaching and learning. In most schools these resources are very inadequate. For instance, laboratory equipment are very expensive and difficult to maintain, therefore, most schools buy cheap laboratory equipment near examination time. In reality, a few or no equipment are bought for actual teaching during the year (Musoko, 1983; Eshiwani, 1993; Atinga, 2005).

According to Somerset (1974); Waweru (1982); and Kibera and Kimokoti (2007), they observe that socio-economic background of students impact on their academic performance. Socio-economic background refers to the situation of one's level of education, income, and occupation. It has been established that children from high socio-economic background are sent to school earlier than those from low socio-economic background. This is attributed to the fact that the parents have resources to spend on nursery education for age 3 children. Poor parents on the other hand, send their children later or not at all. Wealthier and better educated parents send their children to private nursery schools and create a conducive learning environment at home. This puts their children at an advantage in school work compared to children of the poor parents.

Academic aspirations of the school going child are positively related to the socio-economic status of his/her parents. This is because educational provision is closely linked with class, power, and status of its recipients. High socio economic status parents do not discriminate sending girls to schools. Girls in these families are sent to good schools just as boys. In fact, such girls are not expected to marry early. They are not even overburdened with household chores since their parents can afford to engage the services of household helps.

Parents' participation in school activities include attending school open days, academic days, prize giving days, annual general meetings, fund raising days, and sports days. Kathuri, (1986); Nguru, (1987); Karanja, (2005), agree in common that parents' participation in school activities have a positive influence on their children's academic achievement. Students' performance is better for those whose parents participate in school activities than those whose parents never participate. Parents have good opportunities to discuss their children's academic performance with teachers and support them in planning for better performance. In these forums the parents are sensitized on educational needs of their children and are able to assist the school administration and the teachers to come up with solutions and hence better academic achievement.

The major concern of this study therefore, was to investigate the factors that influence students' performance at KCSE examinations in public and private secondary schools in Central Division of Machakos District.

## **1.2 Statement of the Problem**

The government is committed to the provision of quality education and training as a human right for all Kenyans in accordance with the Kenyan law and international conventions of Education for All (EFA) goals. The relatively large monetary allocation to the sector confirms this (Republic of Kenya, 2008). The share of Education in total government spending (both recruitment and development) has ranged between 23.77 and 29.69% over the last five years. In addition, a significant proportion of the devolved funds such as Constituency Development Funds (CDF) and Local Authority Transfer Fund (LATF) have been funding education related activities.

The quality of education in Kenya is measured by student achievement in national examinations yet many of the country's 4,000 secondary schools post poor examinations results every year. There are only about 600 schools that excel in KCSE and if a student is not in any of these schools he or she is not expected to get credible grades (Ongiri and Abdi. 2004).

This study intended to investigate determinants of students' performance in KCSE examinations. The variables; physical facilities, teaching and learning resources, students' socio-economic background, and parents' participation in school activities were investigated as factors that caused poor students' performance at KCSE examinations. If these factors cause poor students' performance are not treated with the urgency they deserve, there will be wastage of resources and time, overburdening of parents, no further academic mobility of students, lack of job opportunities and mediocrity of the students. This would in the long run make it difficult for central Division of Machakos District to participate fully in national development.

Therefore, the study was timely in that a lot of research has already been carried out in educational administration yet no studies have focused on factors causing poor students' performance in Machakos. This study thus intended to find out the factors that cause poor students' performance in Kenya Certificate of Secondary Education (KCSE) examinations in public and private secondary schools in Central Division, Machakos District..

### **1.3 Purpose of the Study**

The purpose of this study was to investigate the factors that cause poor students' performance in Kenya Certificate of Secondary Education (KCSE) examinations in public and private secondary schools in Central Division, Machakos District. This study was also hoped to turn around the

performance of low performing students by improving their scores and also maintaining high scores for high performers. Consequently, better use of resources, increased job opportunities and chances of academic mobility. This would benefit the students, parents, teachers, stakeholders, ministry of education officials, and the government.

#### **1.4 Objectives of the Study**

The study was guided by the following objectives;

- i. To determine the causes of students poor performance in KCSE examinations in Public and Private secondary schools in Central Division, Machakos District.
- ii. To determine the effects of physical facilities on students' performance in KCSE examinations in public and private secondary schools in Central Division, Machakos District.
- iii. To determine the effects of teaching and learning resources on students' performance in KCSE Examinations in public and private secondary schools in Central Division, Machakos District.
- iv. To establish the effects of students' socio-economic background and parents' participation on their performance in KCSE examinations in Public and Private secondary schools in Central Division, Machakos District.
- v. To establish ways of improving students' performance in national examinations (KCSE) in Public and private secondary schools in Central Division, Machakos District.

## **1.5 Research Questions**

- i. What are the causes of students' poor performance in KCSE examinations in public and private secondary schools in Central Division, Machakos District?
- ii. What are the effects of teaching and learning resources on students' performance in KCSE Examinations from public and private secondary schools in Central Division, Machakos District?
- iii. Does the students' socio-economic background affect their performance in KCSE examinations from public and private secondary schools in Central Division, Machakos District?
- iv. Do the students' socio-economic background and parents' participation affect their performance in KCSE examinations from public and private secondary schools in Central Division, Machakos District?
- v. What are the ways to improve students' performance in KCSE examinations in public and private secondary school in Central Division, Machakos District?

## **1.6 Scope of the Study**

This study was carried out in Central Division of Machakos District in Eastern Province of the Republic of Kenya. The target population comprised the current form four students, form four class teachers, and head teachers in the eighteen public and thirteen private secondary schools in Central Division of Machakos District. The study covered five Public and five private secondary schools in the division. One whole class from each of the five (5) public and five (5) private secondary schools was involved in the study. One form four class teacher from each of the selected five public and five private secondary schools was involved in the study.

The main reason for choosing Central Division of Machakos District was that it had the characteristic elements which the researcher needed to investigate the factors that affected students' performance at KCSE examinations in both public and private secondary schools in the division. Kenya Certificate of Secondary Education (KCSE) was chosen by the researcher for the study because it provides a benchmark for assessing learning outcomes and providing a platform for transition to higher education and employment in Kenya.

### **1.7 Limitations of the Study**

- i. It was difficult to control the respondents' attitudes as they responded to questions in the questionnaires.
- ii. It was not possible to investigate all performance variables. The researcher would investigate the following performance variables, physical facilities, teaching and learning resources, students' socio-economic background and parents' participation in school activities.

### **1.8 Delimitations of the Study**

The study was limited to form four students, form four class teachers and head teachers in 5 public and 5 private secondary schools in Central Division of Machakos District. The study was limited to form four students, form four class teachers and head teachers. Other teachers and students in other classes were not be considered in this study.

The study was further limited to the factors that influenced students' performance in KCSE examinations in public and private secondary schools in Central Division of Machakos District, including; physical facilities, teaching and learning resources, students' socio-economic

background, and parents' participation in school activities. These are not the only factors. There were other related factors that the study could not address.

### **1.9 Significance of the Study**

The findings of this study were hoped to add knowledge on factors that causes students' poor performance in national examinations. The researcher hoped the findings of the study would be useful to various stakeholders.

The study was hoped to be useful to the prospective students as they were likely to be provided with the required physical facilities, teaching and learning resources, their parents sensitized to participate in school activities, and those from low socio-economic background to be assisted through bursary funds, non-governmental organizations, and religious organizations which would consequently improve their academic performance.

Parents were hoped to benefit from the findings as they would be made aware of their roles in providing physical facilities, teaching and learning resources and participating in all school activities.

The ministry of education officials were hoped to use the findings to support schools improve their performance in KCSE examinations by providing the necessary resources and professional advice.

The Board of Governors, the School Proprietors, Parents' Teachers' Associations, District Education Board, and Headteachers were hoped to use the findings to provide the required resources and advice, hence improved students' performance at KCSE examinations.

## 1.10 Definitions of Operational Terms

*Academic performance:* The term refers to the final grades awarded to a student after doing an examination on a course of study.

*Achievement:* The term refers to the successful completion of a job, solutions to problems, and the seeing of good results.

*Examination performance:* The term refers to the achievement of a scholar or candidate in KCSE examination done at the end of four years of secondary education expressed in terms of mean grade.

*Kenya Certificate Secondary Education:* This is the national examination which is undertaken by students at the end of their fourth year of secondary education in Kenya and often determines their entry into different courses in universities and middle level colleges.

*Mean score:* This is the average point showing individual or group achievement in KCSE examination.

*Poor Performance:* The term refers to grades D+, D, D- and E as final grades awarded to students after doing an examination (KCSE). course of study.

*Physical facilities:* These refer to classrooms, laboratories, workshops, libraries, lockers, chairs, desks, swimming pools, playing fields and sporting fields used / required by learners/students while in school.



*Public secondary schools:* Refers to schools that belong to the community and are supported by the government of Kenya that is public owned schools. They offer education to students in selected aspects of knowledge, skills and moral values that are perceived to be useful to the society.

*Private secondary schools:* Refers to schools that are owned by individuals, churches or non-governmental organizations to offer education to students' in selected aspects of knowledge, skills and moral values that are perceived to be useful to society.

*Socio-economic background:* Refers to the individual situation of one's level of education, income, and occupation and determines ones standard of living.

*Teaching and learning resources:* Refers to textbooks, exercise books, charts and wall maps, chemicals, chalk, dusters and other materials which facilitate teaching and learning process in the school set-up.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.0 Introduction**

The chapter deals with the review of the related literature on the performance of students in the national examinations. The review dwells on the factors identified for investigation in the study. These are school factors which include physical facilities, and teaching and learning resources; non-school factors which include socio-economic background and parents' participation in school activities are their impact on students' performance.

#### **2.1 Physical Facilities**

In discussing the qualitative implications of school expansion. Ersen (1985) stated that school compounds frequently lack space for recreational use and for teaching practical and technical subjects such as agriculture and homescience. Maengwe (1985) and Gakunga (2005) observed that the size of the classroom being too small led to overcrowding and this affected learning. Children crowded in class found it difficult to write while teachers could not move around with ease to reach all the students as they sit working at their places. This inability meant that teachers could not mark the students' work as they continued learning and working. They revealed that students learning in spacious well ventilated classrooms, teachers were able to give individualized teaching. hence performed better in national examinations (KCSE) than students in overcrowded classrooms.

Eshiwani (1983) pointed out that the presence or absence of physical facilities distinguished schools that performed highly from those which performed poorly in KCSE examinations in Western Province of Kenya. The schools that had adequate physical facilities were among the best performing schools while those with inadequate physical facilities had dismal performance. Kathuri (1986) found out that schools equipped with adequate physical facilities have better performance in KCSE examinations. He revealed that availability of libraries and laboratories enhanced learning because the students were able to access library services and perform science experiments. hence good performance. According to Kigotho (2008) most secondary schools lack money to repair leaking roofs, replace old buildings, and construct libraries, laboratories and basic recreational activities. This scenario impacts negatively on students' academic achievement.

From the foregoing review, obviously the researchers reveal that physical facilities affect students' performance in national examinations. For instance, students learning in spacious classrooms. teachers are able to move around with ease to reach individual students as they sit working at their places and assist those with difficulties. Those in overcrowded classrooms, teachers find it difficult to reach individual students to assist those with difficulties hence disadvantaged over those in spacious classrooms. Therefore, schools with adequate physical facilities, students' performance in KCSE examinations are better compared with those with inadequate facilities. This study therefore, attempted to investigate the effects of physical facilities on students' performance at KCSE examinations in public and private secondary schools in Central Division of Machakos District.

## 2.2 Teaching and Learning Resources

While discussing education and development in Kenya, Court (1974) recognized the distribution of resources such as textbooks and equipments as a major factor which accounts for scholars' differences in performance among schools. Fuller (1985) and Eshiwani (1993) indicated that instructional materials, especially textbooks and school library activity are quality elements that have been found to relate to students' academic achievements. In 1979-1983 Development Plan the Kenyan government aimed at enhancing the quality and performance of secondary education through provision of suitable instructional materials. Adequate instructional materials for example, make students do class assignments in time as given by the teachers and read on their own ahead of the teacher thus enhancing learning which results into better performance. On the other hand, inadequate instructional materials disadvantage students learning and this leads to poor performance.

Musoko (1983) indicated that there were inadequate science laboratories in most public schools. In most Kenyan schools one laboratory serves as a science room for physics, chemistry and biology. Majority of the schools buy cheap laboratory equipment near examination times and it is obvious that the materials are basically for examination. Few or no equipment are bought for actual teaching during the year. Therefore, the learners have not been able to perform experiments practically in the course of their learning. The teachers taught practical subjects by lecture method contrary to science practical methods approach. This puts the learners in an awkward situation where they are not able to compete with their counterparts with adequate instructional materials hence poor performance at national examinations (KCSE).

Atonga (2005) indicated that there was a shortage of very vital teaching and learning resources such as library books, laboratory chemicals, students' textbooks, wall maps and charts, audiovisual teaching aids and duplicators in Secondary schools in Limuru Division, Kiambu District. This scarcity of vital teachings and learning resources had a direct bearing on students' poor performance in these schools. In absence of these resources learners are not able to do class assignment as given by their teachers, not able to read on their own or even read ahead of their teachers. This disadvantages them over their counterparts who have adequate teaching and learning resources, therefore poor performance at KCSE examinations.

From the foregoing review, it is evident that the researchers reveal that teaching and learning resources have a direct bearing on students' performance in KCSE examinations. Schools with adequate teaching and learning resources perform better than those poorly equipped with the resources at national examinations. This is because students in schools with adequate teaching and learning resources are able to do their assignments in good time read on their own ahead of their teachers and are able to perform science experiments in the laboratories unlike their counterparts in poorly equipped schools. This study therefore, intended to investigate the effects of teaching and learning resources on students' poor performance in KCSE examinations in public and private secondary schools in Central Division of Machakos District.

### **2.3 Socio-economic Background**

The socio-economic background of a student does affect his/her academic performance at national examinations. The high socio-economic class has the financial ability to provide their children with books and other related educational materials. These children are widely exposed to other educational information, for example, from the radio, television, videos, and computers.

Additionally, they attend good public/private schools with highly qualified teachers and good facilities. The children who attend these good schools do so because they have a good educational background in nursery and primary schools (Kibera and Kimokoti, 2007). Somerset (1974) shows that there is a relationship between the students attending well equipped schools and their parents' educational background. Educated parents understand that in a well equipped school, their children are able to achieve good academic grades because the children do their assignments in good time, read on their own ahead of the teachers, and even perform experiments in the laboratories for the science subjects. Parents who are not educated tend to see that all schools are the same (Somerset, 1974).

Kibera and Kimokoti (2007) indicated that students who are not encouraged by their parents in their school work are likely to go to school late, for they may be given duties to perform before going to school. Such duties include fetching water, opening the family shop, cooking, and even bathing young sisters and brothers. At times such students go to school late because of being burdened with a lot of household chores. Continuous late attendance of school is bound to have an adverse effect on the academic achievement. Student coming to school late find the lessons have already begun and are not able to understand even follow the lessons. In addition, the students are already tired and have no energy to learn for the whole day. On the other hand, students from high socio-economic background are prepared for school early, are well fed, are driven to school in a car. Their parents show a lot of concern to poor academic performance. In this way, the parents take time to help their children with their homework and inspire them to achieve high educational goals (Kibera and Kimokoti, 2007).

Waweru (1982) noted that poverty exerts pressure on pupils' performance. This is because they cannot afford basic learning resources such as textbooks, pens, and school fees among others. Malnutrition and poor living conditions influence the health of the child and thus directly or indirectly affects the ability to learn and hence their performance in examinations. Ndiritu (1999) also noted that limited income among lower class families had been found to restrict provision of school books, development funds and other necessary materials to ensure good attendance and performance at national examinations.

According to Kibera and Kimokoti (2007) provision of a good mode of teaching in English by teachers enhances students' academic achievement. The language spoken at the homes by the parents from high socio-economic class is often the medium of instruction in schools; therefore, children from such class have an advantage over children who speak mother tongue at home. Apart from the language spoken at home, parents from high socio-economic status are able to buy their children books whereas parents from low socio-economic class cannot afford. This further increases their children's chances to acquire more language for educational purposes.

There is a strong and positive correlation between the parents' level of education and their children's need to achieve, (Mukundi, 1999, Kibera and Kimokoti, 2007). The children who are encouraged in their work by their parents relatively have high scores in their examinations as compared to those who are not encouraged (Morrison and McLutye, 1971). Children who are encouraged in their work by their parents are assisted in their homework at home, are bought the necessary textbooks, pens, pencils, and erasers. This encouragement makes the children perform better in national examinations unlike children from illiterate parents who lack such encouragement.

In view of the foregoing, it is evident that the researchers reveal that socio- economic factors impact on students' academic achievement either positively or negatively. This study therefore, attempted to investigate the effects of students' socio-economic background on the performance in KCSE examinations in Central Division of Machakos District.

#### **2.4 Parents' Participation in School Activities**

Parents participate in school activities through attending school open days, academic days, prize giving days, annual general meetings, fund raising days, sports days, paying of school fees, and providing the necessary textbooks, school uniforms, and writing materials. Kathuri (1986) in his study of Nairobi secondary schools revealed that children whose parents took time off work to visit their children in school, attend school functions, and consult with teachers had their children doing better academically than those whose parents who never paid such visits. He reported a positive relationship between parent's participation in schools activities and their children's academic performance. Parents who participate in school activities such as school academic days are able to understand their children's academic performance, meet subject teachers and therefore come up with the way forward. The children are guided and counseled by parents, teachers, and the headteachers as one team. When children come home for holidays, the parents remind them what they agreed concerning their learning at school, hence good performance by the children. Those whose parents never visit schools are disadvantaged because their parents are ignorant of their roles concerning education.

Nguru (1987) and Simiyu (2002) found out that a relationship exists between children's academic achievement and parents' participation in their children's schools activities. Children whose parents participated in school activities had higher scores compared to those whose



parents never participated. Both stressed the fact that those parents who participated in their children's school activities, their children tended to do better than those children whose parents did not participate. This is because parents who participated in schools activities were able to guide and counsel their children in partnership with the teachers and the head teachers; hence their children had better performance than those whose parents never participated.

Karanja (2005) revealed that parents rarely visited schools to check on their childrens academic progress. Parents who visited and participated in school activities, their children tended to improve on academic performance unlike those whose parents hardly visited or participated in school activities.

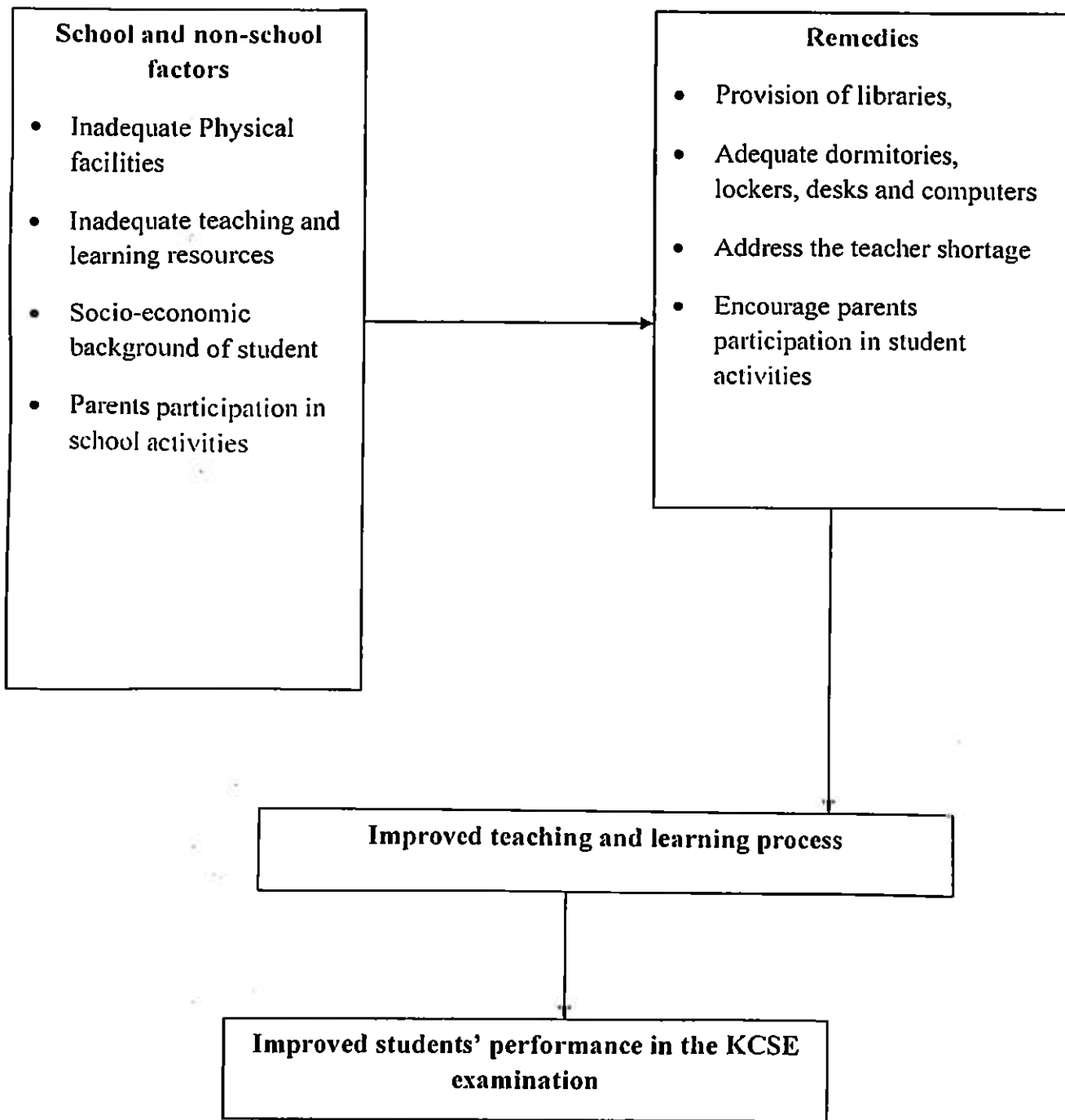
In the light of the above, the researchers reveal that parents' participation in school activities of their children have a positive influence on their children's academic achievement. Children whose parents participate in school activities tend to improve on their academic scores as compared to those whose parents never participate. This study therefore, attempted to investigate the effects of parents' participation in school activities on students' performance in KCSE examinations in Central Division of Machakos District.

## **2.5 Knowledge Gap**

From the literature review, it is evident that the school factors that impact on students' performance including physical facilities and teaching and learning resources, and the non school related factors including the socio economic background of the students and parents' participation in school activities have been found to influence students' performance in Kenya Certificate of Secondary Examinations in other parts of the country. Maengwe (1985) and Gakunga (2005), Eshiwani (1983) and Kathuri (1986) have studied the influence of physical

facilities on student performance in K.C.S.E. Fuller (1985), Eshiwani (1993), Musoko (1983) and Atonga (2005) studied on the teaching and learning resources effect on students' performances. In addition, Kibera and Kimokoti (2007) have studied the influence of the socio economic background of the students on their performance while Nguru (1987) and Simiyu (2002) found out that a relationship exists between children's academic achievement and parents' participation in their children's schools activities. However, all these studies have been carried out in different parts of the country and thus this study sought to establish the influence of these factors on the performance of students in the Central Division of Machakos District.

**Figure 2. 1: Conceptual Framework**



Source: (Author, 2009)

In this study students' performance is conceptualized as an outcome of interrelated factors. Factors emanating from the school and non-school (outside school) are seen to interact. This interrelationship is indicated by the two-sided arrow connecting the two sets of factors. As the students go through the teaching and learning process, they are under the influence of the two sets of factors. The adequacy of both school factors, that is, physical facilities and teaching and learning resources; and non-school factors, that is socio-economic background, and parents' participation in school activities lead to efficiency and effectiveness in teaching and learning process, and thus influence learners' performance at national examinations (KCSE). The effectiveness or ineffectiveness of the teaching and learning process determines students' performance in KCSE examinations. hence the two-sided arrow.

## **2.6 Summary of Literature Review**

From the reviewed literature, the researchers reveal that, physical facilities tend to affect students performance in national examinations (KCSE). They point out that, for example, students learning in spacious classrooms seem to learn better than those in overcrowded classrooms because their teachers are able to move around and give individual assistance.

In addition, the researchers show that, teaching and learning resources tend to impact on students performance at national examinations (KCSE). They argue that, for instance, students learning in schools with adequate textbooks and well equipped laboratories seem to achieve better scores than those in inadequately equipped schools because the students are able to do assignments in time and do their own reading ahead of their teachers.

On the same note, the researchers reveal that students, socio-economic background influence their performance at national examination (KCSE). They advance that, students from high socio-economic background tend to perform better than the ones from low socio-economic background because their parents seem to have the resources to take them to well-equipped schools. This tends to make them to have an advantage over their counterparts from low socio-economic background whose parents have less or lack the necessary resources.

Finally, the researchers reveal that, parents' participation in school activities of their children has a positive influence on their performance at national examinations (KCSE). They point out that, parents who take part in school activities, for example, academic days, their children tend to have better performance than those whose parents never participate. This is because during their academic days, the parents meet with the teachers and school authorities to discuss their children's performance and therefore plan the way forward.

A lot of research has been done on the effects of the factors that cause poor students' performance in national examinations (KCSE) in many different parts of Kenya. However, no research has been done on the effects of the factors that cause students varying performances at KCSE examinations in public and private secondary schools in Central Division of Machakos District.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.0 Introduction**

This chapter dealt with the research methodology of the study; That is, the research design, target population, sample and sampling procedures, research instruments, pilot study, data collection procedures, and data analysis and presentation techniques.

#### **3.1 Research Design**

This study was conducted using the survey research method. Ary, Jacobs and Lizavich (1996) defined survey research method as a technique in which detailed information concerning a social phenomenon is gathered by posing questions to respondents. The result of such investigation makes it possible to find explanation of the social phenomenon in question.

The survey design was chosen because it provided a means to contextually interpret and understand the students' and teachers' perceptions about factors affecting academic achievement in national examinations. According to Orodho and Kombo (2002), the survey method was useful in measuring people's attitudes, opinions, habits or any of the variety of education or social issues in a large population. This study used both quantitative and qualitative approaches. In both cases, the research instruments used were questionnaires. The form four students during the period of conducting the study filled one set of their questionnaire, the form four class teachers, and the headteachers also each filled one set of their questionnaire. Additionally, secondary school data relating to the past KCSE examination results of students from both public

and private secondary schools was used for comparison purposes. The dependent variable in this case was the KCSE students' performance while the independent variables were the school and non-school factors influencing the students' performance in the national examinations.

### **3.2 Target Population**

The target population for this study comprised the form four students at the time of study, form four class teachers, and head teachers in eighteen public and thirteen private secondary schools in Central Division of Machakos District. The study covered five public and five private secondary schools selected using stratified random sampling technique. The researcher's intent was to sample a whole class from each of the five public and five private secondary schools sampled. One form four class teacher from each of the selected ten schools was involved in the study. Teachers were sampled using purposive sampling technique. Lastly, five head teachers from the sampled five public secondary schools and five from the sampled five private secondary schools were involved in the study. The population size was comparable to the target population in the characteristics that appeared most relevant to the study. Population size was in itself a representative of the target population.

### **3.3 Sample and Sampling Procedures**

The sample for this study included ten form four whole classes, ten class teachers, and ten head teachers.

Sampling is the process of selection of appropriate number of subjects from a defined population (Borg, 1993). In case of students, the researcher sampled a whole class from each of the five public and five private secondary schools stratified sampled. If the school had more than one

stream, papers were written no and yes according to the number of the streams. Papers were then put in a container, shuffled, then picked by class representative. The stream with yes was supplied with the questionnaire. The selection of the class teachers and headteachers was done through purposive sampling.

### **3.4 Study Site: Schools**

The study was based in Central Division of Machakos District in the Eastern Province of Kenya. It focused on public and private secondary schools which offer the KCSE examinations. The study covered five public and five private secondary schools which formed the basis for population selection.

### **3.5 Research Instruments**

This study used self administered three sets of questionnaires: one for the two hundred and thirty six form four students, one for the ten form four class teachers, and the other for the ten headteachers. The questionnaires had both closed and open-ended questions. Close-ended questions were accompanied by a list of all possible alternatives from which the respondents selected the answer that best described their situation. Open ended questions gave the respondents complete freedom of response. The three sets of questionnaires each contained four items of questions: physical facilities, teaching and learning resources, socio-economic background of the students, and parents' participation in school activities.



### **3.6 Pilot Study**

A pilot study involving one public and one private secondary was undertaken to pre-test the research instruments. Ten students from the public and ten from the private secondary schools were involved in the study. In addition, one form four class teacher and one headteacher from the one public and one private secondary school also participated in the pilot study.

The pilot study was expected to help the researcher in identification of items in the questionnaire which might be ambiguous in eliciting the relevant information. The items which were found ambiguous, and therefore not soliciting the intended information, were reconstructed or discarded altogether. The importance of carrying out a pilot study was that through pre-testing it was possible to find some ambiguities in the questions asked and then the necessary corrections were made before the final study was carried out.

#### **3.6.1 Instrument Validity**

Mugenda (1999) defines validity as the accuracy and meaningfulness of inferences which are based on the research results. In other words, validity is the degree to which results obtained from the analysis of the data actually represent the phenomenon under study. To enhance validity, the three sets of questionnaires were pre-tested before the actual research. This helped to evaluate, ascertain, and clarify that the test instruments were valid to capture all the data as expected.

#### **3.6.2 Instrument Reliability**

Reliability of the research instrument is its level of internal consistency over time (Borg and Gall, 1993). A reliable instrument therefore, is the one that constantly produces the expected results when used more than once to collect data from two samples drawn from the same

population (Mulusa, 1990). The reliability of a test is usually expressed as a correlation coefficient, which measures the relations between variables.

The reliability of the instrument was tested using the Pearson's product Moment Correlation Coefficient Formula.

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

Where:

$\sum xy$  = sum of all the gross products of the values of each variable

$(\sum x)(\sum y)$  = products of the sum of x and sum of y

r = reliability

N = number of pairs of scores

$\sum$  = sum of the values

A coefficient of 0.80 or more implies that there was high degree of reliability of the instruments.

### 3.7 Data Collection Procedure

To carry out the study, permission and authority was sought from the Ministry of Higher Education, through a letter of authorization from the school of education, Department of Educational Foundation, University of Nairobi. Subsequent clearance to carry out the study was obtained from the District Commissioner (DC) and the District Education Officer (DEO) in

Machakos District. After permission was granted, the researcher administered the three sets of questionnaires both for the pilot and the main study. The researcher paid a visit to the participating schools to inform them of the intended study and create some rapport. Then, afterwards, the researcher administered the questionnaires personally to the head teachers, teachers, and students in each school at different times.

### **3.8 Data Analysis and Presentation**

The results of the questionnaire were checked for completeness for the preparation of its analysis. Data was appropriately coded for ease of use of Statistical Package for Social Sciences (SPSS). The simplest way to present information according to Brinker (1988) is in descriptive statistics, that is; frequencies, percentages, tables, and distributions which give a summary of data about a single variable. Descriptive statistics enabled the researcher to meaningfully describe a distribution of scores or measurements using a few indices or statistics. Each statistics used in descriptive statistics had a purpose or role. The types of statistics or indices used depended on the type of variables in the study and the scale of measurement used. Using the SPSS program gave such descriptive statistics and therefore the program was much appropriate for the analysis.

## CHAPTER FOUR

### DATA PRESENTATION, ANALYSIS AND INTERPRETATION

#### 4.0 Introduction

This chapter presents the findings of the study. The responses from the subjects were compiled into frequencies and converted into percentages and presented in tabular form. This was to facilitate easy analysis and understanding of the determinants of students' performance at national examinations (KCSE) in public and private secondary schools. The analysis was done based on each question asked by the researcher in the questionnaires.

However the findings and interpretations were done on the basis of study objectives and research questions. The open ended items that did not limit the respondents, to one response but allowed them to give as many responses as they could were categorized and the findings presented also in frequency and percentage tables. The research findings were categorized in three: The students' findings, the class teachers' findings and the head teachers' findings.

The researcher had targeted 10 class teachers for the study out of which 9 participated forming 90% return rate. 5 class teachers from private schools participated and 4 from public schools. In the case of students, the researcher targeted a total of 334 students, 189 from public schools and 145 from private schools. However 185 students from public schools participated (98% response rate) and 141 from private schools (97% response rate) participated. Out of the 10 head teachers targeted for the study, 5 each from private and public schools, 4 teachers from public schools (80% response rate) and 5 from private schools (100% response rate) participated in the survey.

The following are the findings of the research;

#### 4.1 Students' Response Results

##### 4.1.1 Gender of Students

This sought to show the number of males and females in the public and private schools under study. It also reveals the number of males and females who took part in the study by giving their response.

**Table 4.1 Gender of students**

	Type of your school			
	Public		Private	
	Frequency	Percentage	Frequency	Percentage
Male	87	47%	70	50%
Female	96	52%	71	50%
Missing	2	1%	0	0
Total	185	100%	141	100%

The study established that the majority of the students were female in the public secondary schools, but in private schools both genders had the same frequency, as seen from table 4.1. In public schools female were 52% while female were 47%. In private schools, both the female and the male students were 50% each.

#### 4.1.2 Age brackets of the students

This was to capture the age of students under study. In order to capture this effectively, different ranges were put to show those students who were 20 years and below, those between 21-25 years and those students of 25 years and above.

**Table 4.2 Age brackets of students**

	Type of your school				Total
	Public		Private		
	Frequency	Percentage	Frequency	Percentage	
20 years and below	177	96%	130	91%	308
21-25 years	7	3%	8	7%	15
25 yrs and above	1	1%	3	2%	4
Total	185		141		327

From table 4.2, majority of the students were between the ages 20 and below in both the public and private secondary schools. In public schools, 96% of the students were below 20 years while in private schools, 91% were of 20 years and below.

#### 4.1.3 Students' choice of school

This sought to show the students' choice of school; either public or private school. This will also explain the reason why the students are in their current school, that is, whether it's because of fees charges, parents' choice, or it's because the school it's near their home and how this choices affect the students' performance in their national examinations.

**Table 4.3 Students' choice of school**

	Type of your school					Total
	Public		Private		Non Response	
	Freq	Percentage	Freq	Percentage		
It is near my home	18	10%	8	6%	0	26
It charges low fees	26	14%	3	2%	0	29
I just applied and got selected	49	26%	49	35%	1	99
My parents/guardians chose for me	88	48%	81	57%	0	169
Non Response	4	2%	0	0	0	4
<b>Total</b>	<b>185</b>	<b>100%</b>	<b>141</b>	<b>100%</b>	<b>1</b>	<b>327</b>

Majority of the students from both the public and private secondary schools said that their parents/ guardians chose for them their current school.

48% of the students from the public schools said that their parents/ guardians chose the school for them, 26% of them said they just applied and were selected. Majority of the students in private schools, 57%, said that their parents/ guardians chose the school for them and 35% of them said that they just applied and got selected.

#### 4.1.4 Rating of the Physical Facilities

This was to capture the physical facilities in the public and private schools and whether they are adequate. It was also sought to show whether the availability of physical facilities affects students' performance at KCSE examinations in public and private secondary schools.

**Table 4.4 Physical facilities rating by students**

		Public		Private		Non Response
		Freq	%	Freq	%	
Classrooms	Very adequate	22	12%	55	39%	0
	Adequate	103	56%	74	40%	0
	Inadequate	57	31%	7	4%	1
	Not available	1	1%	5	3%	0
	Non Response	2	1%	0	0	0
<b>Total</b>		<b>185</b>	<b>100%</b>	<b>141</b>	<b>100%</b>	<b>1</b>
Science laboratories	Very adequate	15	8%	11	9%	0
	Adequate	88	48%	71	50%	0
	Inadequate	74	40%	52	37%	1
	Not available	5	3%	5	3%	0
	Non Response	3	2%	2	1%	0
<b>Total</b>		<b>185</b>	<b>100%</b>	<b>141</b>	<b>100%</b>	<b>1</b>
Library	Very adequate	2	1%	10	7%	0
	Adequate	32	17%	17	12%	0
	Inadequate	119	64%	34	24%	1
	Not available	28	15%	75	53%	0



	Non Response	4	2%	5	3%	0
<b>Total</b>		<b>185</b>	<b>100%</b>	<b>141</b>	<b>100%</b>	<b>1</b>
Dormitories	Very adequate	7	4%	52	37%	0
	Adequate	46	25%	62	44%	0
	Inadequate	92	50%	8	57%	1
	Not available	36	19%	17	12%	0
	Non Response	4	2%	2	1%	0
<b>Total</b>		<b>185</b>	<b>100%</b>	<b>141</b>	<b>100%</b>	<b>1</b>
Lockers/desks	Very adequate	23	12%	57	40%	0
	Adequate	99	54%	55	39%	0
	Inadequate	48	26%	11	8%	1
	Not available	11	6%	11	8%	0
	Non Response	4	2%	7	4%	0
<b>Total</b>		<b>185</b>	<b>100%</b>	<b>141</b>	<b>100%</b>	<b>1</b>

From table 4.4, most of the students in both public and private schools, said that their classrooms were adequate. 56% of students in public schools said their classrooms were adequate. However, 31% of public schools students said that their classrooms were inadequate while 40% of students in the private schools said their classrooms were adequate.

Majority of the students in both public and private schools said that their science laboratories were adequate. 48% of public schools students said that their science laboratories were adequate. However, 40% of them said that they were inadequate. 50% of private school students said their science labs were adequate and 37% of them said that the labs were inadequate.

Further, 64% of the students in public schools said their libraries were inadequate while 15% said they were not available. On the other hand, 53% of the students in private schools said that libraries were not available while 24% of them said the libraries were inadequate.

The study also established that students dormitories in both public and private schools their were inadequate. 50% of the students in the public schools said that their dormitories were inadequate and 25% said they were adequate. On the other hand 57% of students in private schools said that their dormitories were inadequate while 44% of them said they were adequate.

Moreover, 54% of the students in the public schools said that their desks/ lockers were adequate although 26% of them said that they were inadequate. 40% of the students in private schools said that their lockers/ desks were very adequate. 39% of them said that the lockers/desks were adequate.

#### **4.1.5 Teaching and Learning Resources**

This was sought to establish the availability of teaching and learning resources in public and private schools and whether the adequacy of this learning resources affects students' performance at KCSE examinations.

**Table 4.5: Teaching and learning resources rating by Students**

		Public		Private		Non Response
		F	%	F	%	
Exercise books	Very adequate	62	34%	60	43%	0
	Adequate	76	41%	62	44%	0
	Inadequate	38	21%	7	5%	1
	Not available	5	3%	9	6%	0
	Non Response	4	2%	3	2%	0
<b>Total</b>		<b>185</b>	<b>100%</b>	<b>141</b>	<b>100%</b>	<b>1</b>
Laboratory chemicals and equipment	Very adequate	21	11%	23	16%	0
	Adequate	72	39%	65	46%	0
	Inadequate	74	40%	44	31%	1
	Not available	13	7%	6	4%	0
	Non Response	5	3%	3	2%	0
<b>Total</b>		<b>185</b>	<b>100%</b>	<b>141</b>	<b>100%</b>	<b>1</b>
Library books	Very adequate	16	9%	10	7%	0
	Adequate	37	20%	21	15%	0
	Inadequate	100	54%	39	28%	1
	Not available	26	14%	70	50%	0
	Non Response	6	3%	1	1%	0
<b>Total</b>		<b>185</b>	<b>100%</b>	<b>141</b>	<b>100%</b>	<b>1</b>
Computers	Very adequate	23	12%	17	12%	0
	Adequate	39	21%	62	44%	0

	Inadequate	79	43%	26	18%	1
	Not available	39	21%	35	25%	0
	Non Response	5	3%	1	1%	0
<b>Total</b>		<b>185</b>	<b>100%</b>	<b>141</b>	<b>100%</b>	<b>1</b>
Teachings aids e.g. wall maps and charts	Very adequate	7	4%	8	6%	0
	Adequate	35	19%	36	26%	0
	Inadequate	85	46%	33	23%	1
	Not available	52	28%	58	41%	0
	Non Response	6	3%	6	4%	0
<b>Total</b>		<b>185</b>	<b>100%</b>	<b>141</b>	<b>100%</b>	<b>1</b>

From table 4.5 above, the study reveals that most students from both the public and private schools have text books for their learning. Forty one percent of students from public schools said that the textbooks were adequate while 34% of them said that they were very adequate. On the other hand, majority of students (44%) from the private schools said that text books were adequate.

It was found out that students from public schools have inadequate books in their library; this was according to 54% of the respondents while 20% said they were adequate. For private school students, majority of them (50%) said that library books were unavailable while 28% said they were inadequate.

43% of students in public schools said that computers were inadequate and only 21% said that they were adequate while 21% of them also said that computers were unavailable. On the other

hand majority of the students from private schools (44%) said that computers were adequate, while 25% of them said computers were not available.

Moreover, 46% of the students from public schools said that teaching aids were inadequate while 28% of the students said that teaching aids were not available. Further, 41% of the students in private schools said that teaching aids were not available while 26% said that the teaching aids were adequate.

#### 4.1.6 Level of education of the Father and Mother

In order to capture, students were asked to indicate the father's/mother's level of education in the questionnaire. This was sought to establish whether the parents' level of education has an effect on the students' performance in the National examination in public and private schools.

**Table 4.6: Level of education of the Father and Mother**

		Public		Private		Non Response
		F	%	F	%	
Father	Graduate	40	22%	46	33%	0
	Diploma	25	14%	31	22%	0
	"A" level	26	14%	19	13%	0
	"O" level	35	19%	25	18%	0
	Primary	34	18%	4	3%	0
	None	11	6%	8	6%	0
	Non Response	14	8%	8	6%	1
<b>Total</b>		<b>185</b>	<b>100%</b>	<b>141</b>	<b>100%</b>	<b>1</b>
Mother	Graduate	23	12%	26	18%	0
	Diploma	32	17%	36	26%	1
	"A" level	16	9%	23	16%	0
	"O" level	41	22%	33	23%	0
	Primary	45	24%	5	4%	0
	None	12	6%	9	6%	0
	Non Response	16	9%	9	6%	0
<b>Total</b>		<b>185</b>	<b>100%</b>	<b>141</b>	<b>100%</b>	<b>1</b>

Majority of the students from both public and private schools said that the highest level of their fathers were graduate. 22% of students from public schools said that their fathers were graduates.

19% O Level and 18% primary level. On the other hand majority of the students in private schools (33%) said their fathers were graduates, 22% said their fathers had diploma and 18% O Level.

Majority of the students in public schools (24%), said that their mothers highest level of education was primary level, 22% said they had O levels and 17% diploma and only 12% said their mothers were graduates. On the other hand, majority of the students in private schools (26%) said that their mothers highest level of education was diploma level, 23% said they had O level while 18% of the students mothers were graduates.

#### 4.1.7 Occupation of Father and Mother

Information on occupation of father and mother was also captured in the students' questionnaire. This was to find out the different occupations of students' parents and whether it has an effect on students' performance at KCSE examinations in public and private secondary schools.

**Table 4.7: Occupation of Father and Mother**

		Type of your school				
		Public		Private		Non Response
		F	%	F	%	
Father	Non Response	49	26%	37	26%	1
	Business man	17	9%	19	13%	0
	Farmer	40	22%	12	9%	0
	Teacher	14	8%	11	8%	0
Mother	Non Response	48	30%	27	19%	0
	Business woman	18	10%	40	28%	0
	Farmer	30	16%	10	7%	0
	House wife	32	17%	7	5%	0
<b>Total</b>		<b>185</b>	<b>100%</b>	<b>141</b>	<b>100%</b>	<b>1</b>

From table 4.7 above, Majority of the students in public schools (26%) did not respond. However, 22% of the students said that their fathers were farmers while only 9% were businessmen. 26% of students in private schools did not respond. However, 13% of the students said that their fathers were businessmen. Only 9% said their fathers were farmers.

Majority of the students in public schools (30%) did not respond. However, 17% of them said that their mothers were housewives and 16% said their mothers were farmers. On the other hand,



28% of students in private schools said their mothers were businesswomen and 19% did not respond. Only 5% of the students said their mothers were housewives.

#### 4.1.8 Who pays your school fees

This question in the students' questionnaire was drafted bearing in mind that students come from different backgrounds; those whose parents/guardians are able to pay fees without any difficulties and there are those who depend on sponsors and bursaries from the government. In view of this, the study sought to establish whether the source of school fees affects the students' performance at national examination in public and private secondary schools.

**Table 4.8: Who pays your school fees**

	Type of your school				
	Public		Private		Non Response
	F	%	F	%	
Parent	147	79%	123	87%	1
Guardian	16	9%	12	9%	0
Sponsor	16	9%	4	3%	0
Non Response	6	3%	2	1%	0
<b>Total</b>	<b>185</b>	<b>100%</b>	<b>141</b>	<b>100%</b>	<b>1</b>

From table 4.8, majority of the students in both public and private schools said that their school fees are paid by their parents. In both cases (9%), students said that their fees were paid by their guardians. 79% of students in public schools said their fees were paid by their parents, while 87% of students in private schools said their fees were paid by their parents.

#### 4.1.9 Whether school fees is paid on time.

Due to financial constraints of the parents/ guardians or sponsor, sometimes the students' fees is not paid in time and this disrupts learning especially when students have to be sent home to get the fees. In view of this, the study sought to find out whether school fees for students is paid on time and whether this affects the students performance at national examination in public and private secondary schools.

**Table 4.9 Rate of school fees payment**

	Type of your school					Total
	Public		Private		Non Response	
	F	%	F	%		
Yes	96	52%	116	82%	0	212
No	82	44%	22	17%	1	105
Non Response	7	4%	3	2%	0	10
<b>Total</b>	<b>185</b>	<b>100%</b>	<b>141</b>		<b>1</b>	<b>327</b>

From table 4.9 above, majority of the students in both public and private schools said that their school fees were paid in time, however, 44% of them said that their fees were not paid in time. 52% of students in public schools said that their fees were paid on time while 82% of students in private schools said their school fees were paid on time. Only 17% of these students said their fees were not paid in time. Majority of the students who said their fees were not paid in time cited financial constraints as the major reason.

#### 4.1.10 Parents/guardians participation in school activities

Lack of close monitoring and participation by parents/guardian on students learning activities such as ensuring they do their assignments and buying learning materials have been blamed for students' poor performance as well as indiscipline cases in schools. The study therefore sought to establish whether participation by parents/guardian on students learning activities affects their performance in the national examination.

**Table 4.10 Parents/guardians participation in school activities**

		Public		Private		Non response
		F	%	F	%	
(PTA)meetings	Yes	81	44%	68	48%	0
	No	98	53%	61	43%	1
	Non response	6	3%	12	9%	0
<b>Total</b>		<b>185</b>	<b>100%</b>	<b>141</b>	<b>100%</b>	<b>1</b>
Buying required textbooks and other learning materials?	Yes	131	71%	127	90%	0
	No	48	26%	12	9%	1
	Non response	6	3%	2	1%	0
<b>Total</b>		<b>185</b>	<b>100%</b>	<b>141</b>	<b>100%</b>	<b>1</b>
Ensuring that you do your school assignments during school holidays	Yes	148	80%	124	88%	1
	No	32	17%	13	9%	0
	Non response	5	3%	4	3%	0
<b>Total</b>		<b>185</b>	<b>100%</b>	<b>141</b>	<b>100%</b>	<b>1</b>

From table 4.10 above, majority of the students in public schools (53%) said that their parents/guardians did not participate in PTA meetings and 44% of them said that they participated. Majority of the students from private schools (48%) said that their parents/guardians participated in PTA meetings. However 43% of these said that their parents/guardians did not participate in PTA meetings.

On whether their parents/guardians participated in the buying of textbooks and other learning materials, majority of the students from both public and private schools said that they participated. 71% of students from public schools said that they participated while 90% of students from private schools said that they participated.

On whether their parents/guardians ensured that they did their assignments, majority of students from both the public and private schools said that they participated. 80% of students from the public schools said their parents/guardians participated while 88% of the students from private schools said that they participated.

#### **4.1.11 Major causes of poor performance**

Students were asked to give their opinion on what could be the major cause of poor students' performance in KCSE examinations.

Students gave many opinions why there was poor performance in the examinations. Majority of the students from the public schools said that the poor performance was due to fear of exam and inadequate facilities e.g. textbooks. Majority of the students in private schools said that the reasons were primarily out of lack of seriousness and also inadequate facilities.

#### 4.1.12: Ways to improve performance in KCSE

Students were asked to suggest ways to help improve the students' performance in the KCSE examinations.

Majority of the students from public schools suggested that students ought to manage their time well, that the management should improve on syllabus coverage to ensure they are well prepared for the exams and that the school management should improve the current facilities and resources. Majority of students from private schools suggested that students need to work hard to perform better in the exams and also that the management should improve the current facilities and resources.

#### 4.2 Class Teachers' Response Results.

##### 4.2.1 Gender of Class Teacher

In order to capture teachers' demographic information, teachers' gender was addressed in the first section of the questionnaire. This was to find out the total number of males and females teachers from public and private school under study.

**Table 4.11 Gender of class teachers**

	School				Total
	Public		Private		
	F	%	F	%	
Male	1	25%	5	100%	6
Female	3	75%	0	0	3
<b>Total</b>	<b>4</b>	<b>100%</b>	<b>5</b>	<b>100%</b>	<b>9</b>

From table 4.11, majority of the teachers in public schools were female (75%), while all the class teachers from private schools were men (100%).

#### 4.2.2 Age bracket of teachers

This was to capture the ages of teachers under study. To gather this data effectively, the questionnaire was designed with various age brackets to show those teachers who were between 30-40 years, those between 40-50 years and those between 50-60 years. It sought to establish whether teachers' age affects students' performance in the national examination in public and private schools.

**Table 4.12 Age bracket of teachers**

	School				Total
	Public		Private		
	F	%	F	%	
30-40 years	3	75%	3	60%	6
40-50 years	1	35%	1	20%	2
50-60 years	0	0	1	20%	1
Total	4	100%	5	100%	9

From table 4.12, majority of the teachers from both schools were in the age bracket 30 to 40 years. 75% of the teachers in public schools were between 30 and 40 years while 60% of teachers from private schools were between 30 to 40 years.

#### 4.2.3 Duration of teachers as professional.

This was to show teachers years of experience as a professional teacher. This was designed to show those who have worked as professional teachers for 5 years and below, those with 5-10 years, 10-15 years experience as professional teacher as well as those with experience of 15

years and above. This was also to establish whether teachers experience as a professional affects students' performance in the national examination in public and private schools.

**Table 4.13 Duration of teachers as professional.**

	School				Total
	Public		Private		
	F	%	F	%	
5 years and below	1	25%	1	20%	2
5-10 years	1	25%	3	60%	4
10-15 years	1	25%	0	0	1
15 years and over	1	25%	1	20%	2
Total	4	100%	5	100%	9

From table 4.13, all teachers in public schools came from each of the period category (25%), however, majority of the teachers from the private schools (60%) said they had practiced for between 5 and 10 years. 20% of the teachers had worked for below 5 years and 15 years and above.

#### 4.2.4 Teachers professional qualification

This was to show the teachers highest professional qualification. This was designed to show those teachers with Masters in Education, those with Bachelors in Education and those with Diploma qualification.

**Table 4.14 Teachers' professional qualification**

	School				Total
	Public		Private		
	F	%	F	%	
MEd	1	25%	0	0	1
BEd	2	50%	3	60%	5
Diploma	1	25%	2	40%	3
Total	4	100%	5	100%	9

From table 4.14, majority of the teachers from both public and private schools had a Bachelor of Education degree as their highest qualification. 50% of the class teachers from public schools had BEd, 25% had Med and 25% had diploma, while 60% of teachers from private schools had BEd and the rest (40%) had diploma. None had Med.

#### 4.2.5 Physical facilities rating by the teachers

This was one of the objectives of the study and therefore the study sought to show the availability of physical facilities such as classrooms, science laboratories, libraries, dormitories and lockers/desks and its effect on the performance of students in the national exam in public and private schools. To achieve this, teacher were asked to state whether these facilities were adequate or inadequate in their schools.



**Table 4.15 Physical facilities rating by the teachers**

		School				Total
		Public		Private		
		F	%	F	%	
Classroom	Very adequate	1	25%	4	80%	5
	adequate	2	50%	1	20%	3
	inadequate	1	25%	0	0	1
<b>Total</b>		<b>4</b>	<b>100%</b>	<b>5</b>	<b>100%</b>	<b>9</b>
Science laboratories	very adequate	1	25%	1	20%	2
	Adequate	2	50%	4	80%	6
	Inadequate	1	25%	0	0	1
<b>Total</b>		<b>4</b>	<b>100%</b>	<b>5</b>	<b>100%</b>	<b>9</b>
Library	Very adequate	1	25%	1	20%	2
	Inadequate	3	75%	2	40%	5
	Not available	0	0	1	20%	1
	Non response	0	0	1	20%	1
<b>Total</b>		<b>4</b>	<b>100%</b>	<b>5</b>	<b>100%</b>	<b>9</b>
Dormitories	Very adequate	0	0	3	60%	3
	Adequate	1	25%	1	20%	2
	Inadequate	3	75%	0	0	3
	Non response	0	0	1	20%	1
<b>Total</b>		<b>4</b>	<b>100%</b>	<b>5</b>	<b>100%</b>	<b>9</b>
Lockers/desks	Very adequate	1	25%	2	40%	3
	Adequate	0	0	3	60%	3
	Inadequate	3	75%	0	0	3
<b>Total</b>		<b>4</b>	<b>100%</b>	<b>5</b>	<b>100%</b>	<b>9</b>

From table 4.15, majority of the teachers from public schools (50%) said that the classrooms were adequate and 25% said they were inadequate while majority of teachers from the private schools (80%) said their classrooms were very adequate. None said that they were inadequate.

Fifty percent of the class teachers from public schools said that their science laboratories were adequate, 25% said they were inadequate. On the other hand majority of the teachers in private schools (80%) said their labs were adequate. None said that they were inadequate. On the rating of their libraries, majority of the teachers from public schools (75%) said that they were inadequate and 25% said they were adequate while majority of the teachers from private schools (40%) said their libraries were inadequate and 20% said they were not available. However 20% said they were adequate.

The study also found out that dormitories in public schools were inadequate; this was according to 75% of teachers from public schools while 25% said they were adequate. On the other hand, majority of teachers from private schools (60%) said that the dormitories were very adequate and 20% said they were adequate. On the rating of lockers/ desks, majority of teachers from public schools (75%) said that they were inadequate but 25% said they were very adequate. Majority of teachers from private schools (60%) said that the lockers/ desks were adequate and 40% said they were very adequate. None said that they were inadequate.

#### 4.2.6 Rating of teaching and learning materials by class teachers

Another objective of the study was to determine the effects of teaching and learning resources on students' performance in KCSE Examinations in public and private secondary schools. To achieve this, teachers were requested to state whether the learning materials were adequate or inadequate and hence establish the effect of this on students' performance.

**Table 4.16 Rating of teaching and learning materials by class teachers**

		School				Total
		Public		Private		
		F	%	F	%	
Students' text books	Very adequate	1	25%	1	20%	2
	Adequate	0	0	1	20%	1
	Inadequate	3	75%	3	60%	6
<b>Total</b>		<b>4</b>	<b>100%</b>	<b>5</b>	<b>100%</b>	<b>9</b>
Exercise books	very adequate	1	25%	5	100%	6
	Adequate	2	50%	0	0	2
	Inadequate	1	25%	0	0	1
<b>Total</b>		<b>4</b>	<b>100%</b>	<b>5</b>	<b>100%</b>	<b>9</b>
Teachers reference books and guides	Very adequate	1	25%	1	20%	2
	Adequate	1	25%	2	40%	3
	Inadequate	2	50%	2	40%	4
<b>Total</b>		<b>4</b>	<b>100%</b>	<b>5</b>	<b>100%</b>	<b>9</b>
Laboratory chemical and equipment	Very adequate	2	50%	2	40%	4

	Adequate	1	25%	3	60%	4
	Inadequate	1	25%	0	0	1
<b>Total</b>		<b>4</b>	<b>100%</b>	<b>5</b>	<b>100%</b>	<b>9</b>
Library books	Very adequate	1	25%	1	20%	2
	Adequate	0	0	1	20%	1
	Inadequate	3	75%	2	40%	5
	Non response	0	0	1	20%	1
<b>Total</b>		<b>4</b>	<b>100%</b>	<b>5</b>	<b>100%</b>	<b>9</b>
Computers	Very adequate	1	25%	0	0	1
	Adequate	0	0	4	80%	4
	Inadequate	3	75%	0	0	3
	Not available	0	0	1	20%	1
<b>Total</b>		<b>4</b>	<b>100%</b>	<b>5</b>	<b>100%</b>	<b>9</b>
Duplicators	Very adequate	1	25%	1	20%	2
	Adequate	0	0	1	20%	1
	Inadequate	1	25%	0	0	1
	Not available	2	50%	2	40%	4
	Non Response	0	0	1	20%	1
<b>Total</b>		<b>4</b>	<b>100%</b>	<b>5</b>	<b>100%</b>	<b>9</b>
Teaching aids	Very adequate	1	25%	1	20%	2
	Adequate	0	0	2	40%	2
	Inadequate	1	25%	2	40%	3
	Not available	2	50%	0	0	2
<b>Total</b>		<b>4</b>	<b>100%</b>	<b>5</b>	<b>100%</b>	<b>9</b>

From table 4.16, majority of the class teachers in both type of schools said that students' textbooks were inadequate. 75% of teachers in public schools said that textbooks were inadequate while 60% of teachers in private schools said there were inadequate. When asked to rate the exercise books, majority of the class teachers from public schools (50%) said they were adequate, 25% said they were inadequate. All teachers in private schools said that the exercise books were very adequate.

When asked to rate the teachers reference books and guides, Majority of public schools teachers (50%) said the guides and books were inadequate. However, 25% said they were adequate and another 25% said they were very adequate. On the other side, majority of teachers in private schools (40%) said that the guides were either inadequate or unavailable. On rating of Laboratory chemical and equipment, majority of class teachers from public schools (50%) said that they were very adequate. However, 25% said they were inadequate. Majority of the class teachers in private schools (60%) said they were adequate while 40% said they were very adequate.

On library books, majority of the teachers from public schools (75%) said they were inadequate although 25% of them said the books were very adequate. Majority of teachers from private schools (40%) said they were inadequate, 20% said they were adequate and 20% said they were very adequate. On the rating of computers, majority of the teachers in public schools (75%) said the computers were inadequate while 80% of teachers in private schools said the computers were adequate and 20% said they were not available.

On the rating of duplicators, majority of teachers in public schools (50%) said that duplicators were not available and 25% said they were inadequate. In private schools, teachers said that

duplicators (40%) were unavailable and 20% said they were adequate and very adequate. When asked to rate the teaching aids, majority of teachers in public schools (50%) said that teaching aids were not available while 25% said they were inadequate. In private schools, majority of the teachers said that teaching aids were either adequate or inadequate (both at 40%). However 20% said they were very adequate.

#### 4.2.7 Frequency of students missing lessons due to non-payment of school fees

This was to show how often the students learning is disrupted by missing lessons due to non-payment of school fees and the effect of the disruption of learning to students performance in the national examinations.

**Table 4.17 Frequency of students missing lessons due to non-payment of school fees**

	School				Total
	Public		Private		
	F	%	F	%	
Occasionally	4	100%	5	100%	9
Total	4	100%	5	100%	9

From table 4.17. all the class teachers from both the public and private schools said that students miss classes occasionally for lack of school fees and other levies.

#### 4.2.8 Parents visit to the school to check on their children's academic performance

Parents' participation in students learning has an effect on their performance. In view of this, the study sought to investigate whether parents visit the school to check on their children's academic performance and how this affects their national examinations in public and private schools.

Table 4.18 Parents' visit to the school to check on their children's academic performance

	School				Total
	Public		Private		
	%	F	%	F	
Yes	75%	3	80%	4	7
No	25%	1	20%	1	2
Total	100%	4	100%	5	9

From table 4.18, majority of teachers from public schools (75%) said that parents visit the school to check on their children's academic performance while 80% of teachers in private schools also said the parents visited the school to check on their children's academic performance.

### (b) Rating of Visits

This was to establish how often the parents/guardians visit students in the schools and whether this has an effect on students' performance in KCSE examinations in public and private secondary schools.

**Table 4.19 Rating of visits**

	School				Total
	Public		Private		
	F	%	F	%	
Frequent	1	25%	1	20%	2
Not frequent	3	75%	4	80%	7
Total	4	100%	5	100%	9

Majority of the teachers from both the public and private schools said that the parents did not come frequently to check on their children's academic performance. 75% of teachers in public schools said the meetings were not frequent while 80% of the teachers in private schools said the meetings were infrequent.



#### 4.2.9 Parents support student's activities to enhance examination performance.

This was to show the extent to which parents support students' activities and how this affects the students' performance in KCSE Examinations in public and private secondary schools.

**Table 4.20 Teachers' perception on parents support to student's activities to enhance examination performance**

	School				Total
	Public		Private		
	F	%	F	%	
To a very high extent	0	0	1	20%	1
To some extent	4	100%	3	60%	7
Not at all	0	0	1	20%	1
Total	4	100%	5	100%	9

From table 4.20, all the teachers in public schools said that parents supported student's activities to some extent while 60% of the teachers in private schools said that parents supported to some extent while 20% said they supported to a very high extent.

#### 4.2.10: Opinion of teachers on the major causes of poor performance in KCSE examinations

When asked to give their opinion on the major causes of poor performance at KCSE examinations at their school, teachers in public schools gave various reasons ranging from inadequate textbooks, overloaded syllabus, staffing and poor studying habits by students. Teachers from private schools also gave various opinions which included Lack of self

motivation, lack of parental participation and input to education, lack of education facility citing abs, revision books, and textbooks

#### **4.2.11 Suggestions by teachers to improve students' performance at KCSE examinations**

Asked to give Suggestions on how to improve students' performance at KCSE examinations, teachers in public schools gave various suggestions which included Looking for more teaching aids of learning materials for student . Motivate teachers, review the syllabus and provide adequate facilities. Teachers in private schools gave suggestions ranging from Purchase of students text books and library books, Parent should improve in paying fees to avoid absenteeism, Motivation of teachers and students and Introduction of time management study system to save time wastage by students.

### 4.3 Head teachers' Response Results.

#### 4.3.1 Gender of Head teachers

This sought to show the number of male and female head teachers in the public and private schools under study. Head teachers gender was addressed in the first section of the head teachers' questionnaire.

**Table 4.21 Gender-Head teachers**

	School				Total
	Public		Private		
	F	%	F	%	
Male	3	75%	3	60%	6
Female	1	25%	2	40%	3
Total	4	100%	5	100%	9

From table 4.21, majority of public schools head teachers interviewed were male (75%) and female 25% while in private schools majority were 60% male and 40% female.

#### 4.3.2 Age bracket of Head teachers

This was to establish the ages of head teachers in public and private schools under study. The head teachers' age was captured in the first section of the head teachers' questionnaire and put into various ranges to show those head teachers between 30-40 years of age, 40-50 years of age and those between 50-60 years.

**Table 4.22 Age bracket of Head teachers**

	School				Total
	Public		Private		
	F	%	F	%	
30-40 years	0	0	2	40%	2
40-50 years	2	50%	2	40%	4
50-60 years	2	50%	1	20%	3
Total	4	100%	5	100%	9

From table 4.22, Half of the head teachers in public schools were between the age of 40 and 50 years (50%) and the other half (50%) were between 50 and 60 years. 40% of head teachers in private schools were between the age of 30 and 40, 40% between 40 and 50 and 20% were 50 to 60 years.

### **4.3.3 Population of school by Gender**

### **4.3.4 Duration of head teacher in school**

This was to show the duration the head teacher have served in their current post whether this affects the students' performance at national examination in public and private schools. To capture this, head teachers questionnaire was designed to show those who have served in that capacity for 5 years and below and those who have served between 5-10 years.

**Table 4.23 Duration of head teacher in school**

	School				Total
	Public		Private		
	F	%	F	%	
5 years and below	4	100%	2	40%	6
5-10 years	0	0	3	60%	3
<b>Total</b>	<b>4</b>	<b>100%</b>	<b>5</b>	<b>100%</b>	<b>9</b>

From table 4.24, all the head teachers in public schools have been head teachers in their current schools for less than 5 years. Majority of head teachers in private schools (60%) have been in those schools for between 5 and 10 years and 40% have been there for 5 years and below.

#### **4.3.5 Rating of the physical facilities**

This was to show head teachers response on the physical facilities available in private and public secondary schools under study. The head teachers were to indicate whether the facilities were adequate or inadequate.

**Table 4.24 Rating of physical facilities by head teachers**

		School				Total
		Public		Private		
		F	%	F	%	
Classrooms	Very adequate	0	0	3	60%	3
	Adequate	2	50%	2	40%	4
	Inadequate	2	50%	0	0	2
<b>Total</b>		<b>4</b>	<b>100</b>	<b>5</b>	<b>100%</b>	<b>9</b>
Science laboratories	Very adequate	1	25%	0	0	1
	Adequate	2	50%	3	60%	5
	Inadequate	1	25%	2	40%	3
<b>Total</b>		<b>4</b>	<b>100</b>	<b>5</b>	<b>100%</b>	<b>9</b>
Library	Adequate	1	25%	1	20%	2
	Inadequate	2	50%	3	60%	5
	Not available	1	25%	1	20%	2
<b>Total</b>		<b>4</b>	<b>100</b>	<b>5</b>	<b>100%</b>	<b>9</b>
Dormitories	Very adequate	0	0	1	20%	1
	Adequate	1	25%	3	60%	4
	Inadequate	3	75%	0	0	3
	Not available	0	0	1	20%	1
<b>Total</b>		<b>4</b>	<b>100</b>	<b>5</b>	<b>100%</b>	<b>9</b>
Lockers/desks	Very adequate	2	50%	2	40%	4
	Adequate	2	50%	3	60%	5
<b>Total</b>		<b>4</b>	<b>100</b>	<b>5</b>	<b>100%</b>	<b>9</b>

From table 4.25, Half of the head teachers from public schools (50%) said that the classrooms were adequate and the other half said they were inadequate. Majority of head teachers from the private schools (60%) said their classrooms were very adequate and 40% said they were adequate.

Majority of the head teachers from public schools (50%) said that their science laboratories were adequate. 25% said they were inadequate and 25% said they were very adequate. On the other hand majority of the head teachers in private schools (60%) said their labs were adequate, while 40% said they were inadequate.

On the rating of their libraries, majority of head teachers from public schools (50%) said that they were inadequate and 25% said they were adequate while majority of head teachers from private schools (60%) said their libraries were inadequate and 20% said they were not available. However 20% said they were adequate. Majority of head teachers from public schools (75%) said the dormitories were inadequate and 25% said they were adequate. On the other hand, majority of head teachers from private schools (60%) said that the dormitories were adequate and 20% said they were very adequate.

On the rating of lockers/ desks, half of head teachers from public schools (50%) said that they were inadequate and the rest said they were very adequate. Majority of head teachers from private schools (60%) said that the lockers/ desks were adequate and 40% said they were very adequate. None said that they were inadequate.

### 4.3.6 Rating the teaching and learning resources by head teachers

This was one of the objectives of the study; to determine the effects of teaching and learning resources on students' performance in KCSE Examinations in public and private secondary schools in Central Division, Machakos District. To achieve this, head teachers were asked to state whether the teaching and learning materials such as text books, exercise books, laboratory chemical and equipment were adequate.

**Table 4.25 Rating of teaching and learning resources by head teachers**

		School			
		Public		Private	
		F	%	F	%
Students' text books	Very adequate	0	0	1	20%
	Adequate	3	75%	3	60%
	Inadequate	1	25%	1	20%
<b>Total</b>		<b>4</b>	<b>100%</b>	<b>5</b>	<b>100%</b>
Exercise books	Very adequate	2	50%	3	60%
	Adequate	2	50%	2	40%
<b>Total</b>		<b>4</b>	<b>100</b>	<b>5</b>	<b>100%</b>
Teachers' reference books and guide books	Very adequate	1	25%	1	20%
	Adequate	3	75%	3	60%
	Inadequate	0	0	1	20%
<b>Total</b>		<b>4</b>	<b>100%</b>	<b>5</b>	<b>100%</b>
Laboratory chemical and equipment	Very adequate	0	0	1	20%
	Adequate	3	75%	3	60%
	Inadequate	1	25%	1	20%



<b>Total</b>		<b>4</b>	<b>100%</b>	<b>5</b>	<b>100%</b>
Library books	Adequate	1	25%	1	20%
	Inadequate	3	75%	3	60%
	Not available	0	0	1	20%
<b>Total</b>		<b>4</b>	<b>100%</b>	<b>5</b>	<b>100%</b>
Computers	Adequate	1	25%	2	40%
	Inadequate	3	75%	2	40%
	Not available	0	0	1	20%
<b>Total</b>		<b>4</b>	<b>100%</b>	<b>5</b>	<b>100%</b>
Duplicators	Very adequate	1	25%	0	0
	Adequate	2	50%	2	40%
	Inadequate	1	25%	1	20%
	Not available	0	0	2	40%
<b>Total</b>		<b>4</b>	<b>100%</b>	<b>5</b>	<b>100%</b>
Teaching aids e.g. wall maps and charts	Adequate	2	50%	2	40%
	Inadequate	2	50%	2	40%
	Not available	0	0	1	20%
<b>Total</b>		<b>4</b>	<b>100%</b>	<b>5</b>	<b>100%</b>

From table 4.26, majority of the head teachers in both type of schools said that students' textbooks were adequate. 75% of teachers in public schools said that textbooks were adequate while 60% of teachers in private schools said they were adequate.

When asked to rate the excise books, half of the head teachers from public schools (50%) said they were very adequate, the other half said they were adequate. Majority of head teachers in private schools (60%) said that the excise books were very adequate and 40% were adequate.

When asked to rate the teachers reference books and guides, Majority of public schools teachers (75%) said the guides and books were adequate. However, 25% said they were very adequate. On the other side, majority of teachers in public schools (60%) said that the guides were either adequate.

On rating of Laboratory chemical and equipment, majority of head teachers from public schools (75%) said that they were adequate. However, 25% said they were inadequate. Majority of the head teachers in private schools (60%) said they were adequate while 20% said they were very adequate.

On library books, majority of head teachers from public schools (75%) said they were inadequate although 25% of them said the books were adequate. Majority of head teachers from private schools (60%) said they were inadequate, 20% said they were adequate and 20% said they were not available.

On the rating of computers, majority of head teachers in public schools (75%) said the computers were inadequate and 20% said they were adequate while 40% of head teachers in private schools said the computers were adequate and 40% said they were inadequate.

On the rating of duplicators, majority head teachers in public schools (50%) said that duplicators were adequate and 25% said they were very adequate. In private schools, head teachers 40% said that duplicators were adequate and 40% said they were not available.

When asked to rate the teaching aids, 50% of head teachers in public schools said that teaching aids were adequate while 50% said they were inadequate. In private schools, 40% of head teachers said that teaching aids were adequate. 40% said they were inadequate.

#### 4.3.7 Frequency of students being away from school to collect fees and other levies

Learning is highly interrupted when students are sent away from school to collect fees and other levies. In view of this, the study sought to investigate how often head teachers send away students from school to collect fees and how this affects the students' performance in KCSE Examinations in public and private secondary schools.

**Table 4.26 Frequency of students being away from school to collect fees and other levies**

	School				Total
	Public		Private		
	F	%	F	%	
Monthly	2	50%	2	40%	4
Once in a term	2	50%	1	20%	3
Time not definite	0	0	1	20%	1
Non response	0	0	1	20%	1
	4	100%	5	100%	9

From table 4.27, 50% of head teachers from public schools said they send students away for fees monthly while 50% said they send them away once in a term. Majority of head teachers from private schools (40%) said they send their students away monthly and 20% once in a term.

### 4.3.8 Meetings with parents to discuss students' performance

This section was to establish whether head teachers hold meetings with parents to discuss students' performance and to ensure a close monitoring as they progress. It also sought to show whether the head teaches meetings with parents have an effect on the students' performance in the national examination in private and public schools.

**Table 4.27 Meetings with parents to discuss students' performance**

	School				Total
	Public		Private		
	F	%	F	%	
Yes	3	75%	5	100%	8
No	1	25%	0	0	1
Total	4	100%	5	100%	9

From table 4.28, majority of head teachers from public schools (75%) said that they held meetings with parents to discuss students' performance while all head teachers from private schools said they had meetings with parents to discuss the student's performance.

#### (b) How often the meetings were held

This was to show how frequent the head teachers were meeting with parents to discuss on students performance in public and private secondary schools. The respondents were to indicate whether they hold these meetings once a term or once a year. It was also to establish whether these meetings affect the performance of the students in the national examination.

**Table 4.28 Frequency of meetings held**

	School				Total
	Public		Private		
	F	%	F	%	
Once a term	3	75%	4	80%	7
Once a year	0	0	1	20	1
Non response	1	25%	0	0	1
	4	100%	5	100%	9

From those head teachers that said that they held meetings with parents to discuss the student's performance, majority of head teacher from public schools (75%), said that meetings were held once in a term while 80% from private schools said they also held the meetings once per term and 20% once in a year.

#### **4.3.9 To Parents support to students' activities to enhance examination performance.**

This sought to show the extent to which parents support students' activities to enhance students' performance in their national examination in public and private schools under study. The findings of this study would be helpful in giving advice to the parents on how their support is essential in determining the performance of students in KCSE Examinations.

**Table 4.29 Head teachers' perception on parents support to students' activities to enhance examination performance**

	School				Total
	Public		Private		
	F	%	F	%	
To a very high extent	1	25%	1	20%	2
To some extent	3	75%	4	80%	7
	4	100%	5	100%	9

From table 4.30, majority of head teachers from public schools (75%), said that parents support students' activities to some extent and 25% said to a very high extent. For head teachers in private schools, 80% said the parents supported to some extent while 20% said to a very high extent.

#### **4.3.10 In your opinion what could be the major cause of poor students' performance at KCSE examination in your school?**

Head teachers were asked to give their opinions on the major causes of poor students' performance at KCSE examinations in their schools. Head teachers in public schools gave opinions ranging from lack of staff, lack of preparation, indiscipline, inadequate parent involvement and negative attitude of the students. Head teachers from private schools gave reasons ranging from absenteeism due to lack of school fees, attitudes towards hard work, high staff turnover and lack of motivation.

### **4.3.11: Suggest ways to improve students' performance at KCSE examination in your school**

When told to give suggestions to improve students' performance at KCSE examinations, head teachers from public schools suggested that there should be adequate parent involvement, raising the entry behavior in form 1, frequent testing, motivation of students/teachers and Guidance and counseling. Head teachers from private schools gave suggestions including; Continuous giving of weekly assignments, monthly CAT and monthly standardized exams, Guidance and counseling, enhance hard work ethics in student and delete the idea of cheap things, Reduce the subject and shorten the syllabus and stemming staff movement.

### **4.4: Conclusions**

From the findings of the study the researcher would like to make the following conclusions; That poor performance in KCSE by students was being caused by inadequate facilities and resources. overloaded syllabus. lack of self motivation, lack of parental participation and input to education. On overall, physical facilities such as computers, teaching aids, lockers/ desks and dormitories were adequate only in private schools while in public schools they were inadequate. The study also revealed that, KCSE performance could be improved through adequate parent involvement, motivation of both students and teachers, reduction of subjects and shortening of the syllabus.

## CHAPTER FIVE

### SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

#### 5.0 Introduction

This chapter presents the conclusions of the study. The research dealt with determinants of students' performance at national examinations (KCSE) in public and private secondary schools in central division, Machakos district. The key variable included physical facilities, teaching and learning resources, socio-economic background and parents' participation in school activities. The prime objective of the study is to determine the causes of students poor performance in KCSE examinations in Public and private secondary schools. The study sought to answer the following questions;

- i. What are the causes of students' poor performance in KCSE examinations in public and private secondary schools in Central Division, Machakos District?
- ii. What are the effects of teaching and learning resources on students' performance in KCSE Examinations from public and private secondary schools in Central Division, Machakos District?
- iii. Does the students' socio-economic background affect their performance in KCSE examinations from public and private secondary schools in Central Division, Machakos District?
- iv. Do the students' socio-economic background and parents' participation affect their performance in KCSE examinations from public and private secondary schools in Central Division, Machakos District?



- v. What are the ways to improve students' performance in KCSE examinations in public and private secondary school in Central Division, Machakos District?

The following are the summary of the research findings upon which the conclusion and recommendations of the study were made.

### **5.1 Causes of poor students' performance in KCSE examinations**

The study was able to establish the causes of poor students' performance from the students', class teachers' and head teachers' point of views.

From the students' point of view, the study established many opinions why there was poor performance in the examinations. Students from both public schools and private schools said that the poor performance was due to fear of exam, inadequate facilities e.g. textbooks and lack of seriousness. From the class teachers point of view, poor performance in KCSE by students was being caused by inadequate facilities and resources, overloaded syllabus, staffing, poor studying habits by students. lack of self motivation, lack of parental participation and input to education.

From the head teachers' point of view, poor performance was being caused by lack of staff, lack of preparation, indiscipline, inadequate parent involvement, negative attitude of the students, absenteeism due to lack of school fees, attitudes towards hard work, high staff turnover and lack of motivation. In general, lack of learning and teaching resources, lack of school fees are the major causes of poor performance in KCSE examinations by students.

## **5.2 Effects of teaching and learning resources on students' performance in KCSE**

### **Examinations**

The study was able to establish the effect of teaching and learning facilities from the students', class teachers' and head teachers' point of view. The teaching and learning facilities identified for the study were textbooks, Exercise books, laboratory chemical and equipment, library books, teaching aids, computers and duplicators. Facilities included classrooms, science labs, library, dormitories and lockers/ desks.

From the students' point of view, the study established that on overall, classrooms, science labs, lockers/ desks, exercise books and laboratory chemicals& equipment were adequate for both students in public and private schools. From the findings 56% of students in public schools stated that the classrooms were adequate while on the hand 50% of students in private school revealed that science laboratories were adequate. However, computers were only adequate for private school students. On overall, students said that libraries, dormitories, library books and teaching aids were inadequate in both public and private schools. However, computers were only inadequate for public schools. Forty four percent of students from private schools stated that computers were adequate while 79% of students in public schools stated that they were inadequate.

From class teachers' point of view, on overall classrooms, science labs, libraries, excise books, lab chemicals and equipments in both public and private schools were adequate while computers, teaching aids, lockers/ desks and dormitories were adequate only in private schools. Fifty percent of teachers in public schools stated that science labs were adequate while 80% of teachers in private schools stated that the science labs were very adequate. On the other hand, duplicators,

teachers' reference books, library books and text books were inadequate in both public and private schools while dormitories, lockers/ desks, computers and teaching aids were inadequate only in public schools. An overwhelming 100% of teachers in private schools stated that exercise books were very adequate while only 25% of teachers in public schools stated that they were very adequate.

From head teachers point of view, in general, classrooms, science labs, lockers/ desks, students text books, excise books, teachers reference books and guide books, lab chemical and equipment, computers and teaching aids were adequate in both public and private schools. From the findings, 60% of head teachers in private schools stated that lockers/ desks were adequate while 50% in public schools also stated that they were adequate. However duplicators were only adequate in public schools: this was revealed by 50% of head teachers. Libraries and library books were rated as inadequate in both public and private schools this was according to 75% of head teachers in public schools and 60% of head teachers in private schools, although duplicators were also inadequate but in private schools only.

Thus it is the researcher's view that students in private schools performed better in KCSE examinations than students in public schools due to the disparity in availability and adequacy of both teaching and learning resources.

### **5.3 Students' socio-economic background effect on performance in KCSE examinations**

The study also sought views from students on the effects of students' socioeconomic background on their performance in KCSE examinations. The socioeconomic background was based on the level of education of both parents and their current occupation, who pays their fees and whether

they are paid on time and whether their parents/ guardians participate in educational activities e.g PTA meetings.

The study established that, in general, the parents of the students in public schools; majority (24% for mothers and 18% for fathers) had primary, A level or O level education. while parents of students in private schools had diploma and graduate levels of education; this was according to 26% of students on mothers and 33% on fathers level of education. This would have a meaning that the parents with students in private schools are in better occupations hence they have the financial ability to pay school fees or they are more enlightened about quality education. This would affect the performance of the students in KCSE through either late fees payment or poor quality education.

The study also established that although parents for both public and private schools students were farmers. majority of parents for public school students were farmers and housewives, incase of mothers and businessmen and businesswomen for students in private schools. This was revealed by 22% and 17% of students in public schools as well as 13% and 28% of students in private schools respectively. This would mean students in public schools would have problems in timely paying of their fees considering the seasonality of farming. This would eventually affect their performance on KCSE examinations. By majority of mothers for students in public schools being house wives, this meant that the father was the sole bread winner in the family. This would mean less disposable income, leading to late fees payment and students lacking learning resources, since from the study it was evident that although majority of students from both schools said their fees are paid on time, a sizable number from public schools said their fees were

not being paid in time. Fifty two percent of students in public schools and 82% in private schools revealed that their fees was paid on time while 44% of students in public schools and 17% in private schools stated that it was not paid on time.

The study also established that although parents of students from both private and public schools participated in buying books and ensuring that the students did their school assignments during school holidays. majority of the parents with students in public schools did not attend PTA meetings; this was according to 53% of students in public schools, however, 68% of students in private schools revealed that their parents attend PTA meetings. This would mean that parents with students in public schools were not committed in following up on the performance of their students. This would lead to laxity by the students thus performing poorly in KCSE.

In general therefore, the study established that, students' socioeconomic background does affect students' performance in KCSE examinations due to the constraints their parents face in providing learning materials, paying school fees and participating in school activities. However this problem was common among students in public schools.

#### **5.4 Ways to improve students' performance in KCSE examinations in public and private secondary schools**

The study also sought to find out from students, teachers and head teachers, ways to improve students' performance in KCSE examinations in public and private schools. From the students' point of view, students ought to manage their time well; teachers should improve on syllabus coverage to ensure they are well prepared for the exams and that the school management should improve the current facilities and resources.

From the class teachers' point of view, performance in both public and private schools could be improved through staff motivation, review of the syllabus and provision of adequate facilities. From the head teachers' point of view, KCSE performance could be improved through adequate parent involvement, motivation of both students and teachers. They also suggested the reduction of subjects and shortening of the syllabus.

In general, the study established that the major ways that could be employed to improve KCSE performance in both public and private schools included; improving on syllabus coverage, improving the existing and acquisition of additional teaching and learning facilities, staff and students' motivation and parents' involvement.

## **5.5 Conclusions**

From the findings of the study the researcher would like to make the following conclusions;

The study have evidently revealed and established that teaching and learning resources and socioeconomic factors affect the performance of students in KCSE examinations in Central Division, Machakos District. Although these factors affect the performance of students in both public and private schools, the study established that, the effects are more felt in public schools than in private schools. The study established that private schools tend to perform better than public schools. This could be attributed to the availability of resources in private schools more than public schools.

The study also established that in order to ensure better performance, students and teachers should be well motivated, syllabuses should be sufficiently covered, teaching and learning facilities should be provided and that parents should be actively involved in the performance of their children. The study also concluded that parents' participation in school activities affects the

performance of the students. By participating, parents are able to understand the students' needs and hence they are able to support them by buying learning materials such as text books and hence improve their performance.

## **5.6 Recommendations**

In line with the findings and conclusion of the study, the researcher would make the following recommendations as a precursor to improving the performance of students in KCSE examinations in Central Division, Machakos District and in Kenya at large. There is a great need to provide adequate libraries and library books to students in both public and private schools to encourage private studying. Public schools ought to provide students with adequate dormitories, lockers/ desks and computers. Teachers should also be provided with adequate teaching aids to ensure quality teaching. The government should quickly address the issue of shortage of teachers in public schools as well as their salaries. Parents should fully participate in the students' academic record. They should ensure their children are kept in schools to avoid inconsistency in learning. Teachers should ensure they cover the syllabuses fully so that students can go to exams having covered the required coursework.

## **5.7 Suggestions for Further Research**

The study of this magnitude cannot be exhaustive in covering the performance of students in KCSE. More research can be done in areas closely related to this study. On the strength of the data gathered, analyzed and the findings, the researcher proposes the following suggestions for further research;

The study was based in Central Division, Machakos District. However, for purpose of producing results that are balanced, the researcher recommends, further research to include other districts and provinces, the region and the country at large. This will help to create more comprehensive picture of the determinants of poor performance among students in KCSE examinations in both private and public schools in a wider spectrum. It would be interesting to establish whether the same factors affecting performance in KCSE, do affect other examinations offered by KNEC, e.g. KCPE.



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## APPENDICES

### Appendix I: Research Budget Schedule

<b>Item</b>	<b>Cost (KShs.)</b>
Typing	40,000
Photocopying	20,000
Traveling	40,000
Binding	10,000
<b>Total</b>	<b>110,000</b>



### **Appendix III: Letter of Introduction to the Respondents**

The Headteachers, The Teachers, The Students.

Dear Respondent,

#### **REF: RESEARCH FIELD WORK**

I am a postgraduate student pursuing a Master of Education Degree in the Department of Educational Foundations, School of Education, University of Nairobi. I am currently undertaking a research study to determine the factors that affect students' performance in KCSE examinations. The respondents are the headteachers, form four class teachers, and form four students. It would be greatly appreciated if you would give the required information for the purpose of this research. The results of this study will hopefully enable the government, ministry of education officials, school administrators, teachers, and communities to identify factors that affect academic performance in schools and possibly put in place intervention measures.

All your responses to the questionnaire will be treated with the utmost confidence and will be used strictly for the purpose of the study. You are therefore kindly advised not to indicate your name for confidentiality. Please answer all the questions.

Thank you for your cooperation.

Yours faithfully,

Nelson Mualuko Mwova.

**Appendix IV: Questionnaire for the Head teachers**

Dear Respondent,

You have been randomly selected to participate in this study, which is very important in improving students' performance at KCSE examinations. You are kindly requested to complete this questionnaire indicating your honest response by ticking where appropriate against your option and offer an explanation for the question requiring your answer either through a word or explanation. The information you provide will be treated with uttermost confidence and used only for this study.

**Section A**

1. Please indicate your gender

Male  Female

2. What is your age bracket?

30 years and below  30-40 years

40-50 years  50-60 years

3. What is the population of your school by gender?

Male .....

Female .....

4. How long have you been the head teacher in this school?

5 years and below  5-10 years

10-15 years  15 yrs and over



**Section B**

5. Please rate the physical facilities in your school by ticking in the appropriate space.

	R A T I N G S C A L E S			
Physical facilities	Very adequate	Adequate	Inadequate	Not available
Classrooms				
Science laboratories				
Library				
Dormitories				
Lockers/ desks				

6. Please rate the teaching and learning resources in your school by ticking in the appropriate space.

	R A T I N G S C A L E S			
Teaching and learning resources	Very adequate	Adequate	Inadequate	Not available
Students' text books				
Exercise books				
Teachers' reference books and guides				
Laboratory chemicals and equipment				
Library books				
Computers				
Duplicators				
Teaching aids e.g. wall maps and charts				

7. How often do you send students away from school to collect fees and other levies?

Weekly  Monthly

Once in a term  Time not definite

8. a) Do you have meetings with parents to discuss students' performance?

Yes  No

b) If yes, how frequently?

Once a term  Once a year

Once in two years  Not at all

c) If no, give reasons

.....

9. To what extent do parents support students' activities to enhance examination performance?

To a very high extent  To some extent  Not at all

10. In your opinion what could be the major cause of poor students' performance at KCSE examinations in your school?

.....

11. Suggest ways to improve students' performance at KCSE examinations in your school.

.....

.....

.....

Thank you for your co-operation

## Appendix V: Questionnaire for the Teachers

Dear Respondent,

You have been randomly selected to participate in this study, which is very important in improving students' performance at KCSE examinations. You are kindly requested to complete this questionnaire indicating your honest response by ticking where appropriate against your option and offer an explanation for the question requiring your answer either through a word or explanation. The information you provide will be treated with uttermost confidence and used only for this study.

### Section A

1. Please indicate your gender.

Male  Female

2. What is your age bracket?

30 years and below  30-40 years

40-50 years  50-60 years

3. How long have you taught as a professional teacher?

5 years and below  5-10 years

10-15 years  15 yrs and over

None

4. What is your highest professional qualification?

PhD [ ] MEd [ ]

BED [ ] Diploma [ ]

Certificate [ ] None of the above [ ]

**Section B**

5. Please rate the physical facilities in your school by ticking in the appropriate space.

	R A T I N G S C A L E S			
Physical facilities	Very adequate	Adequate	Inadequate	Not available
Classrooms				
Science laboratories				
Library				
Dormitories				
Lockers/ desks				

6. Please rate the teaching and learning resources in your school by ticking in the appropriate space provided.

	R A T I N G S C A L E S			
Teaching and learning resources	Very adequate	Adequate	Inadequate	Not available
Students' text books				
Exercise books				
Teachers' reference books and guides				
Laboratory chemicals and equipment				
Library books				
Computers				
Duplicators				
Teaching aids e.g. wall maps and charts				

7. How often do students' miss lessons because of non-payment of school fees and other levies?

Always  Occasionally  Rarely

8. a) Do parents visit the school to check on their children's academic performance?

Yes  No

b) How can you rate their visits?

Frequent  Not frequent

9. To what extent do parents support students' activities such as attending class academic or prize giving days to enhance their performance?

To a very high extent [ ] To some extent [ ] Not at all [ ]

10. In your opinion what could be the major cause of poor students' performance at KCSE examinations in your school?

.....  
.....

11. Suggest ways to improve students' performance at KCSE examinations in your school.

.....

Thank you for your co-operation.

## Appendix VI: Questionnaire for the Students

Dear Respondent.

You have been randomly selected to participate in this study, which is very important in improving students' performance at KCSE examinations. You are kindly requested to complete this questionnaire indicating your honest response by ticking where appropriate against your option and offer an explanation for the question requiring your answer either through a word or explanation. The information you provide will be treated with uttermost confidence and used only for this study.

### Section A

1. Please indicate your gender

Male  Female

2. What is your age bracket?

20 years and below  21-25 years  25 yrs and above

3. What type is your school?

Public  Private

4. Please indicate why you chose to be in this school.

It is near my home  It charges low fees

I just applied and selected  My parents/ guardian chose for me

**Section B**

5. Please rate the physical facilities in your school by ticking in the appropriate space.

	R A T I N G S C A L E S			
Physical facilities	Very adequate	Adequate	Inadequate	Not available
Classrooms				
Science laboratories				
Library				
Dormitories				
Lockers/ desks				

6. Please rate the teaching and learning resources in your school by ticking in the appropriate space.

	R A T I N G S C A L E S			
Teaching and learning resources	Very adequate	Adequate	Inadequate	Not available
Students' text books				
Exercise books				
Laboratory chemicals and equipment				
Library books				
Computers				
Teaching aids e.g. wall maps and charts				



7. What level of education did your father attain?

- Graduate                Diploma
- “A” level               “O” level
- Primary                 None

8. What is your father`s occupation?.....

9. What level of education did your mother attain?

- Graduate                        Diploma
- “A” level                        “O” level
- Primary                         None

10. What is your mother`s occupation?

.....

11. Who pays for your school fees/levies?

- Parents                 Guardian                Sponsor

12. Is your school fees paid on time?

- Yes                     No

If no, give a reason.....

13. Do your parents, guardian or sponsor participate in the following activities?

a) Parents’ Teachers’ Association (PTA) meetings?

- Yes        No

b) Parents and students interaction day?

Yes [ ] No [ ]

c) Buying for you the required textbooks and other learning materials?

Yes [ ] No [ ]

d) Ensuring that you do your school assignments during school holidays?

Yes [ ] No [ ]

14. In your opinion what could be the major cause of poor students' performance in KCSE examinations in your school?

.....  
.....

15. Suggest ways to improve on students' poor performance in KCSE examinations in your school.

.....  
.....

**Thank you for your co-operation**

REPUBLIC OF KENYA



# NATIONAL COUNCIL FOR SCIENCE AND TECHNOLOGY

Telegrams: "SCIENCETECH", Nairobi  
Telephone: 254-020-241349, 2213102  
254-020-310571, 2213123  
Fax: 254-020-2213215, 318245, 318249  
When replying please quote

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

Our Ref:

NCST/5/002/R/1186

Date:

15<sup>th</sup> Jan, 2010

Nelson Mualuko Mwova  
Nairobi University  
P.o Box 30197  
NAIROBI

Received and Granted  
authority.  
for.

## RE: RESEARCH AUTHORIZATION

DISTRICT COMMISSIONER  
MACHAKOS

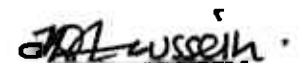
Following your application for authority to carry out research on  
*"determinants of students' Performance at national Examinations  
(KCSE) in Public and Private Secondary Schools in Central Division,  
Machakos District, Kenya."*

21/1/2010

I am pleased to inform you that you have been authorized to undertake  
your research in *Machakos District* for a period ending *31<sup>st</sup> march 2010*.

You are advised to report to the **District Commissioner and the District  
Education Officer** of *Machakos Districts* before embarking on your  
research project.

Upon completion of your research project, you are expected to submit  
two copies of your research report/thesis to our office.

  
SAID HUSSEIN  
FOR SECRETARY

Copy to:

- ✓ The District Commissioner  
Machakos District
- The District Education Officer  
Machakos District

**THIS IS TO CERTIFY THAT:**

Prof./Dr./Mr./Mrs./Miss... NELSON  
MUALUKO MWOVA

of (Address) NAIROBI UNIVERSITY  
PO BOX 30197 NAIROBI

has been permitted to conduct research in.....

.....Location.

MACHAKOS District,

EASTERN Province,

on the topic DETERMINANTS OF STUDENTS'

PERFORMANCE AT NATIONAL EXAMINATIONS

(KCSE) IN PUBLIC AND PRIVATE

SECONDARY SCHOOLS IN CENTRAL

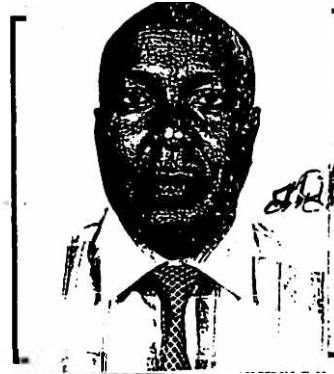
DIVISION, MACHAKOS DISTRICT, KENYA

for a period ending 31ST MARCH 2010

Research Permit No. NCST/5/0027R/1186

Date of issue 15.1.2010

Fee received SHS 1000



[Signature]  
Applicant's  
Signature

[Signature]  
F. Hussein  
Secretary  
National Council for  
Science and Technology