

SCHOOL BASED FACTORS' INFLUENCE ON
STUDENT PERFORMANCE IN KENYA CERTIFICATE
OF SECONDARY EDUCATION IN MURANG'A
SOUTH DISTRICT, KENYA.

By

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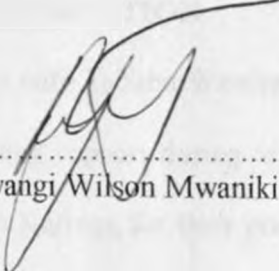
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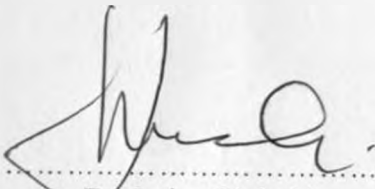
DECLARATION

This Research project is my original work and has not been presented for a degree in any other university.



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DEDICATION

This work is first dedicated to my wife Tabitha Wawira Mwaniki for her practical love, inspiration and overwhelming support during my study. Then to our dear sons Michael Mwangi and Keith Karinga for their prayers and desire to see me complete the study, and finally to my loving dad Gibson and mum Hannah whose sacrifice, devotion and inspiration in my life I can never repay.

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To God be the glory.

TABLE OF CONTENTS

Title	i
Declaration	ii
Dedication	iii
Acknowledgement	iv
Table of contents	v
List of tables'	viii
List of figures.....	ix
List of abbreviations	x
Abstract	xi

CHAPTER ONE

INTRODUCTION

1.1 Background to the study	1
1.2 Statement of the problem.....	9
1.3 Purpose of the study.....	10
1.4 Objectives of the study	10
1.5 Research questions.....	10
1.6 Significance of the study.....	11
1.7 Delimitations of the study.....	12
1.8 Limitations of the study	12
1.9 Assumptions of the study.....	12

1.10 Definition of key terms	13
1.11 Organizing of the study.....	14

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction	15
2.2 Factors affecting Pupil Achievement	15
2.3 Influence of school facilities / physical resources.....	16
2.4 Teacher Training and their morale	19
2.5. Influence of school’s instructional policy and implementation / school culture on students performance.	21
2.6 Studies from Kenya on Factors Affecting Academic Performance	24
2.7 Theoretical Framework	28
2.8 Summary of the Literature Review.....	30
2.9 Conceptual Framework.....	31

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction	32
3.2 Research design	32
3.3 Target population	32
3.4 Sample and sampling techniques.....	33

3.5 Research instruments	33
3.6 Reliability of the instruments.....	34
3.7 Validity of the instruments	35
3.8 Data collection procedure	35
3.9 Data analysis technique	36

CHAPTER FOUR

DATA ANALYSIS, INTERPRETATION AND DISCUSSION

4.1 Introduction.....	37
4.2 Background data of the respondents.....	37
4.3 Effects of facilities on academic performance	39
4.4 Effects of teacher training on academic performance.....	43
4.5 Effects of Instructional and learning policy/school culture on academic performance	47

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction.....	61
5.2 Summary	61
5.3 Conclusion	64
5.4 Recommendations.....	64
5.5 Areas for Further Research.....	65

Reference.....66

APPENDICES

Appendix I- Letter of Introduction 78

Appendix II - Questionnaire for Principals 79

Appendix III - Questionnaire for Teachers..... 83

Appendix IV - Questionnaire for Students..... 86

Appendix V - Observation Schedule 89

Appendix VI – Research Permit 90

LIST OF TABLES

Table	Page
Table 1.1 Contribution made by various inputs for academic achievement.....	4
Table 1.2 KCSE Performances by Districts in Central Province 2009.....	8
Table 4.1 Respondents' views on adequacy of facilities in schools	40
Table 4.2 Academic performance across adequacy of facilities	42
Table 4.3 Attendance of in-service training in the last 10 years	43
Table 4.4 Courses the teachers had attended	44
Table 4.5 Organizers of the courses attended.....	45
Table 4.6 Attendance of in-service training across KCSE mean scores.....	46
Table 4.7 Staff meetings	48
Table 4.8 Number of exams done in a term	48
Table 4.9 Mode of marking the exams	49
Table 4.10 School policy adapted in the school while teaching	49
Table 4.11 Adoption of policies in the following statements	51
Table 4.12 Teachers' views on existence of students' documents.....	52
Table 4.13 Compensation for lessons missed.....	52
Table 4.14 Extent to which school culture helps in exam performance	53
Table 4.15 Teachers frequency of marking exercise books	55
Table 4.16 Teachers opinions on school policies.....	56
Table 4.17 Overall scores on instructional policies.....	57
Table 4.18 Policy grouped data across KCSE mean scores.....	58

LIST OF FIGURES

Figure	Page
Figure 2.1 Conceptual Framework: School based factors' influence on students academic performance	31
Figure 4.1: Principals'/Teachers' academic/professional qualification	38
Figure 4.2 Working Experiences of Principals and Teachers	39
Figure 4.3 Adequacy Rates of School Facilities	41
Figure 4.4 Average Class Sizes in the School	50

LIST OF ABBREVIATIONS

KCSE	- Kenya Certificate of Secondary Education
IQ	- Intelligence Quotient
TSC	- Teacher's service commission
SPSS	- Statistical Package for Social Sciences

ABSTRACT

The purpose of the study was to establish the influence of school-based factors on academic achievement of students in KCSE in Murang'a South District. The objectives of the study were to: determine the influence of school's proper use of facilities and resources on academic achievement of students in KCSE in Murang'a South District; identify nature of teachers training and morale and influence on academic achievement of students in KCSE in Murang'a South District; and determine the influence of school's instructional policy and its implementation on academic achievement of students in KCSE in Murang'a South District. The study adopted a descriptive survey design targeting 102 principals, 1020 teachers and 15,000 students in 102 public secondary schools in Murang'a South District.

Stratified random sampling was employed to select ten (10) schools (5 of the top performing schools and 5 of the bottom performing schools in the district.). All the principals from the sampled schools took part in the study. Simple random sampling was employed to select 50 teachers (5 per school) while 300 students (30 per school) were randomly selected giving a total of 350 participants. The study employed questionnaires as the main research instruments for data collection. Before the actual data collection, piloting was done on two secondary schools to test the reliability and validity of the instruments. Descriptive statistics was used to analyze the quantitative data obtained. The statistics used included frequency counts, means, and percentages. On the other hand, qualitative analysis considered the inferences that were made from the opinions of the respondents. This analysis was thematically presented in narrative form and where possible tabular form. The results of data analysis were presented in frequency tables, bar graphs and pie charts. The study established that lack of enough learning and teaching facilities in schools had contributed to poor performance in KCSE results. The

facilities that appeared most inadequate in schools were ICT equipment, library, diary, experiment books and farm tools for agriculture. The study also established that most of the teachers had attended training, which reflected positively on KCSE performance of students since the teachers were able to perform their duties effectively and efficiently.

The study further, established that good instructional policies had a positive effect on performance of students since schools which had strong instructional policies performed better in KCSE compared to those which had weak instructional policies. The study recommends that school heads should ensure that their schools have adequate teaching-learning materials to enhance learning and student performance in national examinations; school heads also need to encourage teachers to perform to the best of their knowledge by giving them incentives like trips, monetary rewards in good subject performance among others ;schools need sound instructional policies and culture for good academic performance; further, the Ministry of Education should ensure that the secondary school curriculum is not overburdening to both teachers and students but instead encourage learning and also endeavor to equip schools with adequate physical and human resources; among other recommendations.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Investment in education and training contributes to economic development and raises the income of the poor as much as investment in physical capital. Education transforms “raw” human beings into productive human capital by inculcating skills required by both the traditional and modern sectors of the economy. General education and technical training contributes to economic growth by increasing the productivity of population or workforce in particular, which leads to increased individual earnings.(Psacharopoulos and Woodhall ,1985).

Lockheed (1991) concluded that education also contributed substantially to non – monetary benefits, that is physical (real) benefits particularly in agriculture. A relationship was established between farmers’ education and their agricultural efficiency as measured by crop production. It was concluded that if a farmer had completed four years of elementary education, his productivity was an average 8.7 % higher than that of a farmer with no such education.

Shultz (1961), in Psacharopoulos and Woodhall, (1985) found that education could be considered an investment in human capital. Therefore, the society and individuals demanding it must make choices between other forms of investment. Educational returns, both private and social are considered durable and therefore leading to increased demand for education. The society and individuals are

willing to pay for the increasing costs of education in order to reap the lasting returns therefrom.

To date education financing takes a great proportion of public funds in all countries (UNESCO, 2005). In developing countries it takes the greatest share of the recurrent national budgets, at least 30%, against other sectors of the economy (Michael, 1990). Kenya is no exception. According to national budget figures of 2010, it was allocated Kshs170 billion out of close to Kshs1 trillion total budget, which rose from Kshs155 billion in 2009 (National Budget 2010 – 2011). Currently, the government is spending 1165/= per pupil per year in primary schools and 10265/= for a pupil in secondary school.

For the investment in education to bear fruits, students are expected to perform well in examinations so as to acquire quality training for better returns. This performance may be hampered by poor internal efficiency of education process. The means to judge academic achievement is normally through examinations. High achievers in education normally get better paying jobs due to their higher productivity

Examinations are used to decide the course one pursues in the institutions of higher learning. The top achievers usually end up being placed in the socially prestigious careers like medicine, engineering and accounting. These jobs are well paying and these people are usually placed highly in production structure. Ayot and Briggs (1992) say that input – output studies should be done using learning

achieved as seen from student examination performance. Academic performance is affected by a number of factors, including student – related factors like intelligence quotient (IQ) and willingness to learn (Magiri, 1997). Others include teacher – related factors like teacher morale, teaching methods, training and job satisfaction; teacher student ratios/ class size and student text books ratios (Anyango. 2001) among others. Education output could also be influenced by school related factors like adequacy of resources and facilities (Musoko, 1983; Kunguru, 1986) and school leadership, which include school instructional policy and culture.

Research has shown that in developing countries drop out and repetition rates appear to be most common among students from low socio – economic backgrounds. In such countries, causes of high wastage and poor student performance include poverty, malnutrition, absenteeism, inappropriate curriculum and examination methods, badly trained teachers, lack of textbooks and overcrowded classrooms (Pscharopolous and Woodhall, 1985). Research findings reveal that school improvement and effectiveness can be realized through contributions made by various inputs. According to Mingat (cited in Chitiavi, 2002), the inputs displayed in table 1.1 are crucial in the academic performance of a school.

Table 1.1: Contribution made by various inputs for academic achievement.

Inputs	% contribution to good results
Effective teaching	75
Adequate textbooks, tuition and equipment	15
Good physical facilities, effectively used	9
Others e.g. community support	1

The inputs in table 1.1 contribute to good results and are appropriately applied when teachers are committed to their work and there are effective instructional policies in the school.

Research on the links between teacher training and pupil performance shows that teachers make a difference and the quality of teachers is important. The best way to improve teacher quality through training depends on conditions in the country and can be determined only after analysis of the costs and effectiveness of alternative ways of training and using teachers (Bennel and Ekyeermpony, 2007). At present many developing countries devote a very small proportion of school expenditure on teaching resources including books, maps or visual aids, while more than 80 percent goes to salaries. Due to the fact that teachers' salaries and other recurrent costs account for a large share of the total cost of education the potential for using buildings and other capital resources more efficiently has sometimes been neglected.

Student performance in developing countries is largely determined by the quality of school inputs more than by external social economic factors. Sullivan and Glanz (2000) argue that in a world of increasingly rapid change, school administrators should adopt cost effectiveness analysis effectively. This means that when reallocating resources the cost and effectiveness of alternative combinations of inputs must be assessed. This increases the quality of the output (student achievement). In developed countries, student related factors and school based factors affect student performance more than social – economic factors.

Studies have also shown that school instructional policy as mainly reflected in the school culture determines performance. This policy touches on issues like mode of examining students and frequency, marking students note books, nature of co – curricular activities and organization of various departments. School culture reflects on convictions, values, norms, beliefs and expectations of school community which have influence on work practices and attitudes of teachers / workers and learners. This determines how learning and teaching takes place in the school (Chrishom and Vakey, 1996). According to Christie (1998) the culture of the school is a very vital aspect of school life and hence has high influence on the performance.

In developing countries, unlike in developed countries, the influence of school based variables on academic achievements of students is higher, with social economic background of students influencing their performance more in

developed countries (Schiefelbein and Simmons, 1978). Therefore in many developing countries, a lot is being done to improve internal efficiency through changing of combinations or quality of school factors.

And while developed countries like the U.K and the US concentrate on the improvement of quality of education offered in schools, in developing countries like Kenya, more attention is needed on improving the pass rates in secondary schools. Poor student performance in K.C.S.E represents a challenge to all in Kenya despite the free day schooling programme. Therefore, the need to gain a better picture of the causes and solutions to the problems cannot be over-emphasized e.g. in 2010 KCSE results, only 97, 134 candidates out of 357, 488 (27.2%) scored grade C+ and above (Daily Nation 1st March 2011 pg 6), as the results were announced by the minister for education. This is the minimum university entry grade.

In Kenya, students performance in examinations is not only affected by factors inside school but also outside school such as social and economic factors which include parents' education level, income level, family size and religion (Odhiambo, 2005). It is evident that schools make a difference in student performance and many types of inputs do determine educational outputs. The problem is to identify the most cost effective way to increase inputs or change the combination of inputs so as to maximise output.

In Murang'a South District, performance in KCSE has not been impressive, as compared to other larger districts in Central Province. As shown in Table 1.2, its mean score was below the provincial mean for the three years, 2007 – 2009. It was also lower in terms of quality grades. According to the table which shows performance in the larger districts in Central Province, the district was ranked 8th out of 12. There's therefore need to investigate if this scenario is determined by school – based factors and to what extent.

MINISTRY OF EDUCATION
PROVINCIAL EDUCATION OFFICE - CENTRAL PROVINCE
KCSE 2009 DISTRIBUTION OF GRADES BY DISTRICTS

Table 1.2

CODE	DISTRICT	ENTRY	A	A-	B+	B	B-	C+	C	C-	D+	D	E	X	Y	Z	W	Y2009	Y 2008	Y 2007	CHANG E
200	NATIONAL	1100	208	307	232	171	112	39	19	3	1	0	0	5	0	2	0	10.098	10.0084	10.2436	0.1895
201	NYANDARUA NORTH	4118	6	63	129	231	284	404	468	550	654	588	65	22	1	2	0	5.017	5.041	4.457	-0.0244
202	NYERI SOUTH	7894	19	158	330	478	610	660	817	969	1125	1175	204	21	2	4	9	5.061	5.114	4.48	-0.053
203	KIRINYAGA	6911	6	65	167	318	470	596	779	981	1109	1002	84	42	2	3	0	4.834	4.792	4.104	0.042
204	MURANG'A NORTH	6617	7	74	160	314	457	574	773	923	1096	856	48	29	6	5	0	4.916	4.87	4.447	0.046
205	KIAMBU EAST	5520	13	67	146	216	290	456	640	754	882	947	131	28	7	8	0	4.706	4.674	4.32	0.0324
207	THIKA	5519	4	37	121	217	318	429	527	759	856	1040	179	25	0	3	0	4.514	4.34	4.453	0.1738
208	MURANG'A SOUTH	6750	4	54	151	300	391	531	677	862	1062	1172	179	2	8	3	0	4.591	4.564	4.598	0.0272
209	NYANDARUA SOUTH	3007	0	19	69	124	200	266	360	410	491	469	54	15	20	0	0	4.74	4.683	4.333	0.057
210	NYERI NORTH	4782	14	75	153	249	318	379	490	612	774	681	95	18	1	6	0	4.89	4.651	4.48	0.239
211	KIAMBU WEST	5310	0	20	67	136	293	380	520	673	834	1059	194	32	0	4	0	4.275	4.168	3.988	0.1067
212	GATUNDU	4168	10	54	99	135	223	267	373	457	560	980	139	18	6	1	0	4.338	4.326	4.025	0.0119
	PROV. TOTAL	61696	291	993	1824	2889	3966	4981	6443	7953	9444	9939	1372	275	53	41	0	5.165	4.784	4.285	0.381

1.2 Statement of the Problem

While some schools consistently perform well in KCSE, others seem to perform poorly year in year out. Even among schools that perform poorly, some record improved performance from one year to another, while others record decline in performance. Yet all schools set their academic goals aimed at improving academic performance. As mentioned in the background of the study, previous studies show that academic performance can be affected by school – based factors, among others.

The reasons for poor performance cannot be easily discerned without focused investigation. Surveys on examination performance have shown that a majority of schools which display good results each year have adequate facilities and good and committed human resources (Steyn, 2000). Murang'a South District has on the contrary consistently posted poor examination results on the previous years as shown in Figure 1.2. It shows that only 21.2% of students who did K.C.S.E in 2009 attained grade C+ and above which is the minimum university entrance grade, against 24.2% for the provincial totals.

This is despite the various measures put in place to improve performance, including “effective 40” policy from the Provincial Director of Education’s office (Central Province), funding from constituency development fund for physical facilities, and general community support, not to forget the free secondary day schooling programme by the government providing instructional materials and

workers salaries. Upon this background there is need to examine the school-related factors that could influence academic performance in Murang'a South District and propose possible remedies

1.3 Purpose of the Study

The purpose of the study was to establish the influence of school-based factors on academic achievement of students in KCSE in Murang'a South District

1.4 Objectives of the Study

The study objectives were:

- a) To establish the extent to which efficient use of school facilities and resources influence academic achievement of students in KCSE in Muranga south district.
- b) To asses the impact of teacher training on academic achievement of student in KCSE in Muranga south District.
- c) To determine how schools instructional policies influence students academic achievement in KCSE in Muranga south District..

1.5 Research Questions

The study was guided by the following research questions:

- a) What is the influence of proper use of school facilities on student performance in KCSE in Murang'a South District?
- b) How does teacher training influence academic achievement of students in KCSE in Murang'a South District?

- c) What is the influence of school's instructional policy and its implementation/school culture on performance of KCSE in Murang'a South District?

1.6 Significance of the Study

The study may be most significant to school principals, students and parents who would like to see their schools perform better in national examinations. For school principals, the study may provide data that could be used to improve input combination practices for improved academic performance. Secondary school students may benefit from the study because findings may reveal the way students in well performing schools interact with other members of the school community (principals and teachers) and the school environment (school resources). They may learn how to efficiently make use of school resources and learning materials and also teachers. Parents may also benefit from the study in that they expect that their investment in education will reap benefits, and this is best realized when students perform well and join institutions of higher learning. Similarly, as key stakeholders of schools, parents need information on how best to support the schools to bring about academic success, and this study will provide such information. The study may also serve to examine further the applicability of the education production function theory.

1.7 Delimitations of the Study

The study covered Murang'a South District of Murang'a County which is only one among many districts in Kenya. The findings of the study may therefore be used to pave way for further research in other districts. Future researchers may want to find out whether the findings of this study may also apply to other districts. The study assumed that all respondents would cooperate and provide reliable responses.

1.8 Limitations of the Study

The study was limited by the fact that there are many factors that influence academic performance, such as students' intelligence Quotient (IQ), willingness to learn, and entry behaviour, and parental socio economic status. These factors cannot be controlled in the study. Another limitation is that some respondents may not provide actual information due to subjectivity of their thinking and attitude.

1.9 Assumptions of the Study

The following assumptions were made:

- a) There are practical measures that need to be taken to enhance internal efficiency of a school.
- b) There are school – based factors that influence students' academic achievements in secondary schools.

1.10 Definition of Terms

Effective school – This refers to a school that, in measured student achievement terms, demonstrates the joint presence of quality and equity. It is a school where students are encouraged to perform to their maximum potential, regardless of their entry behaviour.

Internal efficiency – concerns the relationship between inputs and out puts in the education system

Inputs – Material and technical efforts imparted into the education system to enhance education process.

Outputs – Students achievements from education process (cycle) i.e academic performance in national examination.

Principal - Refers to the executive officer in a school, who has been given the authoritative power in matters concerning the administration of the school by the T.S.C.

Performance-This refers to the level of success in KCSE in terms of mean grades.

School based factors- These are factors that influence students' performance within the school environment.

1.11 Organization of the Study

The study comprised of five chapters. Chapter one formed the study background where the study problem was introduced in general. It explored the nature of school performance in a global perspective, touching on the various factors that affect performance at school level. It also outlined study objectives, questions, significance, limitations, delimitations, and assumptions of the study and definitions of key terms used in the study.

Literature review followed in chapter two where various scholars' views related to the topic were highlighted. This reflected on what had been done so far on the subject and the possible research gaps highlighted to show the rationale for the study as in the conclusion of the literature review. The chapter also captured the theoretical and conceptual frameworks. Chapter three followed on research methodology. This may have details of the research design for the study, target population, sample size and sampling techniques, research instruments to be used in the study, reliability and validity tests of the instruments, data collection procedure and finally data analysis techniques. Chapter four followed showing how data was analyzed to form various decisions or judgments as per the study objectives i.e. making interferences from the information obtained from the data collected. Chapter five presented the summary of the research study which formed the conclusions and proposed recommendations from the study findings or the way forward.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter covers a review of literature related to the study. The literature review given in this chapter covers literature on factors affecting academic achievement including school – related factors.

2.2 Factors Affecting Pupil Achievement

Researchers have shown that there are many factors that affect academic achievement of students. According to the Wisconsin Education Association Council (WEAC, 2005), high-achieving students are likely to have the following characteristics: positive feelings about their school experiences; attribute their success in high school to such things as hard work, self-discipline, organization, ability, and high motivation; tend to watch relatively little television during the school week; tend to associate with students who also were successful in school; and avid readers. The factors therefore range from school based to home based.

Alexander and Simmons (1975) in Psacharopoulos (1985) reviewed the relationship between input and output in nine developing countries (Chile, Congo, India, Kenya, Iran, Malaysia, Puerto Rico, Thailand and Tunisia). They concluded that school inputs have only a weak impact on pupil achievement while home background and individual personality have a big impact. They however found out that in developing countries, teacher characteristics (especially training and

motivation), textbooks and other reading materials have some reasonable impact on internal efficiency. However Schiefelbein and Simmons, (1978) found in less developed society a weaker influence of home background on achievement and greater one for school based variables.

Also Shuluka, (1974), in his study of more than twenty developing countries including India, Kenya, Ghana and Uganda concluded that wealthy students do not perform better in achievement tests suggesting that social economic background has much less influence on pupil achievement in developing than in developed countries

With such findings it has been more positively considered that influence of school variables on pupil achievement is key in attaining internal efficiency. This can be done by manipulating the contribution or quality of inputs. Eshiwani (1983) identified the following key school based variables that affect pupil achievement: school plant and resources (text books, library and laboratory facilities) i.e. availability and how efficiently they are utilized, and teacher characteristics (training, certification, professional commitment, experience and motivation).

2.3 Influence of School Facilities / Physical Resources.

A number of studies in several African countries (Foster and Chigret, 2006; Heyneman, 1984) found a strong relationship between resources and students achievement. They gave the laboratory a central and distinctive role in education. In addition, studies done in less developed countries such as Uganda, India,

Ghana, Brazil and Malaysia, indicated that access to textbook availability is positively related to students achievement. For example, the data for India and Chile showed that a block of factors, which included textbook availability accounts for more of the variance in test scores than does a block, which includes home circumstances and student's age and sex (Heyneman, 1984).

According to UNESCO (2004, 2007) reports, many schools lack adequate resources e.g. it was found that over half of students in Kenya, Malawi, Mozambique, Uganda and Tanzania attended classrooms that did not have a single book (UNESCO, 2005). In these countries, 25% - 40% of teachers did not possess a manual in subjects they taught. Research shows that there is consistent influence of school – based factors on pupil – learning outcomes (Williams, 2006). This is more true in developing countries, (Baker, 2002; Heyneman and Loxley, 1983). Dynamic processes, professional leadership, shared vision and goals, and teachers who motivate students are key factors of effective schools. The study also concludes that enough text books, well resourced class rooms and other learning materials are key school- based variables. Heyneman, (1984) concluded that pupil achievement is more closely related to text book availability than class size and expenditure on teacher salaries, in their study of ten countries. Arriagada (1983) found that in Peru, school variables like management, teacher attributes and physical resources like libraries, visual aids, tables and chairs have a significant influence on pupil's achievement.

Questions arise as to whether text books are more important in some subjects than others, or if they are more important in large classes. Also, how do they interact with other variables like teacher training or are they more important to inexperienced teachers? (Psacharopoulos and Maureen, 1985). Studies in Chile revealed that experienced teachers have a higher tendency of using text books than the inexperienced ones, and that majority of teachers have ambivalent attitude towards textbooks probably due to little emphasis during training. It was also revealed that students use textbooks more than teachers.

In Kenya, for instance, the government is spending reasonable funds in providing school facilities. The government is almost achieving student – text book ratio of 1: 1 through the Free Day Secondary Schooling Programme. Selected schools are also being funded annually for purposes of constructing and equipping laboratories and libraries to enhance performance. Other government efforts include establishment of academic centres of excellence in all constituencies, improvement of facilities in national schools and more recently the proposal to upgrade two provincial schools (one for each gender) in each county to national status. This is to enhance academic performance and clearly shows the importance of school's physical resources in influencing pupil achievement. However, they must be utilized efficiently to yield desired academic outcomes.

2. 4 Teacher Training and their Morale

Bennell and Ekyeampong, (2007) emphasize that teacher training is vital in academic achievement. It's expected that the higher the level of training the higher will be the academic achievement of students through increased teachers' productivity (Denisson, 1962). Many countries face crisis in teachers morale linked to low salaries, poor working conditions and limited opportunities for professional development. Motivation comes to be lower in school with a high teacher – pupil ratio and disadvantaged pupils (Bennell and Ekyeermpoony, 2007).

However, a reasonable teacher – pupil ratio should be maintained to avoid teacher underutilisation as seen in low enrolment. These issues affect teachers productivity and hence students academic achievement. Teachers qualifications have been found to influence pupil achievement, particularly teacher training due to the amount of knowledge and skills acquired (Husein, Saha, and Noonan, 1978).

In Kenya, many teachers are over utilized due to high shortages in schools i.e. 23, 000 teachers in secondary schools and 43, 000 in primary schools as at 2010 end. This can be seen to lead to less productivity of the available teachers. But even then, according to the Teachers Service Commission, some of the teachers promoted on the grounds of further studies (training) add no value in terms of increasing student achievement (Daily Nation, June 29th 2010). The government

has since undertaken teacher contracting policy as a way of reducing teachers' shortages at lower costs.

Husen, Saha and Noonan, (1978), in their studies concluded that trained teachers do make a difference, and in particular that teacher qualifications, experience, and amount of education and knowledge are positively related to student achievement. The issue under scrutiny, currently, is whether improvements in teacher training are more – cost effective than other improvement in inputs and what form they should take – upgrading existing teachers, in servicing serving teachers or improving initial training. To some extent it's suggested that teacher experience is important in primary and lower secondary education than in upper grades where skills and knowledge of teachers are more important as reflected in higher salary or qualifications. Therefore, the quality of teachers is in fact an influential factor on student achievement and hence investment in their training is crucial.

Bennel and Ekyeampong, (2007) urge that teacher morale is vital to performance. Low morale is evidenced by lateness and absenteeism, poor duty performance and poor syllabus coverage. It's also seen in terms of poor teacher preparedness e.g. absence of lesson notes and lesson plans and poor role – modelling. Under such circumstances performance may not be impressive due low teacher productivity.

2.5. Influence of School's Instructional Policy and Implementation /School Culture on Students Performance.

The school effectiveness studies emphasize the importance of the educators' instructional leadership role which concerns the teacher's responsibility to ensure that effective teaching and learning takes place (Bidhal, 2000). It relates to the core activities of the school i.e. teaching and learning in the classroom involving all the beliefs, decisions, strategies and tactics which teachers utilize to ensure instructional effectiveness in every classroom. Instructional leadership occurs when the teachers provide direction, resources and support to learners with aim of improving teaching and learning at a school. Good Instructional leadership is the path to good teaching and learning. Instructional leaders ensure a sound culture of learning and teaching in their schools at all times (Bidhal, 2000).

The following functions generally typify instructional leadership, according to Chitiavi, (2002). Defining and communicating a clear mission goals and objectives (setting together with the staff members, a mission, goals and objectives to realize effective teaching and learning); managing curriculum and instruction. Managing and co – ordination of the curriculum in such a way that teaching time can be used optimally; principles need to fully support the teaching programme and provide the resources that the teachers need to carry out their tasks; supervising teaching i.e. ensuring that educators receive guidance and support to enable them to teach as effectively as possible. The focus of the

instructional leader should be more orientated to staff development than to performance appraisal. This implies implementing programmes that may enrich the teaching experience of educators or motivating them to attend such programmes; monitoring learners' progress i.e. monitoring and evaluating the learner's progress by means of tests and examination and using the results to provide support to both learners and educators to improve as well as to help parents understand where and why improvement is needed; promoting instructional climate i.e. creating a positive school climate in which teaching and learning can take place. In a situation where learning is made exciting, where teachers and learners share a sense of purpose, performance is enhanced.

The organisational culture of a school refers to the convictions, values and expectations of the members of the school which influences the attitudes and work practices of educators as well as learners and has a determining influence on the culture of learning and teaching in a school. According to Blau, (1998) culture of the school is the most important aspect of school life and touches and affects every other aspect in the school.

Blau (1998) further indicate that the organizational culture ratifies what is proper and ideal for the school, and it exerts pressure on both learners and educators to conform to the standards and validate the high expectations on performance as outlined in the schools mission statement and policy.

A poor culture of learning and teaching in a school refers to a school situation where proper teaching and learning has broken down. According to Chishoim and Vallys (1996) the following are common observable features of a poor culture of learning and teaching; weak / poor attendance i.e. educators do not have the desire to teach, tension among the various elements of the school community, vandalism, high drop out rates, poor school results, weak leadership, demotivation and low morale. poor state of buildings, facilities and resources. At the base of these features lies the absence of a sound philosophy, values and norms which shape the deeper attitude of the role players in the school with regard to each and schooling in general. This shows that schools with a strong positive instructional policy and culture normally do well in examinations. Some of the areas that are affected by instructional policy include; nature of curriculum and its implementation, co – curricular activities, frequency of testing the learners, teaching timetable (teacher or student friendly), examination timetable (spreading and time allocated) and marking of student’s exercise books. It also includes departmental organization and time allocated for preps and recreation. A sound instructional policy enhances optimum utilization of time, physical and human resources. Where such in lacking performance may still be poor despite support by the community and adequate human and physical resources.

2.6 Studies from Kenya on Factors Affecting Academic Performance

A number of studies have been carried out locally to find out why some students perform better than others academically. With regard to the overall performance at the KCSE, research findings show that, generally, girls are lower achievers than boys, (Orina, 2005). This finding is supported by research conducted by Maritim (1985), which showed that boys did better than girls at the 'O' level examinations in all the subjects. With the 8-4-4 system of education, the trend does not seem to have changed. It is important to note that given a generally conducive learning environment, girls can perform as well as, if not better than, boys (Eshiwani, 1983). An analysis of the past examination results at primary and secondary school levels gives credence to Eshiwani's (1983) observation. For example, several girls' schools have been among the top 10 and 50 nationally in the primary and secondary final examinations respectively over the years in both the former 7-4-2-3 and the current 8-4-4 education systems.

Research exploring why some students achieve higher academic performance than others has revealed four theoretically important determinants. They include, school plant, leadership behaviour of the principal, teacher characteristics and student behaviour. Eshiwani (1983) identified the following policy-related factors that may cause poor academic performance: School plant and resources (Textbooks, library and laboratory facilities); leadership behaviour of the principal (school administration and management); teacher characteristics

(training, teacher certification, professional commitment, experience and transfer index); and students' behaviour (early childhood education, primary education and social characteristics).

Research conducted in the United States indicated that very small schools have lower academic performance than large schools. However, a school cannot provide a reasonably well-qualified staff for the different subjects of curriculum below a minimum size. There will be an optimum size of school beyond which the level of attainment falls.

Studies done in less developed countries such as Kenya, Uganda, India, Ghana, Brazil and Malaysia, indicated that access to textbook and laboratories availability is positively related to students achievement ((Alway and Schech, 2004).Data for India and Chile showed that a block of factors, which included textbook availability accounts for more of the variance in test scores than does a block, which includes home circumstances and student's age and sex (Heyneman ,1984). Among the most recent studies undertaken in Kenya regarding factors influencing academic performance are those carried out by Magori (1990), Malau (1988) and Achola (1990).

Orina. (2008) conducted a study to analyze the role of the leadership behaviour of the principal on the students' academic performance in secondary schools in Manga Division. Based on the findings, he found out that in most effective schools, instructional leadership were a shared responsibility of teachers and

principals. There were also positive effects of teachers' participation in decision-making, finding that teacher involvement in decision-making leads to a decrease in teacher absenteeism. Also from the findings he found out that students' achievement score were higher with consideration-oriented principals than with initiative oriented principals.

Beatrice (2008) conducted a research to investigate the causes and the extent of students' absenteeism and its effects on student's academic performance in public day secondary schools in Nairobi province. In her study she established that absenteeism was high in day secondary schools in Nairobi. In some classes an average of four students absented themselves every day. This high rate of absenteeism has serious effects of the performance of the school. Bantu (2003) supports this by stating that the situation in Kenya appears to suggest that the gains from education may not be fully realized due to the problem of high absenteeism. Theuri (2004) also notes that while education opportunities have continued to expand in Kenya, internal efficiency problems seem to be pervasive. One factor that affects internal efficiency in schools is absenteeism, since students who absent themselves frequently have been found to end up repeating a grade or dropping out of school.

The study found out that the major causes of absenteeism among students was lack of school fees, illness, peer influence, lack of interest in school work, and avoiding punishment at school. The factors that led to absenteeism among girls

were household chores, working to earn money, and avoiding punishment at school. On the other hand, boys were most affected by peer influence, lack of interest in school work, and long distance between home and school. These finding supports the Report of the Sector Review and Development Direction (MoEST, 2003), which gives the reasons for poor school attendance in Nairobi Province as lack of school fees, early marriages, getting employed and poor academic performance. Distance between home and school was not a contributor of poor school attendance in Nairobi Province. From the result findings she concluded that academic performance is negatively affected by absenteeism, whereby the higher the rate of absenteeism, the lower the grades attained by students.

Phyllis (2009) conducted a study to determine the extent to which total quality education management practices of leadership, empowerment, strategic quality planning and human resource development were practised in secondary schools in Thika Municipality, and sought to find out headteachers' and teachers' perceptions on how the principles influenced academic performance.

Based on the findings of the study, she concluded that secondary schools in Thika Municipality practised the TQM principle of quality leadership to a large extent. They were however average on the principles of employee empowerment. When it came to quality planning and human resource development, the schools were doing poorly.

2.7 Theoretical Framework

This study was based on education production function (EPF) as advocated by Coleman (1966) in Psacharopoulos and Woodhall (1985).

In this theory academic achievement in the education process is seen as a function of many variables known as inputs as follows

$A = F(T, B, E, I, F, P, \dots)$ where

A = Academic achievement

T = Teacher pupil ratio

B = Text books

E = Equipments

I = School age abilities

F = Family back ground

P = Peer group character

According to the theory education process is seen as a production process where many inputs are expensed in given proportions to produce good results (output). It's therefore clear that the quality of the output will be determined by level of inputs provided, how well they are combined for maximum output and the quality of the inputs.

The inputs in the education process range from school based, social-economic/home based to those involving the pupils as individuals. This analysis of the education production function is about education efficiency i.e. how inputs are transformed into outputs. The theory helps in examining the internal efficiency of the education process even in an institution i.e. the relationship between inputs and outputs in the learning process. Internal efficiency, though difficult to measure, is largely considered in terms of examination scores. The theory enables a closer look at the cost-effectiveness of education.

Since education is an investment, it's important that internal efficiency be well analysed to ensure maximum benefits are obtained from the system. A lot of resources are being channelled to the education process in terms of expenditure on teachers and learning materials and other facilities. These resources therefore need to be efficiently utilised for maximum output.

Many scholars have been seeking to establish the most influential variables or inputs on student's achievements. They have also been assessing the most cost effective ways of allocating/ combining educational resources/inputs to produce the best output possible.

This theory is therefore appropriate in this study for the researcher to assess the influence of school based variables on student achievement in secondary schools of Murang'a South District.

2.8 Summary of the Literature Review

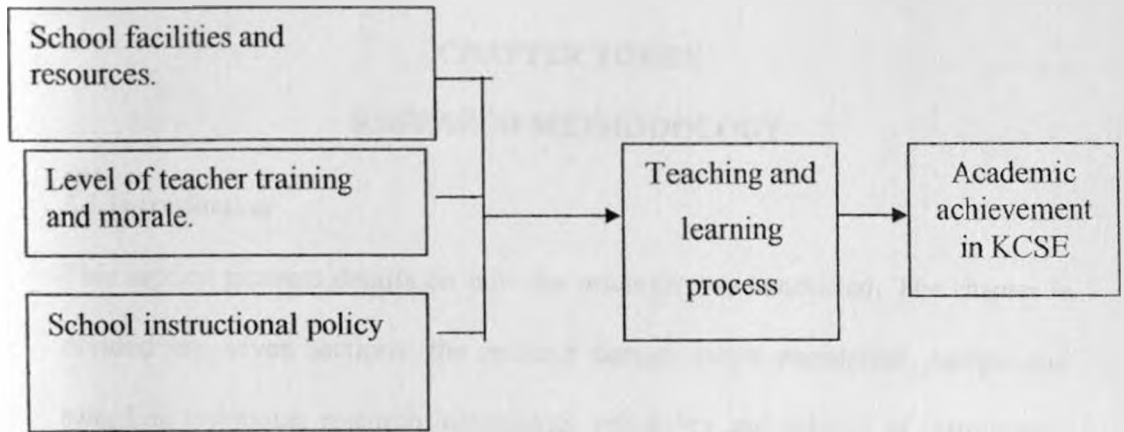
Literature reviewed in this section has shown that there are many factors that affect academic achievement of students, with higher-achieving students likely to be in schools with the following characteristics:-, highly motivated pupils, conducive environment e.g. healthy teacher – pupil relationship, well trained and motivated teacher, enough text books and other instructional materials and efficient resources utilization.

The literature reviewed regarding factors influencing academic performance further revealed that class size, teacher student ratio, parental involvement, gender, and student attitudes are significant determinants of academic achievement. The researcher found few studies that seek to determine the influence of school based factors on student achievement locally and in particular Murang'a South District. This is despite the fact that there are schools that consistently perform well in KCSE examinations and others were poor performers in academics. Again, all public schools receive government support in form of Free Day Secondary Education as well as reasonable parental/community support. A number of schools also receive financial assistance from constituency development fund (CDF). To fill this research gap, the study will investigate the influence of school-based factors on students' KCSE performance in Murang'a South District.

2.9 Conceptual Framework

Figure 2.1 presents the conceptual framework of the study.

Figure 2.1: School based factors' influence on students KCSE performance



As shown in Figure 2.1, the independent variables of the study include school facilities and resources for teaching and learning, teacher training and characteristics (student ratio/class size, nature of teaching and morale) and instructional policy/culture. The dependent variable of the study is students' academic performance. It is expected that schools with adequate facilities and resources such as textbooks, classrooms, toilets, libraries, laboratories and laboratory equipment, and other teaching and learning resources perform better than those with inadequate resources. Adequacy and qualifications of teachers, as well as curriculum cost- effectiveness are also expected to influence academic performance, whereby those schools with adequate teachers, strong instructional effectiveness, clear and focused mission, climate of high expectations for success and frequent monitoring of student progress are expected to be performing well in KCSE.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This section presents details on how the research was conducted. The chapter is divided into seven sections: the research design, target population, sample and sampling technique, research instruments, reliability and validity of instruments, data collection procedures and methods of data analysis.

3.2 Research Design

The proposed study adopted a descriptive survey design utilising both qualitative and quantitative approaches. The design was considered appropriate for the study because according to Kothari (1985) survey is concerned with describing, recording, analyzing and reporting conditions that exist or existed. Kerlinger (1973) argues that survey method is widely used to obtain data useful in evaluating present practices and in providing basis for decisions. The descriptive survey research design enabled the researcher to collect, analyse and report data on the influence of school-based factors on academic performance of students.

3.3 Target Population

The target population were all the public secondary schools in Murang'a South District. All the principals and teachers in these schools comprised the population of the study. In Murang'a South District there are 102 public secondary schools,

all of which form the target population of the study. There were 1020 teachers and 15000 students who were also considered.

3.4 Sample Size and Sampling Techniques

A sample is a small portion of a target population. Sampling means selecting a given number of subjects from a defined population as representative of that population. Any statements made about the sample should also be true of the population (Orodho 2002). Mugenda and Mugenda (1999) argue that a sample of between 1 -10% of the target population is enough representation.

Stratified random sampling was employed to select ten (10) schools i.e. 10% – 5 of the top performing schools and 5 of the bottom performing schools in the district. The principals of the 10 schools took part in the study. From each of the 10 schools, 5 teachers were randomly selected to participate in the study, i.e. 5% of all the teachers giving a total of 50 teachers. From each school, 30 students were randomly selected i.e. 2% of the total (300 students for sample).

3.5 Research Instruments

The study employed questionnaires as the main research instruments for data collection. Questionnaires were administered to school students and teachers. The questionnaires were used for data collection because, as Kiess and Bloomquist (1985) observe, it offers considerable advantages in the administration: it presents an even stimulus potentially to large numbers of people simultaneously and provides the investigation with an easy accumulation of data. Gay (1992)

maintains that questionnaires give respondents freedom to express their views or opinion and also to make suggestions. It may also include observation schedules. The instruments contained details of the various school inputs as per objectives of the study.

The questionnaire for teachers captured information such as gender, experience, level of training, level of morale, use of text books, preparation of teaching documents and how they make use of the available facilities. Interview schedule for principals reflected on gender, length of stay in the school, experience, levels of training, supervision of curriculum, instructional policies in place and general school results. Students' questions captured information on adequacy of textbooks and other learning materials, frequency of marking of note books, frequency of assignment and general relationship with the teachers. It may also check on frequency of use of the laboratories / libraries. The observation schedule captured the available visible school facilities e.g. laboratories, classrooms, fields and dining halls.

3.6 Reliability of the Instruments

Before the actual data collection, piloting of questionnaires was done on two secondary schools in Murang'a South District, one from performing school and the other from a poorly performing school both of which did not participate in the actual study. The researcher agrees that the random sample for piloting instruments should depend on the size of the sample ranging from 1% to 10%

(Mugenda and Mugenda, 1999). This helped in adjusting the necessary aspects of the questionnaires to make information more reliable.

3.7 Validity of Instruments

Validity is defined as the accuracy and meaningfulness of inferences, which are based on the research results (Mugenda and Mugenda, 1999). In other words, validity is the degree to which results obtained from the analysis of the data actually represents the phenomena under study. Borg and Gall (1989) define validity as the degree to which a test measures what it purports to measure. The pilot study helped to improve face validity and content of the instruments. According to Borg and Gall (1989), validity of an instrument is improved through expert judgment. As such, the researcher sought assistance from his supervisors, in order to help improve content validity of the instrument.

3.8 Data Collection Procedure

The researcher got an introduction letter from the University of Nairobi and a research permit from the National Council for Science and Technology. After this, the researcher booked an appointment with the sampled schools through the principals to visit and administer the questionnaires. The researcher then visited each of the schools and administered the questionnaires himself. The respondents were given instructions and assured of confidentiality after which they were given enough time to fill in the questionnaires, after which the researcher collected the filled-in questionnaires.

3.9 Data Analysis Techniques

Data collected from the field were coded and entered into the computer for analysis using the Statistical Package for Social Sciences (SPSS). As Martin and Acuna (2002) observe, SPSS is able to handle large amount of data, and given its wide spectrum of statistical procedures purposefully designed for social sciences, it is quite efficient. Data collected were both qualitative and quantitative in nature. Qualitative data were analyzed by arranging responses according to the research questions and objectives. Descriptive statistics including percentages and frequency counts were used to analyze the quantitative data obtained. Bell (1993) maintains that when making the results known to a variety of readers, simple descriptive statistics such as percentages have a considerable advantage over more complex statistics. Borg and Gall (1989) also hold that the most widely used and understood standard proportion is the percentage. The results of data analysis were presented in frequency tables and bar charts. Thereafter, conclusions and recommendations were drawn.

CHAPTER FOUR

DATA ANALYSIS, INTERPRETATION AND DISCUSSION

4.1 Introduction

This chapter presents data analysis, interpretation and discussion of the study findings. The general objective of the study was to establish the influence of school-based factors on performance of students in KCSE in Murang'a South District. The findings of the research are presented based on the three research questions restated below:

- a) What is the influence of efficient use of school facilities on student performance in KCSE in Murang'a South District?
- b) What is the influence of teacher training and morale on achievement of students in KCSE in Murang'a South District?
- c) What is the influence of school's instructional policy and its implementation on performance of KCSE in Murang'a South District?

The background data of the respondents is given first, followed by the analysis and discussion of each of the three research questions.

4.2 Background Data of the Respondents

The study was conducted in 10 public secondary schools, 5 of the top performing schools and 5 of the bottom performing schools in Murang'a South District, with a sample size of 10 principals, 50 teachers and 300 students. Out of the 10

principals who participated in the study, 6(60.0%) were males while 4(40.0%) were females, among the 50 teachers, 30(60.0%) teachers were males while 20(40.0%) were females, 158(52.7%) students were females while 142(47.3%) were males. Figure 4.1 shows teachers' academic/professional qualification.

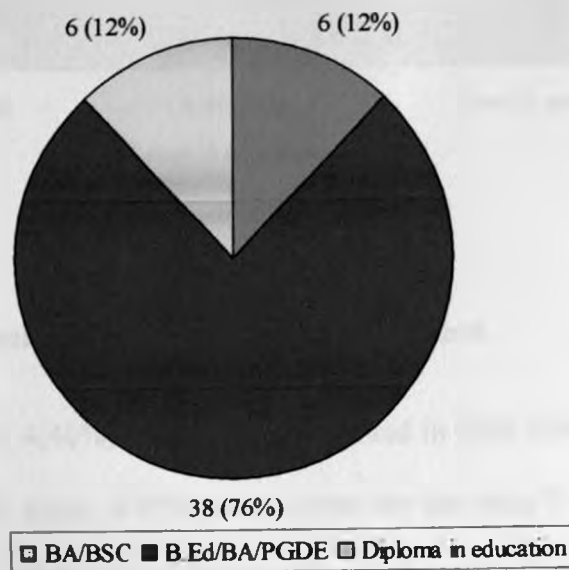


Figure 4.1: Teachers' academic/professional qualification

Figure 4.1 shows that, 38(76.0%) teachers were professionally qualified with B. Ed/B.A/PGDE, 6(12.0%) had BA/B.Sc and another 6(12.0%) had Diploma in education.

As part of the background, the researcher sought to describe the working experience of the principals and teachers since it is a factor that influences the

performance of students in KCSE. Figure 4.2 below presents their working experience.

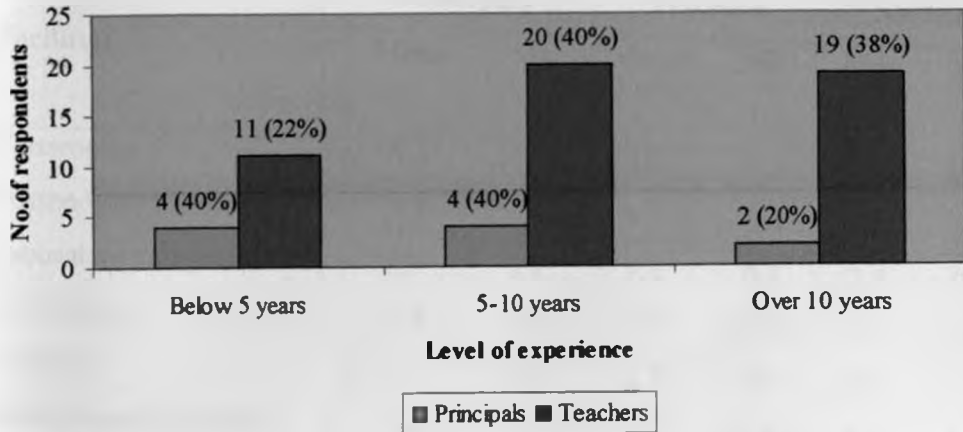


Figure 4.2 Working Experiences of Principals and Teachers

Figure 4.2 indicates that, 4(40%) principals had worked in their current schools as head teachers for 5-10 years, 4(40%) had worked for less than 5 years while 2(20%) had worked for over 10 years. However, 20(40%) teachers had 5-10 years working experience, 19(38%) had worked for over 10 years and 11(22%) had less than 5 years working experience.

4.3 Effects of Facilities on Academic Performance

The first objective of this study was to determine the influence of efficient use of school facilities on student performance in KCSE in Murang'a South District. In order to address this objective the respondents were asked to rate the adequacy of various facilities in their schools. Table 4.1 shows the respondents views on the adequacy of facilities.

Table 4.1: Respondents' Views on Adequacy of Facilities In Schools

Facilities	Principals		Teachers		Students	
	Mean	SD	Mean	SD	Mean	SD
Classrooms	3.9	0.6	3.9	0.6	4.0	0.8
Textbooks	3.7	0.7	3.7	0.8	3.8	1.0
Laboratory equipment	3.7	0.8	3.5	0.7	3.8	0.9
Laboratory	3.5	0.9	3.5	0.6	3.9	0.9
Furniture	3.5	0.9	3.7	0.6	3.6	1.1
Other resources (charts, maps)	3.4	1.0	3.2	0.8	3.1	1.2
Farm tools for agriculture	3.4	0.8	2.7	1.1	2.7	1.4
Library	2.7	1.5	2.2	1.2	2.5	1.4
ICT equipment	1.8	0.8	1.8	1.0	1.8	1.2

In table 4.1, a mean score of 3-4 means that the facility is adequate, 1-2 means inadequate while zero (0) indicates that the facility is not available. As shown in the table, classrooms, textbooks, laboratory, laboratory equipment, furniture and charts/maps had high mean scores indicating that they were adequate in most of the schools. On the other hand, ICT equipment, library and farm tools for agriculture were reported to be inadequate in most schools.

To determine the effects of adequacy of facilities on academic performance, an overall score for adequacy of facilities was computed for each school. This was done by calculating the average ratings of the respondents per school (that is principals, students and teachers)

Figure 4.3 shows the overall availability of facilities in the 10 schools.

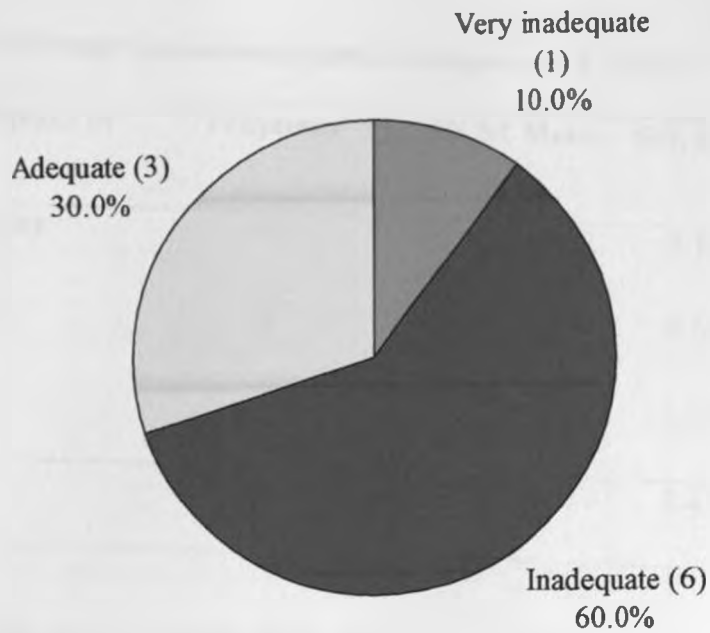


Figure 4.3 Adequacy Rates of School Facilities

Figure 4.3 above shows that 6(60.0%) schools had inadequate facilities, 3(30.0%) schools had adequate facilities while in 1(10.0%) school academic facilities were very inadequate. This is an implication that schools did not have adequate facilities, which may influence students' academic performance.

Table 4.2 shows the mean scores obtained by the 10 schools against adequacy of facilities

Table 4.2: Academic Performances across Adequacy of Facilities

Overall adequacy of resources	Frequency	KCSE Mean score	Std. Deviation
Very inadequate	1	3.80600	1.123590
Inadequate	6	4.12333	0.652777
Adequate	3	6.95907	1.656032
Total	10	4.94232	3.432399

Table 4.2 shows that 3 schools which had adequate facilities obtained a mean score of 6.9 in KCSE, 6 schools with inadequate learning and teaching facilities scored a mean score of 4.1 in KCSE while 1 school where learning resources were very inadequate scored a mean score of 3.8 in KCSE. This implies that those schools with adequate teaching and learning facilities performed better in KCSE compared with the schools that had insufficient facilities. This shows that adequacy of resources had an effect on students' performance.

The above presented results concur with the previous studies in several African countries (Foster and Chigret, 2006; Heyneman, 1984) which found out a strong relationship between resources and students achievement. They gave the laboratory a central and distinctive role in education. In addition, studies done in less developed countries such as Uganda, India, Ghana, Brazil and Malaysia. indicated that access to textbook availability is positively related to students

achievement. For example, the data for India and Chile showed that a block of factors, which included textbook availability accounts for more of the variance in test scores than does a block, which includes home circumstances and student's age and sex (Heyneman, 1984).

According to UNESCO (2005) report, many schools lack adequate resources e.g. it was found that over half of students in Kenya, Malawi, Mozambique, Uganda and Tanzania attended classrooms that did not have a single book.

4.4 Effects of Training on Academic Performance

The second objective of this study sought to determine the influence of teacher training and morale on achievement of students in KCSE in Murang'a South District. Teachers and principals were asked whether they had attended any in-service training during the last 10 years. Table 4.3 shows their responses.

Table 4.3: Attendance of In-Service Training in the Last 10 Years

Attendance of training	Teachers		Principals	
	F	%	F	%
Attended	42	84.0	10	100.0
Not Attended	8	16.0	0	0.0
Total	50	100.0	10	100.0

Table 4.3 indicates that 84% of the teachers had attended some in-service training during the last 10 years while 8(16%) had not. All the 10 (100.0%) principals had attended in-service training courses. This implies that both teachers and principals were aware of the importance of attending in-service training.

Table 4.4 shows the courses attended during the training.

Table 4.4: Courses the Teachers Had Attended

Course attended	Teachers		Principals	
	F	%	F	%
ICT	9	18.0	0	0.0
Guidance and Counseling	17	34.0	5	50.0
Subject based workshop	33	66.0	4	40.0
Management	10	20.0	9	90.0

Table 4.4 shows that the 9(90.0%) principals who attended training reported that they covered management course, 5(50.0%) indicated guidance and counseling courses and 4(40.0%) indicated subject based workshops. However, 33(66.0%) teachers reported that they covered subject based workshops, 17(34.0%) indicated guidance and counseling, 10(20.0%) management and 9(18.0%) ICT.

Table 4.5 shows the organizers of the courses attended.

Table 4.5: Organizers of the Course Attended

Organizers	Teachers				Principals			
	Yes		No		Yes		No	
	F	%	F	%	F	%	F	%
SMASSE	21	42.0	21	42.0	8	80.0	2	20.0
KESI	7	14.0	35	70.0	9	90.0	1	10.0
TAC	2	4.0	40	80.0	0	0.0	10	100.0
NGO/Church	10	20.0	32	64.0	2	20.0	8	80.0
Self Sponsored	11	22.0	31	62.0	2	20.0	8	80.0

Table 4.5 shows that most of the principals had attended courses organized by SMASSE (80.0%) and KESI (90.0%). Other course organizers included teacher advisory centres (TAC), NGOs, Churches and self sponsorship.

To find out the impact of in-service training on academic performance, the KCSE mean scores for those schools whose teachers had attended in-service training were compared with the mean scores of schools whose teachers had not attended training. The results are as given in Table 4.6.

Table 4.6: Attendance of In-Service Training Across KCSE Mean Scores.

Attendance of in-service training	Frequency	KCSE Mean Score	Std. Deviation
Yes	42	5.15214	1.590337
No	8	3.84063	1.078984
Total	50	4.94230	1.586965

Table 4.6 illustrates that the 42 teachers who had attended in-service training were from schools which obtained an aggregate KCSE mean score of 5.12. On the other hand the 8 teachers who had not attended in-service training were from schools which attained an aggregate of 3.84 in KCSE. This implies that attendance of in-service training positively influences KCSE performance.

According to Bennell and Ekyeampong (2007) their study agrees with the result obtained above whereby it emphasizes that teacher training is vital in academic achievement. It's expected that the higher the level of training the higher will be the academic achievement of students through increased teachers' productivity (Denisson, 1962). Many countries face crisis in teachers morale linked to low salaries, poor working conditions and limited opportunities for professional development. Motivation comes to be lower in school with a high teacher – pupil ratio and disadvantaged pupils (Bennell and Ekyeampong, 2007).

However, a reasonable teacher – pupil ratio should be maintained to avoid teacher underutilisation as seen in low enrolment. These issues affect teachers

productivity and hence students academic achievement. Teachers qualifications have been found to influence pupil achievement, particularly teacher training due to the amount of knowledge and skills acquired (Husein Saha, and Noonan, 1978)

In addition to the above study Husen, Saha and Noonan (1978), in their studies concluded that trained teachers do make a difference, and in particular that teacher qualifications, experience, and amount of education and knowledge are positively related to student achievement. The issue under scrutiny, currently, is whether improvements in teacher training are more – cost effective than other improvement in inputs and what form they should take – upgrading existing teachers, in servicing serving teachers or improving initial training. To some extent it's suggested that teacher experience is important in primary and lower secondary education than in upper grades where skills and knowledge of teachers are more important as reflected in higher salary or qualifications. Therefore, the quality of teachers is in fact an influential factor on student achievement and hence investment in their training is crucial.

4.5: Effects of Instructional and Learning Policy/School Culture on Academic Performance

The third objective was to determine the influence of school's instructional policy and its implementation/school culture on performance of KCSE in Murang'a South District. Teachers were asked whether they had departmental meetings. Table 4.7 shows their responses.

Table 4.7: Staff Meetings

Statement	Yes		No	
	F	%	F	%
Do you have departmental meetings to plan for term activities	47	94.0	3	6.0
Do you plan school academic activities like exams date in staff meeting	48	96.0	2	4.0

Table 4.7 shows that 47(94.0%) teachers reported that they had departmental meetings where they planned for term activities while 3(6.0%) teachers indicated they never attend any departmental meeting. However, 48(96.0%) teachers agreed that they plan school academic activities (e.g. exams date) in staff meeting while 2(4.0%) did not. This implies that most schools organize staff meetings, draw plan and raise discussions on school academic activities. Table 4.8 shows the number of exams taken by the students in a term.

Table 4.8: Number of Exams Done In a Term

No. of exams taken	Teachers		Students	
	F	%	F	%
One	0	0.0	7	2.3
Two	10	20.0	68	22.7
Three	40	80.0	225	75.0
Total	50	100.0	300	100.0

Table 4.8 shows that 40 teachers reported that they had three exams per term while 10 indicated two exams. However 225 students reported that they tackled three exams per term, 68 reported had two exams while 7 indicated they had one exam per term. The result obtained above shows that in most schools students did three exams per term. Table 4.9 indicates the mode of marking exams.

Table 4.9: Mode of Marking the Exams

	Frequency	Percent
Individual	42	84.0
Team work	8	16.0
Total	50	100.0

In table 4.9, 42(84.0%) teachers reported that they marked exams individually while 8(16.0%) teachers indicated that exam marking was a team work. Table 4.10 shows the school policy adapted in the school while teaching.

Table 4.10: School Policy Adapted In the School While Teaching

	Yes		No	
	F	%	F	%
Horizontal teaching	5	10.0	45	90.0
Vertical teaching	39	78.0	11	22.0
Block teaching	3	6.0	47	94.0
Multiple grade teaching	9	18.0	41	82.0
Shift teaching	4	8.0	46	92.0

Upon being asked the policy adapted in school while teaching, 39(78%) teachers reported that they used vertical policy. However horizontal, block, multiple grade and shift modes of teaching were rarely adopted by most of the teachers as indicated by over 80%. Figure 4.4 shows the average class size.

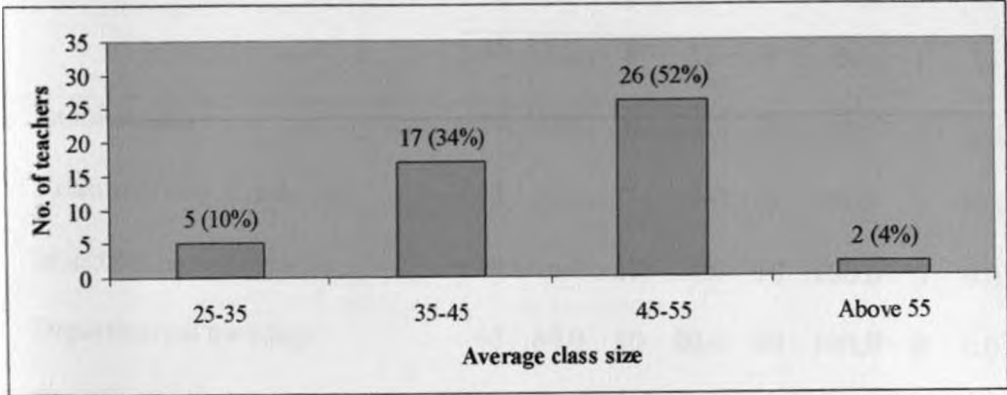


Figure 4.4 Average Class Sizes in the School

Figure 4.4 shows that 26(52%) teachers reported that the average class size in their schools was between 45 and 55, 17(34%) reported that it was between 35 and 45, 5(10%) reported 25-35 class size while 2(4%) reported a class size of above 55 students. Table 4.11 indicates whether the school had policies on the given statements.

Table 4.11: Adoptions of Policies in the Following Statements

Statement	Teachers				Principals			
	Yes		No		Yes		No	
	F	%	F	%	F	%	F	%
Exam setting	44	88.0	6	12.0	8	80.0	2	20.0
Exam marking & analysis	43	86.0	7	14.0	9	90.0	1	10.0
Selection of subjects	38	76.0	12	24.0	10	100.0	0	0.0
Departmental meetings	40	80.0	10	20.0	10	100.0	0	0.0
Teachers professional development	22	44.0	28	56.0	8	80.0	2	20.0
Remedial teaching for weak students	28	56.0	22	44.0	8	80.0	2	20.0

Table 4.11 indicates that majority (over 80%) of the respondents felt that their schools had policies on exam setting, exam marking and analysis of result, selection of subjects and departmental meetings. However, 28(56%) teachers reported that they did not have policies on teachers' development while 44% teachers did not have remedial teaching for weak students in their schools. This contradicts with principals' statement where 80% reported that they had policies on teachers' development and remedial teaching of weak students respectively.

Table 4.12 Teachers' Views On Existence of Students' Documents

Students' documents	Yes		No	
	F	%	F	%
Exercise book	50	100.0	0	0.0
Diary	9	18.0	41	82.0
Experiment book	17	34.0	33	66.0
Assignment book	33	66.0	17	34.0
Personal file	37	74.0	13	26.0
Student revision time table	25	50.0	25	50.0

Table 4.12 shows that all teachers (100.0%) indicated that students had enough exercise books, 33 reported they had assignment book, 37 indicated they had personal file while 25 reported student had revision time table. However 41(82.0%) teachers reported that diary and experiment book (66.0%) did not exist to most students. Table 4.13 shows how the teachers compensate for missed lessons.

Table 4.13: Compensation for Lessons Missed

	Teachers		Principals	
	F	%	F	%
Immediately	23	46.0	7	70.0
Irregularly	27	54.0	3	30.0
Total	50	100.0	10	100.0

Table 4.13 shows that, 70% of the principals reported that teachers compensated for missed lessons immediately while 3(30.0%) indicated irregularly. 27(54%) teachers reported that they compensated for missed lessons irregularly while 23(46%) reported they compensated immediately. Table 4.14 indicates the extent to which the culture helps in school performance.

Table 4.14: Extent to Which the Culture Helps In School Exam Performance

	Teachers		Principals	
	F	%	F	%
Very much	19	38.0	3	30.0
Reasonably	26	52.0	6	60.0
Very little	5	10.0	1	10.0
Total	50	100.0	10	100.0

Table 4.14 illustrates that 60% of the principals indicated that school culture reasonably affected exam performance, 30% reported that culture influenced very much while 10% felt that it had very little effect on performance. On the other hand, 26 teachers also added that good culture affected exam performance reasonably, 19 indicated very much while 5 teachers felt that it had very little impact on exam performance in schools. From the result it emerged that good culture for teaching and learning had a rational impact in academic performance.

According to Blau (1998) culture of the school is the most important aspect of school life it touches and affects every other aspect in the school.

Blau (1998) further indicate that the organizational culture ratifies what is proper and ideal for the school, it exerts pressure on both learners and educators to conform to the standards and validate the high expectations on performance as outlined in the schools mission statement and policy.

A poor culture of learning and teaching in a school refers to a school situation where proper teaching and learning has broken down. According to Chishoim and Vallys (1996) the following are common observable features of a poor culture of learning and teaching; weak / poor attendance i.e. educators do not have the desire to teach, tension among the various elements of the school community, vandalism, high drop out rates, poor school results, weak leadership, demotivation and low morale, poor state of buildings, facilities and resources. At the base of these features lies the absence of a sound philosophy, values and norms which shape the deeper attitude of the role players in the school with regard to each and schooling in general.

This shows that schools with a strong positive instructional policy and culture normally do well in examinations. Some of the areas that are affected by instructional policy include; nature of curriculum and its implementation, co – curricular activities, frequency of testing the learners, teaching timetable (teacher or student friendly), examination timetable (spreading and time allocated) and marking of student`s exercise books. It also includes departmental organization and time allocated for preps and recreation. A sound instructional policy enhances optimum utilization of time, physical and human resources.

Table 4.15 shows the frequency of marking exercise books by teachers.

Table 4.15: Teachers Frequency of Marking Exercise Books

	Frequency	Percent
Often	70	23.3
Rarely	191	63.7
Not at all	39	13.0
Total	300	100.0

Table 4.15 indicated that 191(63.7%) of the students reported that their teachers rarely marked their exercise books, 70(23.3%) reported that their books were often marked while 39(13%) students reported that their books were not at all checked. This result shows that most teachers do not check students' exercise books and this may be due to large classes, high work load or lack of commitment.

Effectiveness of instructional policies in schools for teachers was measured using 14 dichotomous (Yes/No) items in the questionnaire for teachers. For each of the 14 items, a favorable response (Yes) was given a score of one (1) while a 'No' response was given a zero (0).Table 4.16 shows the 14 items and the responses obtained.

Table 4.16: Teachers Opinions on School Policies

Items	Yes (1)		No (0)	
	F	%	F	%
Do you have departmental meetings to plan for term activities	47	94.0	3	6.0
Do you plan school academic activities like exams date in staff meeting	48	96.0	2	4.0
Do your students have Exercise books	50	100.0	0	0.0
Do your students have diary	9	18.0	41	82.0
Do your students have experiment book	17	34.0	33	66.0
Do your students have assignment book	33	66.0	17	34.0
Do your students have personal file	37	74.0	13	26.0
Do your students have student revision time table	25	50.0	25	50.0
Do you have exam setting policies	44	88.0	6	12.0
Do you have exam marking & analysis policies	43	86.0	7	14.0
Do you have selection of subjects policies	38	76.0	12	24.0
Do you have departmental meeting policies	40	80.0	10	20.0
Do you have teachers development policies	22	44.0	28	56.0
Do you have remedial teaching for weak students	28	56.0	22	44.0

Table 4.16 illustrates that over 80.0% of the teachers reported that they had departmental meetings, staff meetings, exam setting policies, exam marking & analysis policies and departmental meeting policies. In addition all teachers (100.0%) indicated that students had exercise books and personal files (74.0%).

However, two significant proportions of teachers indicated that the most lacking documents among students was diary (82.0%) and experiment books (66.0%).

Table 4.17 shows overall scores obtained on instructional policies. The scores could range from 0(very weak, weak) to 14 (very strong).

Table 4.17: Overall Scores on Instructional Policies

Overall scores	Frequency	Percent
5.00	4	8.0
6.00	5	10.0
7.00	5	10.0
8.00	6	12.0
9.00	4	8.0
10.00	3	6.0
11.00	7	14.0
12.00	9	18.0
13.00	1	2.0
14.00	6	12.0
Total	50	100.0

As shown in Table 4.17, none of the teachers scored 0-2, showing that the instructional policies were not very weak. The table shows that 4 teachers scored 5, which shows that some instructional policies were weak, 16 scored 6-8, meaning some instructional policies were average, 14 scored 9-11, meaning their instructional policies were strong while 16 scored 12-14, meaning their instructional policies were very strong.

To determine the effectiveness of instructional policies in schools, the KCSE results mean scores were compared with the schools set policies. A scale was used to address policy grouped data where 0-2 was given very weak, 3-5 weak, 6-8 average, 9-11 strong and 12-14 very strong. Table 4.18 shows the result obtained

Table 4.18: Policy Grouped Data across KCSE Mean Scores

Policy grouped data	Frequency	Mean	Std. Deviation
Weak	4	4.04700	0.927566
Average	16	4.41756	1.623741
Strong	14	4.80893	1.533973
Very Strong	16	5.80756	1.434004
Total	50	4.94230	1.586965

Table 4.16 illustrates that 4 teachers from schools where instructional policies were weak indicated that they attained a mean score of 4.04 in KCSE result, 16 teachers from schools where policies were average reported that they obtained a mean score of 5.8 in KCSE, 14 teachers from schools with strong instructional policies reported that they attained a mean score of 4.8 while 16 teachers from schools where policies were very strong reported that they attained a mean score of 5.8 This implies that school instructional policies played a major role in academic performance whereby schools with very strong policies performed well in KCSE compared to schools with weak policies.

A previous study by Bidhal (2000) relates the core activities of the school i.e. teaching and learning in the classroom involving all the beliefs, decisions, strategies and tactics which teachers utilize to ensure instructional effectiveness in every classroom. Instructional leadership occurs when the teachers provide direction, resources and support to learners with aim of improving teaching and learning at a school. Good Instructional leadership is the path to good teaching and learning. Instructional leaders need to ensure there is a sound culture of learning and teaching in their schools at all times (Bidhal, 2000).

The following functions generally typify instructional leadership, according to Chitiavi (2002): Defining and communicating a clear mission goals and objectives (setting together with the staff members, a mission, goals and objectives to realize effective teaching and learning); managing curriculum and instruction. Managing and co – ordination of the curriculum in such a way that teaching time can be used optimally. Principals need to fully support the teaching programme and provide the resources that the teachers need to carry out their tasks; supervising teaching i.e. ensuring that educators receive guidance and support to enable them to teach as effectively as possible. The focus of the instructional leader should be more orientated to staff development than to performance appraisal. This implies implementing programmes that may enrich the teaching experience of educators or motivating them to attend such programmes; monitoring learners' progress i.e. monitoring and evaluating the learner's progress by means of tests and examination and using the results to provide support to both learners and

educators to improve as well as to help parents understand where and why improvement is needed; and promoting instructional climate i.e. creating a positive school climate in which teaching and learning can take place. In a situation where learning is made exciting, where teachers and learners share a sense of purpose, performance is enhanced.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1: Introduction

This chapter presents summary of the study, conclusions and recommendations arrived at. It also gives suggestions for further studies.

5.2 Summary

The purpose of this study was to establish the influence of school-based factors on academic achievement of students in KCSE in Murang'a South District. The study was conducted in 10 public secondary schools, with a sample size of 10 principals, 50 teachers and 300 students giving a total of 360 respondents. Data was therefore analyzed based on this number. Given below is a summary of the main study findings.

The study found out that, classrooms, textbooks, laboratory, laboratory equipment, furniture and charts/maps had high mean scores indicating that they were adequate in most of the schools. On the other hand, ICT equipment, library and farm tools for agriculture were reported to be inadequate in most schools.

To determine the effects of adequacy of facilities on academic performance, an overall score for adequacy of facilities was computed for each school. This was done by calculating the average ratings of the respondents per schools (that is principals, students and teachers) where the following results were obtained. 6(60.0%) schools had inadequate facilities, 3(30.0%) schools had adequate facilities while in 1(10.0%) school academic facilities were very inadequate.

Teachers and principals were further asked whether they had attended any in-service training, where all the 10 (100.0%) principals reported that they had attended in-service training courses. On the other hand 84% of the teachers had attended some in-service training during the last 10 years while 8(16%) had not.

To find out the impact of in-service training on academic performance, the KCSE mean scores for those schools whose teachers had attended in-service training were compared with the mean scores of schools whose teachers had not attended training where by 42 teachers who had attended in-service training were from schools which obtained an aggregate KCSE mean score of 5.12. On the other hand the 8 teachers who had not attended in-service training were from schools which attained an aggregate of 3.84 in KCSE. This implies that attendance of in-service training positively influences KCSE performance.

Regarding the courses, both principals and teachers were requested to indicate topics covered during training and who organized the training. Most principals reported that they attended courses organized by SMASSE (80.0%) and KESI (90.0%). Other course organizers included teacher advisory centres (TAC), NGOs, Churches and self sponsorship. On topics covered during training 9(90.0%) principals who attended training reported that they covered management course, 5(50.0%) indicated guidance and counseling courses and 4(40.0%) indicated subject based workshops. However, 33(66.0%) teachers reported that they covered subject based workshops, 17(34.0%) indicated guidance and counseling, 10(20.0%) teachers indicated management while 9(18.0%) reported ICT. The

result presented above shows that all principals from sampled schools had never attended any ICT course.

The study further found out that 47(94.0%) teachers reported that they had departmental meetings where they planned for term activities while 3(6.0%) teachers indicated they never attend any departmental meeting. However, 48(96.0%) teachers agreed that they plan school academic activities (e.g. exams date) in staff meeting while 2(4.0%) did not. This implies that most schools organize staff meetings, draw plan and raise discussions on school academic activities. Teachers and students were asked to indicate number of exams they tackle per term, the following were their responses; 40 teachers reported that they had three exams per term while 10 indicated two exams. However 225 students reported that they tackled three exams per term, 68 reported two exams while 7 indicated they had one exam per term. The result obtained above shows that in most schools students did three exams per term.

Upon being asked the policy adapted in school while teaching, 39(78%) teachers reported that they used vertical policy. However horizontal, block, multiple grade and shift modes of teaching were rarely adopted by most of the teachers as indicated by over 80%.

5.3: Conclusion

The study investigated the influence of school based factors on student performance in KCSE in Muranga South District. From the findings of the study, it can be concluded that teachers and principals in Murang'a South district reported that lack of enough learning and teaching facilities in schools had contributed to poor performance in KCSE results. It emerged from the study that most of the teachers had attended training, which reflected positively on KCSE performance of students since the teachers were able to perform their duties effectively and efficiently. The study established that good instructional policies/school culture had a positive effect on performance of students since schools which had strong instructional policies performed better in KCSE compared to those which had weak instructional policies.

The study confirmed the applicability of the education production function as advanced by Coleman (1966).

5.4: Recommendations

1. School needs to be well equipped with adequate teaching and learning materials to enhance performance in National examinations. Schools with adequate facilities were found to be performing well.
2. School heads need to encourage teachers to undertake in-service training courses. methods of contents delivery should be prioritized in various training. Training programs like SMASSE should be strengthened in terms of methodology.

3. School heads should ensure that there are good instructional policies and strong performance culture in their schools and also include teachers' recommendations in coming up with the policies to encourage ownership of the policies. This is because as it was found out, school with sound policies performed well in terms of KCSE mean scores.

5.5: Areas for Further Research

1. A similar study on community and home based factors should be conducted to find out whether they have any influence on students' academic performance.
2. A study should be conducted on causes of poor KCSE performance in public secondary schools since the introduction of Free Day Secondary education.
3. A study on student related factors should be conducted to find out if they influence students KCSE performance and to what extent.

REFERENCES

- Achola, P. P. W. (1990). The Influence of Selected Teacher Factors and school Practices in School Achievement. The Case of Semi-Arid Kajiado, Maasailand. Bureau Educational Seminar Paper, No. 20206, Unpublished thesis, Kenyatta University.
- Alderman, Harold, Jere R. Behrman, Victor Lavy and Rekha Menon. (1997). "Child Health and School Enrollment - A Longitudinal Analysis." *Journal of Human Resources* 36 (1): 185-205.
- Alexander, K. L., Entwisle, D.R., & Bedinger, S.D. (1994). *When expectations work: Race and socio economic differences in school performance. Social Psychology Quarterly*, 57 (4), 283-299.
- Alexander, L. & Simmons, J. (1975). *The determinants of school achievement in developing nations: The educational production function*. Washington, DC: Staff Working Paper No. 201, the World Bank.
- Alway, A. and Schech, S., (2004). Ethnic Inequalities in Education in Kenya; *International Education Journal*, 5 (2), 266 – 274.
- Anyango H. O. (2001). Influence of Headteachers' Leadership Styles on Students KCSE Performance in Mombasa District. Unpublished Master of Education Unpublished Thesis. Kenyatta University.
- Archer, L., Hutchings, M. and Ross, A. (2003) *Higher Education and Social Class: Issues of exclusion and inclusion*, London: Routledge Falmer.
- Arriagada, A.M. (1983). Determinants of sixth grade students' achievement in perm Washington D.C, World Bank, Education department.

- Arriaganda M. (1962). Forth coming efficiency and equity implications of subsidies of secondary education in Kenya New York: Oxford University Press.
- Ayot H.O. and H. Briggs, (1992). Economics of education, Nairobi: Educational research and publications.
- Baker, S. B. (2002). *School counselling for the twenty-first century (3rd ed.)*. New York: Merrill/Prentice Hall.
- Bantu, E. M. (2003). Factors influencing students' absenteeism in public day secondary school in Uasin-Gishu District Kenya. Unpublished Thesis, Egerton University.
- Beatrice, N. (2008). To investigate the causes and the extent of students' absenteeism and its effects on student's academic performance in public day secondary schools in Nairobi Province: Unpublished M.Ed thesis, Kenyatta University.
- Behrman, J. R. (1996). "The Impact of Health and Nutrition on Education." *The World Bank Research Observer* 11 (1): 23-37.
- Behrman, J. R. and V. Lavy (1994). "Children's Health and Achievement in School." *Living Standards Measurement Study Working Paper* No. 104. The World Bank.
- Bell, A. W (1993). Educational Research, N.Y Publishers, New York.
- Bennell, P. (2004). *Teacher Motivation and Incentives in Sub-Saharan Africa and Asia*. Knowledge and Skills for Development, Brighton.

- Bennell, P. and Akyeampong, K. (2007). Teacher motivation in Sub-Saharan Africa and South Asia. *Education Paper prepared for DFID, Brighton: Knowledge and Skills for Development.*
- Berkman, Douglas S, Andres G Lescano, Robert H Gilman, Sonia L Lopez, and Maureen M Black. (2002). "Effects of Stunting, Diarrhoeal Disease, and Parasitic Infection During Infancy on Cognition in Late Childhood: a Follow-up Study." *The Lancet* (Feb. 16): 359.
- Bidhal R. S. (2000). The impact of the principal's instructional leadership on the culture of teaching and learning in the school. Med disseration. Pretoria university of South Africa.
- Blau W. A. (1998). Strategic planning for the implementation of a culture of learning and teaching in a school. Med dissertation Stellenbosch University of Stellenbosch.
- Boggiano, A. K., Main, D. S., & Katz, P. (1991). Mastery motivation in boys and girls: The role of intrinsic versus extrinsic motivation. *Sex Roles*, 25, (9/10), 511-520.
- Booth, Alan, and Judy D. (1996). *Family-School Links: How do they Affect Educational Outcomes?* Hillsdale, N.J.: Lawrence Erlbaum.
- Borg, R. W. and Gall M. D. (1989). *Educational Research: An Introduction.* New York; Longman Inc.
- Bourdieu, Pierre. (1977). "Cultural Reproduction and Social Reproduction," pp. 487-510 in *Power and Ideology in Education*, edited by Jerome Karabel and A.H. Halsey. New York: Oxford University Press.

- Brooks-Gunn, J., Brown, B., Greg, J., and Moore, K (1995). "Child Development in the Context of Family and Community Resources," pp. 27-97 in *Integrating Federal Statistics on Children: Report on a Workshop*. Board on Children and Families, Committee on National Statistics, Commission on Behavioral and Social Sciences and Education, National Research Council, Institute of Medicine. Washington D.C.: National Academy Press.
- Buchmann, C. (2002). "Getting Ahead in Kenya: Social Capital, Shadow Education, and Achievement", in *Research in Sociology of Education Volume 14: Schooling and Social Capital in Diverse Cultures*, Fuller, Bruce, and Emily Hannum, ed.s. London: Elsevier Science.
- Buchmann, C. and Emily H. (2001). "Education and Stratification in Developing Countries: A Review of Theories and Research." *Annual Review of Sociology* 2001 27: 77-102.
- Cheo, R. (2002) Re-examining the Effort-Grade Debate: Children in Singapore Schools, *British Journal of Educational Psychology* (under submission).
- Cheo, R. (2003). Making the grade through class effort alone. Economic Society of Australia. www.findarticles.com/p/articles/mi_m0PAO.
- Chitiavi M. J. (2002). Guidance and Counseling series. School administration. Nairobi: Kenya pavements publishers.
- Chrisholm L & Valley S. (1996). The culture of learning and teaching in Gauterg schools. Report of the committee on the culture of learning and teaching. Johannesburg. Education policy unit. University of the witwatersvand.

- Christie P. (1998), schools as (dis) organizations; the Breakdown of the culture of learning and teaching in South Africa schools. *Cambridge journal of Education*.
- Coleman, J., Campbell, E., Hobson, C., McFarland, J., Mood, A. M., Weinfeld, F. D., & York, R. L. (1966): *Equality of Educational Opportunity*. Washington, DC: U.S. Government Printing Office.
- Cothran, D., & Ennis, C. (2000). Building bridges to student engagement: Communication respect and care for students in urban high schools. *Journal of Research and Development in Education*, 33, (2), 106-117.
- Denisson D. K. (1962). Costing educational wastage: A pilot simulation study. Paris: UNESCO.
- Eccles, J., M., C., Wigfield, A., Buchanan, C.M., Reuman, D., Flanagan, C., & Maclver, D. (1993). Development during adolescence: The impact of stage-environment fit on young adolescents' experiences in schools and in families. *American Psychologist*, 48, 90-101.
- Epstein, J.L. (1997). *School, family and community partnership: Your handbook for action*. Thousand Oaks, Ca: Crown in Press.
- Eshiwani, G. S. (1983). The Education of Women in Kenya, Kenyatta University, *Bureau of Educational Research*.
- Ferris, S. (2002). Education Vouchers, the Peer Group Problem, and the Question of Dropouts, *Southern Economic Journal*, 68, pp. 774-793.
- Florencio, C. A. (1995). Child, School, Home: Determinants of Academic Performance. Excerpt from *Edukasyon* 1 (2) April-June 1995), A

Quarterly Monograph Series of the University of the Philippines
Education Research Program (ERP).

Fortier, M. S., Vallerand, R. J., & Guay, F. (1995). Academic motivation and school performance: Toward a structural model. *Contemporary Educational Psychology*, 20, 257-274.

Foster, P. J. (2006). *Education and Social Change in Ghana*. Chicago: University of Chicago Press.

Gay L. R. (1992). *Education Research: Competence for Analysis and Application*, Charles Merrill Publishing Co. Columbus.

Glewwe, P., Hanan, G. Jacoby and Elizabeth M. K. (2001). Early Childhood Nutrition and Academic Achievement: a Longitudinal Analysis. *Journal of Public Economics* 81: 345-368.

Goldberg, M. D. (1994). A developmental investigation of intrinsic motivation: Correlates, causes, and consequences in high ability students. *Dissertation Abstract International*, 55-04B, 1688.

Gomes-Neto, J. B., E. A. Hanushek, R. H. Leite, and R. C. FrotaBezzera (1997). "Health and Schooling: Evidence and Policy Implications for Developing Countries." *Economics of Education Review* 16(3): 271-282.

Gottfried, A.E. (1990). Academic intrinsic motivation in young elementary school children. *Journal of Education Psychology* 82(3), 525-538.

Guthrie, G. (1982). Reviews of Teacher Training and Teacher Performance in Developing Countries. *International Review of Education*. Vol. 28 (291-306).

- Halle, T., Kurtz-Costes, B., & Mahoney, J. L. (1997). *Family Influences on School Achievement in Low-Income, African American Children. Journal of Educational Psychology, 89*, 527-537.
- Harter, S. (1983). Developmental perspectives on the self-system. In P.H. Mussen (Ed.), *Handbook of Child Psychology, 4*, 275-385.
- Heyneman S. P., & Loxley, W. A. (1983). The effect of primary school quality on academic achievement across twenty-nine high- and low-income countries. *American Journal of Sociology, 88*, 1162-1194.
- Heyneman, S. (1984). Research on Education in the developing countries. *International Journal of Education Development. Vol. 4, No. 4.*
- Hussein, Torsten, Lawrence Saha, and Richard Noonan, (1978). Teacher training and student achievement in less developed countries. World Bank staff working paper No. 310 Washington D.C.
- Kathuri, N. and Pals, D. (1993). *Introduction to Educational Research*. Njoro: Egerton University.
- Kerlinger, F. N. (1973). *Foundation of Behavioural Research, Administration Today Columbus: Charles Merrill Co. (2nd Edition)*. Holt Rinalt and Winston Inc., New York.
- Kiess, H. O. and Bloomquist, D. W. (1985). *Psychological research methods: A conceptual approach*. Boston: Allyn and Bacon.
- Klebanov, P. K., Brooks-Gunn, J. & Duncan, G. J. (1994). *Does Neighborhood and family poverty affect mother's parenting, mental health, and social support? Journal of Marriage and the Family, 56*, 441-455.

- Kothari, C. R. (1985). *Research Methodology: Methods and Techniques*. New Delhi: Willey Eastern Ltd.
- Kunguru K. K. (1986). Factors Contributing to Poor Performance in Physical Sciences, M ED Thesis, Kenyatta University Nairobi.
- Kushman, J. W., Sieber, C., & Harold, K. P. (2000). This isn't the place for me: School dropout. American Counselling Association (pp. 471-507).
- Lockheed (1991). Improving secondary education in developing countries, world Bank, Oxford University Press.
- Magiri, B. J. (1997). A Study of Relationship between Attitude and Achievement in Top Quartile and Lower Quartile in Physics among Form Four Students in Imenti Division of Meru District. Unpublished MED Thesis, Kenyatta University, Nairobi.
- Magori, P. J. O. (1990). A Study of Factors That May Cause Poor Performance in KCPE in Busoga Division, Kisii District. Unpublished MED Thesis, Kenyatta University.
- Malau, N. C. (1988). A Survey into the Probable Causes of poor Performance of Kilifi District, Coast Province. Unpublished MED Project, Kenyatta University
- Maritim, E. K. A. (1985). 'The Dependents of 'O' Level and 'A' Level Results on the Sex Examinee' in *Kenya Journal of Education* Vol. 2. No. 1.
- Marks, D. (2002). Academic Standards as Public Goods and Varieties of Free-Rider Behaviour, *Education Economics*, 10, pp. 145-162.

- Martin, K. and Acuna, C. (2002). *SPSS for Institutional Researchers*. Bucknell Lewisburg, Pennsylvania: University Press.
- Mayer, Susan. (1997). Trends in the Economic Well-Being and Life Chances of America's Children. Pp. 49-69 in *Consequences of Growing Up Poor*, edited by Greg J. Duncan and Jeanne Brooks-Gunn. New York: Russell Sage Foundation.
- McMillan, J. H., & Nash, S. (2000). *Teachers' classroom assessment and grading decision making*. Paper presented at the Annual Meeting of the National Council of Measurement in Education, New Orleans.
- Michael. P. Todaro (1990). *Economics for a Developing World*, Longman Group U.K. Ltd., England.
- Michaels, J. and T. Miethe, (1989). *Academic Effort and College Grades*, Social Forces, 68, pp. 309-319.
- Ministry of Education, (2002). *Reform Agenda for Education Sector in Kenya: Setting Beacons for Policy and Legislative Framework*, Nairobi: Government Printer.
- Mugenda O. M. and Mugenda, G. A (1999). *Research methods-Quantitative and Qualitative Approaches*. Nairobi: Acts Press.
- Musoko, J. (1983). The Role of the Laboratory in the Learning of the 'O' Level Physics in Kenya, M ED Thesis, Kenyatta University, Nairobi.
- Neuman, Peter and Maureen Cunningham, (1982). Mexico S free Textbooks; Nationalism and he urgency to educate World Bank Staff working paper No. 541 Washington D.C.

- Niebuhr, K. (1995). The effect of motivation on the relationship of school climate, family environment, and student characteristics to academic achievement. (ERIC Document Reproduction Service ED 393 202).
- Odhiambo, G. O. (2005). Teacher Appraisal. The Experiences of Kenyan Secondary School Teachers, *Journal of Educational Administration* Vol. 43 No. 4, pp. 402-416.
- Orina, K. B. (2008). The role of the leadership behaviour of the principal on the students' academic performance in secondary schools in Manga Division: Unpublished M.Ed thesis, Kenyatta University.
- Orodho J. A. (2002). *Techniques of Writing Research Proposals and Reports in Education and Social Sciences*. Nairobi: Masola Publishers.
- Pajares, F. (2002). The development of academic self-efficacy. Development of achievement motivation (pp. 15-32). San Diego, CA: Academic Press.
- Phyllis, W. (2009). To determine the extent to which total quality education management practices of leadership, empowerment, strategic quality planning and human resource development were practised in secondary schools in Thika Municipality. Unpublished M.Ed thesis, Kenyatta University.
- Pollitt, E. (1990). *Malnutrition and Infection in the Classroom*. Paris: UNESCO.
- Psacharopoulos, G. and Woodhall, M., 1985, *Education for Development: An Analysis of Investment Choices*, New York: Oxford University Press.
- Ryan, R. J. (2002) Making VET in Schools work: A review of policy and practice in the implementation of vocational education and training in Australian schools. *Journal of Educational Enquiry*, 3 (1).

- Schickedanz, J.A. (1995). *Family socialization and academic achievement*. *Journal of education*, 1, 17-34.
- Schiefelbein, E. 1975 and J Simmons 1978. The determinants of school achievement: A review of the research for Developing countries. IDRC document MR – 9 Ottawa. International development research centre.
- Schiefele, U. (1995). Motivation to succeed. In W. Damon and N. Eisenberg (Eds.). *Handbook of Child Psychology*, 3, 1017-1095.
- Schiefele, U. (1998). *Individual interest and learning—What we know and what we do not know*. In L. Hoffmann, A.Krapp, K. A. Renninger, & J. Baumert (Eds.), *Interest and learning* (pp. 91-104). Kiel: Institut für die Pädagogik der Naturwissenschaften (IPN).
- Schuman, H., Walsh, C. Olson and B. Etheridge, (1985). "Effort and Reward: The Assumption that College Grades are Affected by Quantity of Study", *Social Forces*, 63, pp. 945-966.
- Schunk, D. H., & Pajares, F. (2002). *The development of academic self-efficacy*. In A. Wigfield & J. Eccles (Eds.), *Development of achievement motivation* (pp. 16-31). San Diego: Academic Press.
- Shantz, D., & Rideout, G. (2003). *Education versus schooling: Seeking new paradigms for a new century*. *Education*, 124(1), 203-211.
- Shuluka, S. (1974). Achievement of Indian children in mother tongue (Hindi) and Science. *Comparative education Review* 18 no 2 (June) 237 – 247.
- Sigman, M., C. Neumann, A. Jansen, and N. Bwibo (1989). "Cognitive Abilities of Kenyan Children in Relation to Nutrition, Family Characteristics, and Education." *Child Development* 60(6):1463-74.

- Smith, J. R., Brooks-Gunn, J. & Klebanov, P. K. (1997). *Consequences of living in poverty for young children's cognitive and verbal ability and early school achievement*. In G. J.
- Steyn G. M. (2000). The realization of empowerment and team work in quality school South Africa journal of Education.
- Summers, A.A., and B.L. Wolfe (1977). "Do Schools Make a Difference?" American Economic Review, 67, pp. 63 9-652.
- Tella, A. & Tella, A. (2003). *Parental Involvement, home background and school environment as determinant of academic achievement of secondary school students in Osun State, Nigeria*. Africa Journal of Cross Cultural Psychology and Sport Facilitation, 5 (2), 42-48.
- Theuri, A. W. (2004). An Analysis of Internal Efficiency in Second Level Learning Institutions in Slum Areas of Nairobi Province, Kenya, Unpublished M.Ed Thesis, Kenyatta University.
- UNESCO, (2005), *EFA Global Monitoring Report 2005: Education For All: The Quality Imperative*, Paris: UNESCO.
- WEAC, (2005). *Variables affecting student achievement*. Wisconsin Education Association Council <http://www.weac.org/resource/primer/variable.htm>.
- William J. D., (2006). Dropping out of advanced mathematics. How much do students and school contribute to the problem? Educational evaluation and policy analysis. 21: 36 – 383.

APPENDIX I: LETTER OF INTRODUCTION

MWANIKI W. M
P.O BOX 772,
THIKA.
Date _____

Dear Respondents

RE: QUESTIONNAIRE

I am a post graduate student in the School of Education at the University of Nairobi. I am required to undertake a research study whose title is '**School based factors' influence on student performance in Kenya Certificate of Secondary Education in Murang'a South Distirict'**. This letter is aimed at requesting you to truthfully fill the attached questionnaire. The data you provide will be treated with utmost confidentiality and will be used for academic purpose only.

Your assistance and corporation is highly appreciated. Thank you

Yours Faithfully

MWANIKI W. M.

RESEARCHER

APPENDIX II: INTERVIEWS SCHEDULE FOR PRINCIPALS

The purpose of this questionnaire is to gather information for a research on “school-based factors that influence performance in KCSE in secondary schools in Murang’a South District.” Your responses will be accorded great confidentiality hence do not write your name or the name of your school.

Instructions

Please indicate the correct option as correctly and honestly as possible by putting a tick (☑) against one of the options. For the questions that require your own opinion use the spaces provided. Kindly respond to all items.

Section A: Background information

1. What is your gender? Male [] Female []
2. What is your academic/ professional qualification?
 - (a) M.A/MSC [] (b). M.ED []
 - (c) BA/BSC with PGDE [] (d) B.ED []
 - (e) Diploma ATS []
 - (f) Any other specify).....
3. For how long have you been the headteacher in this school?..... years

Section B: Information about the Institution

4. Year of establishment
5. Gender of the students Male [] Female [] Mixed []
6. Number of streams.....
7. Please Indicate Enrolment per class as shown in the table below

Class	F1	F2	F3	F4	Total
Number of students					

8. a) Do you have teachers' shortage in your school?

Yes

No

b) How serious is it?

Very acute

Acute

Not very acute

Section C: Information about performance in KCSE examinations.

9. Please fill in these tables below which should show a summary of performance in KCSE for the last 5 years in the school you are heading.

Number of students who obtained various grades in KCSE in the year 2006-2010

Year	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	E	X	Y	Mean score
2006															
2007															
2008															
2009															
2010															

10. Considering the table above, comment on performance in KCSE for the years your school have presented candidates for KCSE

.....

Section D: Effects of facilities on academic performance

1. Rate the adequacy of the following facilities in your school by ticking (✓) in the appropriate box.

Very adequate (VA) Adequate (A) Inadequate (I) Very Inadequate (VI)
 Not available (NA)

ICT equipment	VA []	A []	I []	VI []	NA []
Classrooms	VA []	A []	I []	VI []	NA []
Textbooks	VA []	A []	I []	VI []	NA []
Library	VA []	A []	I []	VI []	NA []
Laboratory	VA []	A []	I []	VI []	NA []
Laboratory equipment	VA []	A []	I []	VI []	NA []
Furniture	VA []	A []	I []	VI []	NA []
Other resources (charts, maps)	VA []	A []	I []	VI []	NA []
Farm tools for agriculture	VA []	A []	I []	VI []	NA []
Others (specify)	VA []	A []	I []	VI []	NA []

2. Among the resources indicated above, which one(s) affect academic performance in your school most?

3. What do you suggest should be done to improve the state of teaching and learning resources in your school?

Section E: INSTRUCTIONAL POLICY AND PERFORMANCE

1. What instructional and learning policies have the school adopted that enhance performance

2. Are they effective in terms of KCSE performance?
 Very much Reasonably Only a little

3. Does your school have a sound performance culture?
 Yes No. Somehow

If Yes, is it well passed from generation to generation

Yes

Somehow

No.

4. Does your school culture notably affect KCSE performance?

Very much

Reasonably

Only a little.

Thank you for filling the questionnaire.

APPENDIX III: QUESTIONNAIRE FOR TEACHERS

The purpose of this questionnaire is to gather information for a research on “school-based factors that influence performance in KCSE in secondary schools in Murang’a South District, Kenya.” Your response will be accorded great confidentiality hence do not write your name or the name of your school.

Section A: Background information

1. Gender: Male Female
2. Marital Status Married Single
3. Academic qualification
 - MA/MSc./M.Ed BA/BSc
 - B.Ed/BA/PGDE Diploma in education
 - Any other training (specify).....
4. Work experience
 - Below 5 years 5 – 10 years Over 10 years

Section B: Effects of facilities on academic performance

5. Rate the adequacy of the following facilities in your school by ticking (√) in the appropriate box.

Very adequate (VA) Adequate (A) Inadequate (I) Very Inadequate (VI)
Not available (NA)

ICT equipment	VA <input type="checkbox"/>	A <input type="checkbox"/>	I <input type="checkbox"/>	VI <input type="checkbox"/>	NA <input type="checkbox"/>
Classrooms	VA <input type="checkbox"/>	A <input type="checkbox"/>	I <input type="checkbox"/>	VI <input type="checkbox"/>	NA <input type="checkbox"/>
Textbooks	VA <input type="checkbox"/>	A <input type="checkbox"/>	I <input type="checkbox"/>	VI <input type="checkbox"/>	NA <input type="checkbox"/>
Library	VA <input type="checkbox"/>	A <input type="checkbox"/>	I <input type="checkbox"/>	VI <input type="checkbox"/>	NA <input type="checkbox"/>
Laboratory	VA <input type="checkbox"/>	A <input type="checkbox"/>	I <input type="checkbox"/>	VI <input type="checkbox"/>	NA <input type="checkbox"/>
Laboratory equipment	VA <input type="checkbox"/>	A <input type="checkbox"/>	I <input type="checkbox"/>	VI <input type="checkbox"/>	NA <input type="checkbox"/>
Furniture	VA <input type="checkbox"/>	A <input type="checkbox"/>	I <input type="checkbox"/>	VI <input type="checkbox"/>	NA <input type="checkbox"/>
Other resources (charts, maps)	VA <input type="checkbox"/>	A <input type="checkbox"/>	I <input type="checkbox"/>	VI <input type="checkbox"/>	NA <input type="checkbox"/>
Farm tools for agriculture	VA <input type="checkbox"/>	A <input type="checkbox"/>	I <input type="checkbox"/>	VI <input type="checkbox"/>	NA <input type="checkbox"/>

Others (specify)

VA [] A [] I [] VI [] NA []

6. Among the resources indicated above, which one(s) affect academic performance in your school most?

.....
.....

7. What do you suggest should be done to improve the state of teaching and learning resources in your school?

.....
.....

SECTION C: INSTRUCTIONAL POLICY AND PERFORMANCE

Please tick where appropriate

1. (a) Do you have departmental meetings to plan for term activities Yes []
No []

b) If yes highlight some activities which you plan

.....
.....

2. a) Do you plan school academic activities like examinations date in a staff meeting

Yes [] No. []

b) How many exams do you have in a term?

One [] Two [] Three []

3. How are your exams marked Individual [] Team work []

4. Tick the school policy / policies adapted in your school while teaching

Horizontal teaching Yes [] No []

Vertical teaching Yes [] No []

Block teaching Yes [] No []

Multiple grade teaching Yes [] No []

Shift teaching Yes [] No []

5. What is the average class size in your school?

- (i) Below 20
- (ii) 25 – 35
- (iii) 35 - 45
- (iv) 45 - 55
- v) Above 55

6. State existence of the following students' documents

- a) Exercise book Yes No
- b) Diary Yes No
- c) Experiment book Yes No
- d) Assignment book Yes No.
- e) Personal file Yes No.
- f) Student revision time table Yes No.

7. From your own opinion does your school have policies in the following:-

- a) Exam setting Yes No
- b) Exam marking and analysis of result Yes No
- c) Selection of subjects Yes No
- d) Department meetings Yes No
- e) Teacher development Yes No
- f) Remedial teaching for the weak students Yes No

8. How do teachers compensate for lessons missed?

Immediately At the end of term Never compensated

9. In your own opinion is there good culture for teaching / learning in your school

Yes No

If yes, to what extent does it help in the school examination performance?

Very much Reasonably Very little

Thank you for filling the questionnaire.

APPENDIX IV: QUESTIONNAIRE FOR STUDENTS.

The purpose of this questionnaire is to gather information for a research on “school-based factors that influence performance in KCSE in secondary schools in Murang’a South District, Kenya.” Your response will be accorded great confidentiality hence do not write your name or the name of your school.

PART A

Tick or comment appropriately.

1. What is your gender? (a) Male [] (b) Female []
2. What is your class? (a) Form III [] (b) Form IV []
3. What suggestions can you make to your head teacher as one way of helping to improve performance in KCSE in your school?

5. Tick appropriately
 What was your position in your class in the last exam?
 a) 1 - 10 d) 31 - 40
 b) 11 - 20 e) Over 100
 c) 21 - 30

Indicate your exam grade in your last exam
 A.....
 B
 C.....
 D.....
 E

PART B

- This section is about your school
6. Do teachers attend their lessons punctually?

Yes

No

7. Do teachers offer individual remedial teaching regularly?

Yes

No

8. How often are your exercise books checked / marked by your subject teachers?

Often Rarely Not at all

9. (i) Are the following facilities available in your school?

a) Library Yes No

b) Laboratory Yes No

c) Computer Laboratory Yes No

ii) Do you think the facilities are well utilised?

Yes No

10. Does your school allow you to select the optional subjects?

Yes No.

11. a) How many exams are given in a term

One

Two

Three

None

b) After exams, do class teachers discuss exam results with their classes

Yes

No

12. a) Do you have academic clinics in your school

Yes

No

b) If the answer is yes how often are academic clinics carried out in a year

Once Twice Thrice

c) What is your view towards academic's clinics in performance improvements?

APPENDIX V: OBSERVATION SCHEDULE

- a) Nature of the school Day school
District
Provincial
National

b) Physical facilities

Presence of the following

- (i) Enough classmates Yes No
(ii) ICT equipments Yes No
(iii) Library Yes No
(iv) Laboratories Yes No

c) Nature of classroom

- (i) Adequate spaces Yes No
(ii) Adequate furniture Yes No
(iii) Presence of resources like charts, maps. Yes No

d) Teachers

- a) Use of text books while in class Yes No
b) Presence of lesson notes Yes No
c) Presence of lesson plan Yes No

e) Students

- a) Use of text books
b) Utilization of laboratories, computer room
c) Movement of students i.e. slow, fast, fairly fast.

APPENDIX VI: RESEARCH PERMIT

REPUBLIC OF KENYA



NATIONAL COUNCIL FOR SCIENCE AND TECHNOLOGY

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NCST/RR/12/1/SS-1/664/5

Date:

24th May, 2011

Wilson Mwaniki Mwingi
University of Nairobi
P. O. Box 30197
NAIROBI

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on "School based factors' influence on student performance in Kenya Certificate of Secondary Education in Murang'a South District, Kenya" I am pleased to inform you that you have been authorized to undertake research in Murang'a South District for a period ending 31st December, 2011.

You are advised report to the District Commissioner & the District Education Office, Murang'a South District before embarking on the research project.

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

A handwritten signature in black ink, appearing to read 'P. N. Nyakundi'.

P. N. NYAKUNDI
FOR: SECRETARY/CEO

Copy to:

The District Commissioner
Murang'a South District

The District Education Officer
Murang'a South District