

**INFLUENCE OF SELECTED FACTORS ON THE ACADEMIC PERFORMANCE  
OF SECONDARY SCHOOL STUDENTS IN  
KURESOI SUB-COUNTY, NAKURU COUNTY, KENYA**

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the Requirements for the Award of the Degree of Master of Education in Educational  
Management of Egerton University**

**EGERTON UNIVERSITY**

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## DECLARATION AND RECOMMENDATION

### Declaration

This research project is my original work and has not been presented for the conferment of a degree or award of a diploma in this or any university

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### Recommendation

This research project report has been submitted for examination with my approval as the University Supervisor

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## **DEDICATION**

This research project is dedicated to my Wife, Ruth Mburu, sons; Hillary, Vincent and Felix and parents.

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## ABSTRACT

Education stakeholders invest a lot of resources in order to improve the academic performance of the students. These resources are both human and materials which are usually scarce. Education investment must therefore maximize their use in order to get maximum returns. Although education is not merely passing examinations, performance grades are the most widely used indicator of quality education attainment. In Kenya, national examinations are considered to be appropriate measure for assessing the output of an education system on knowledge and skills acquired by students. However, despite the many efforts by the stakeholders and the government to improve the academic performance of students, Kuresoi sub-county continues to post poor results in the Kenya Certificate of Secondary Education (KCSE). This study therefore examined the influence of quality of teachers, home environment and school facilities on the performance of students in Kenya Certificate of Secondary Education in Kuresoi sub-county. The study adopted a descriptive survey research design. A population of 1600 students and 320 teachers were targeted by the researcher. Stratified random sampling was used to sample 310 students and 175 teachers. Two instruments were used to collect data: Teachers' Questionnaire (TQ) and Students' Questionnaire (SQ). The instruments were checked for construct and content validity by a team of experts from the Department of Curriculum experts, Instruction and Educational Management of Egerton University. The data collection tools were pilot tested for reliability in three schools in the sub-county, with similar characteristics as the target schools. Internal consistency was calculated using Cronbach's alpha coefficient and was found to be 0.79. The data was analyzed using a Statistical Package for Social Scientists (SPSS version 17.0) for Windows. The analyzed data was summarized and described using frequencies, percentages and means. Hypotheses were tested at 0.05 level using the Pearson correlation. The findings of the study showed a statistically significant relationship between school facilities, home environment and the students' academic performance. There was no statistically significant influence between quality of teachers and students' academic performance. The findings of the study could facilitate school administrators, teachers, parents and the government of Kenya to formulate policies that may improve the education standards in Kenya and in Kuresoi sub-county in particular.

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## **LIST OF ABBREVIATIONS AND ACRONYMS**

<b>CAT</b>	Continuous Assessment Test
<b>DEO</b>	Sub-county Education Officer
<b>EFA</b>	Education For All
<b>EMSK</b>	Education Management Society of Kenya
<b>FPE</b>	Free Primary Education
<b>FSE</b>	Free Secondary Education
<b>GOK</b>	Government of Kenya
<b>KCSE</b>	Kenya Certificate of Secondary Education
<b>KNEC</b>	Kenya National Examinations Council
<b>MOEST</b>	Ministry of Education Science and Technology
<b>ROK</b>	Republic of Kenya
<b>SPSS</b>	Statistical Package for Social Science
<b>SQ</b>	Students Questionnaire
<b>TQ</b>	Teachers Questionnaire
<b>UNESCO</b>	United Nations Educational, Scientific and Cultural Organization
<b>UNICEF</b>	United Nations Children Fund
<b>USAID</b>	United States Agency for International Development
<b>EPF</b>	Education Production Function

# CHAPTER ONE

## INTRODUCTION

### 1.1 Background of the Study

Universal Declaration of Human Rights of 1948 identified education as a fundamental human right. Kenya is signatory to various international protocols such as Education For All (EFA) passed in Jomtien, Thailand in 1990 and the World Education Forum in Dakar Senegal in 2000. This is why the Government of Kenya (GOK) has been providing Free Primary Education (FPE) and Free Secondary Education (FSE) since 2003 and 2008 respectively. Despite the efforts made in the education sector over the last ten years, students' performance in Kenya Certificate of Secondary Education (KCSE) in Kuresoi Sub County has not improved. Chapman and Carrier (1990) posited that lack of education perpetuates poverty in developing countries. They further observed that development assistance programmes are discouraged where mass of population is without basic skills of literacy and numeracy (Munda & Tanui, 2010). They also noted that the capacity of education to lower fertility has a multiplier effect on the quality of nation's human resource for many generations to come. When fertility drops, the number of children drops hence fewer dependants. They added that changes in the world are resulting to mismatch between education output and needs of the society. Students who performed poorly in the past ended up doing semi-skilled jobs. However, nowadays these jobs are scarce due to modernization and technology. Although education is not merely passing examinations, grades attained in them are the most widely used indicators of education attainment and national examinations are considered to be appropriate measure for assessing the output of an education system on skills acquired (Republic of Kenya, 2002).

Lockheed and Verspoor (1991), while supporting the value of education, stated that in the developing nations, adults who have higher levels of education have better paying jobs, higher earnings and greater agricultural productivity (Lockheed & Verspoor, 1991). Scholars have identified and documented the benefits of education as: improving the productive capacity of society, reducing poverty by mitigating its effects on population, health and nutrition, increasing the value and efficiency of labour offered by the poor, enhancing democracy and good governance among others (Schultz, 1961; Psacharopoulos & Woodhall, 1985). Since independence in 1963, Kenya has endeavored to provide quality education to

help her people. The report of Kenya education commission (Republic of Kenya, 1964) and the report of the National Committee on Educational Objectives and Policies (Republic of Kenya, 1976) recommended free education for social economic growth of the country. Education is viewed as an important tool for self-enhancement. It is commonly believed that educated people are better of socially and economically in terms of productivity (Asuga, 2002)

The World Bank (2002) conducted a regional study of Africa and asserted that secondary education is crucial for economic growth. Globalization, communication and technology in the 21st century, rapid technological change have made knowledge essential for competing in the world economy. According to this study, secondary education can provide countries with skills and knowledge needed for economic growth, increasing further learning and training of professional such as technicians, scientists and entrepreneurs. Secondly, secondary education helps to socialize young people targeting the youth. This age group has the greatest potential for changing its behaviour; secondary education can be decisive in fostering positive social and civic values. The World Bank further assert that secondary education yields considerable returns, offering young people the chance to acquire attitudes and skills that are unlikely to be developed in the primary grades. This in turn enables the youth to develop job-oriented skills, participate fully in society, take control of their own lives, and continue learning (World Bank, 2002).

The secondary cycle is an important level of education because it is the transitional stage during which the youth of ages 14 and 18 years are prepared to join tertiary education and training thereafter, the world of work. The value attached to this level of education is reflected by the attention it receives from the Kenyan government, parents and the public in general. For instance, the Government's expenditure on education rose from Kenya Shillings (KShs) 73.48 million in 1963 to Ksh. 149.4 billion in 2011/12 financial year (Republic of Kenya, 2011). In the same financial year, KShs 18.5 billion (12.38%) of the Ministry of Education's (MoE's) total expenditure was allocated to Government funded tuition secondary education.

The main method of assessing whether secondary school education has achieved its objectives is through assessment. Students are evaluated throughout the secondary school cycle using class assignment, continuous assessment and end-term tests to determine the progress of each student (UNESCO, 2005). Academic achievement is also assessed through

national examinations results. Good performance in national examinations determines the destiny of the high school students. Failure means that future opportunities for proceeding with educational and finally landing in good jobs are shattered, while passing opens avenues for future advancement in education, career and job opportunities.

In Kenya, secondary school students sit for a national examination administered by the Kenya National Examination Council (KNEC) that leads to the Kenya Certificate of Secondary Education (KCSE) at the end of the fourth year. The results of this examination are graded using a one to twelve points scale where the lowest grade E is 1 point and the highest grade A is 12 points (Kenya National Examinations Council., 2011). The examination is used for certification purposes and selection of students for universities courses and training in post-secondary institutions (Republic of Kenya, 2005). The examination thus ushers students to higher education training and direct entry into the world of work.

Students' performance in the KCSE at the national level has been poor over the years. For example, in 2008 a total of 262669 candidates sat for the Kenya Certificate of Secondary Education (KCSE) examinations, out of this number, only a small percent (29%) got grade C+ and above and thus met the minimum requirement for admission to public universities (Ministry of Education., 2010). Most of the candidates (71%) performed poorly as they got grade C and below and hence did not meet the minimum university entry requirement (MOE, 2010). There was a slight improvement in 2010 because, out of the 307,171 candidates who sat for the KCSE, 97,134 (32%) obtained C+ and above, and 201,037 (68%) got grade C and below (Siringi, 2011).

Students' achievement in KCSE in Kuresoi Sub County has also been poor since 2010 as most of them attained grades that are lower than C+. Data obtained from the Sub-County Education Office (DEO) in Kuresoi indicate that the mean grade of most of the students is below C+ as shown in Table 1.

**Table 1**  
**Performance of Kuresoi Sub County Secondary School Students in KCSE 2009 - 2012**

Grade	2009		2010		2011		2012	
	N	Percentage	N	Percentage	N	Percentage	N	Percentage
A	4	0.34	2	0.40	4	0.22	1	0.08
A-	9	0.76	27	1.80	16	1.04	27	1.07
B+	28	2.37	47	3.35	61	4.54	51	3.4
B	53	4.50	66	4.71	80	5.11	101	6.3
B- to C+	165	13.98	206	14.81	220	14.18	260	16.38
C to D+	535	45.34	645	46.13	699	44.34	750	47.11
D and below	386	32.71	404	28.80	482	30.57	410	25.66
Total	1180	100%	1397	100%	1562	100	1600	100

DEO's Office Kuresoi (2012)

The data in Table 1 reveal that students' academic performance for the years 2009 to 2012 has generally been low. For example, only 24.78% of the students attained a mean grade of C+ and above in years 2009 and 2012. The Sub County's performance was thus far below the C+ mean grade which is necessary for students to be admitted for courses in Kenya public universities. According to Eshiwani (1983), poor performance leads to undesirable wastage through dropouts and repeaters. He goes further and points out that poor results jeopardize student's opportunities for future job placement and reduce his/ her chances of meaningfully participating in national development.

Studies show that academic performance of students is dependent on many factors (Glewwe, Kremer, & Moulin, 2008), Dessarollo, (2007) noted that teaching methods, teacher factors, leadership, the environment of the student and motivation positively affects performance. Dossett and Munoz (2003) pointed out that students' academic achievement is influenced by three major factors; school-related factors, student-related factors, and teacher-related factors. Goldhaber (2004) observed that the most important factors that contribute to students' academic achievement are teacher related factor. Buhere (2007) found that the quality of leadership also plays a vital role in students' achievement as it is concerned with teachers, pupils, rules, regulations and policies that govern the school. Students' performance in KCSE in Kuresoi Sub County is an issue that requires urgent attention from educators and



researchers. The poor performance may perhaps be due to factors such as school facilities, quality of teachers and students' home environment. This study examined the influence of these three factors (school facilities, quality of teachers, and students' home environment) on students' performance in KCSE.

### **1.2 Statement of the Problem**

Students' KCSE performance in Kuresoi Sub County has generally been poor since 2010 when the sub county was established. In 2013, the Sub County ranked 163 out of 280 in Kenya, this trend is of great concern to parents, teachers and educators in the Sub County as it denies students the opportunity to continue with schooling through the formal system of education. Literature reveals that students' academic performance is influenced by factors such school facilities, teaching methods, leadership, motivation, teacher quality and their home environment. The dismal academic performed of students in the Sub County may perhaps be due to these factors. This study determined the influence of school facilities, quality of teachers, and students' home environment on their performance in KCSE.

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

The purpose of the study was to investigate the influence of school facilities, quality of teachers and students home environment the performance of students in KCSE examination in Kuresoi Sub County Sub-county.

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

The objectives of the study were to:

- i) Examine the influence of school facilities on the students' academic performance in KCSE in secondary schools in Kuresoi Sub-county.
- ii) Determine the influence of teachers' quality on the students' academic performance in KCSE in secondary schools in Kuresoi Sub-county.
- iii) Determine the influence of home environment on the students' academic performance in KCSE secondary schools in Kuresoi Sub-county.

### **1.5 Research Hypotheses**

- i) There is no significant relationship between teaching-learning facilities and secondary school students' academic performance.
- ii) There is no significant relationship between the quality of teachers and students' academic performance.

- iii) There is no significant relationship between students' home environment and their academic performance.

### **1.6 Significance of the Study**

The findings of the study are expected to sensitize school administrators, policy makers and curriculum planners in enhancing academic performance in secondary schools in Kuresoi Sub County and Kenya in general. The study may provide empirical data on influence of school facilities, quality of teachers and students home environment on their performance. The findings of the study may provide literature to future researchers and help in identifying priority areas in which to carry out research.

### **1.7 Scope of the Study**

The study was conducted in Kuresoi Sub-county and covered all public secondary schools. It involved one hundred and one fifty-eight (164) teachers and two hundred and seventy-six (276) students. The study only examined influence of school facilities, quality of teachers and students' home environment on their academic performance.

### **1.8 Limitations of the Study**

The researcher encountered the following limitations during the study:

- i. The records at Kuresoi Sub County Education Office were not up-to-date since Kuresoi Sub-county is fairly new.
- ii. Accessibility to some schools was a major challenge due to poor infrastructure but more resilient modes of transport such use of boda boda was adopted to enhance accessibility.

### **1.9 Assumptions of the study**

In conducting this study, the researcher made the assumptions that respondents gave honest and reliable information when responding to items in the questionnaires.

### **1.10 Definitions of Terms**

The following are the definition of key terms used in the study.

**Academic performance:** Refers to how student accomplish different academic tasks at the end of the term examinations. In this study KCSE mean grades is used as the measure of academic performance

**Home Environment:** In this study it refers to the conditions that the students are exposed to when they go home.

**Influence:** This refers to the capacity to have an effect on the character, development or behavior of someone or something. In this study this refers to the relationship between the different variables studied

**KCSE:** This is the examination given to the students at the end of secondary school cycle of education in Kenya.

**School Facilities:** Physical facilities and learning resources available in school, such as library, classrooms, chairs and desks.

**Teacher Quality:** In this study teacher quality is expressed in terms of highest academic qualification and teaching experience in years.

## CHAPTER TWO

### LITERATURE REVIEW

#### 2.1 Introduction

This chapter reviews related work done in this area of study. It covers factors that impact on educational achievement of a learner as gauged through public examination results. These factors include, school facilities, quality of teachers, discipline of students, home environment and inability to meet basic needs at home.

#### 2.2 School Facilities and Academic Performance of Students in National Examinations

The availability and use of teaching and learning materials influence effectiveness of a teacher's lessons (Tamakole, Amedahe, & Atta, 2005). The creative use of a variety of media increases the probability that the student would learn more, retain better what they learn and improve their performance on the skills that they are expected to develop. Young children are capable of understanding abstract ideas if they are provided with sufficient materials and concrete experiences with the phenomenon that they are to understand (Gay, 1996).

Providing students with textbooks improves their academic performance. Textbook provision is almost universally accepted as an effective education policy, even by those who doubt the effectiveness of increased school spending (Glewwe, Kremer, & Moulin, 2008).

The adequacy and use of teaching and learning materials affects the effectiveness of a teacher's lesson. Teaching and learning resources enhances understanding of abstract ideas and improves performance. There is also undue delay in delivering the supplies to the schools and the students may go halfway the term without any writing materials. Textbooks issued are usually shared between two or three students hence they use them alternatively. This creates a problem if the book gets lost or the person with it decides to move to another school, as it is common. This would leave the other members without a textbook. The parents, even the able ones, do not buy any extra books for their children, as they believe everything should be provided for. Shortage of classrooms has also been identified as determinants of academic performance. This leads to overcrowding of students. Studies have indicated that schools with smaller class sizes perform better academically than schools with large class sizes.

Kraft (1994) in his study of the ideal class size and its effects on effective teaching and learning in Ghana concluded that class sizes above 40 have negative effects on student's

achievement. Since children have differences in motivation, interests, abilities and that they also differ in health, personal and social adjustments and creativity generally good teaching is best done in classes with smaller numbers that allow for individual attention (Kraft, 1994).

Research shows that overcrowding causes a variety of problems and the findings indicate that students in overcrowded schools and classrooms do not score as high on achievement tests as students in non-overcrowded schools and classrooms. Corcoran and Chau (1988) reported that overcrowding resulted in a high rate of absenteeism among teachers and students. For the teachers overcrowding results in stressful and unpleasant working conditions (Corcoran & Chau, 1988). Overcrowded schools and classes are noisier, and create more non-instructional duties and paperwork and that without question, they inhibit teaching and learning (Rivera-Batiz & Marti, 1995).

School libraries are also a powerful force in schools. The school library is one of the few facilities whose contribution to academic achievement has been documented empirically, and it is a contribution that cannot be explained way by other powerful influences on student performance (Rivera-Batiz & Mart, 1995).

### **2.3 Teacher Quality and Performance of Students in National Examinations**

A teacher who does not have both the academic and the professional qualification would undoubtedly have a negative influence on the teaching and learning of his/her learners (Sader & Sader, 2000) However, a teacher who is academically and professionally qualified, but works under unfavorable conditions of service would be less dedicated to his work and thus be less productive than a teacher who is unqualified and works under favorable conditions of service (UNESCO, 2005). According to Wango (2010) effective supervision of instruction can improve the quality of teaching and learning in the classroom. Academic performance was better in private schools than public schools because of more effective supervision of work (Wango, 2010).

Kinyanjui (1979) observes that the caliber of teachers in any school system form an important input variable which can have tremendous impact on school outcomes. In a country like Kenya where the language of the school is not necessarily the native language of the child, the ability of the teacher to impart language skills is critical for the success of schooling child (Kinyanjui, 1979). The teachers' role is to create a bridge between two different environments with a clear objective of incorporating the pupils into the world of school. It is

in this context that the distribution of qualified teacher should be carefully assessed. Maundu (1986) postulates that teacher qualifications have significant effect on pupils' performance in science and mathematics. He attributed the good performance of the provincial school in Kiambu Sub County to excellent instruction given by qualified teachers in addition to their inputs. The study was based in schools which had high quality inputs emanating from historical, economic, political and social backgrounds (Maundu, 1986).

The level of training of teachers has also been found to have a significant effect on performance of their students. Lockheed (1991) observed that performance largely depends on teacher qualification alongside other qualities (Lockheed & Verspoor, 1991). Glewwe, Kremer and Moulin (2008) noted that teacher factors such as qualification and experience affects the academic performance of their students. However, Gachoka (2008) found out that in Kenya at upper secondary, teachers experience showed no significant effect on pupils' performance (Gachoka, 2008).

Teacher commitment has also been identified as a factor that influences performance. A highly committed person puts in the maximum effort in his or her job. Tamakole *et al.* (2005) found out that several factors produced motivation and job satisfaction (Tamakole, Amedahe, & Atta, 2005). Lack of commitment produces poor attendance and unprofessional attitudes towards students, which in turn affect their academic performance (Lockheed & Verspoor, 1991). Good performance is as a result of high commitment levels by the teachers. Ubogu (2004) asserts that teachers who lack enthusiasm are unable to teach effectively, making pupils not to learn well (Ubogu, 2004). This could be a contributing factor to poor performance by the pupils in national examinations.

A study conducted in Migori Sub-county, Kenya by Ochieng (2001) established that motivation is fundamental to successful operation of any institution. For a school to realize its objectives, the students and staff must be motivated. Despite the Kenya government's attempts to motivate teachers, low motivation among teachers is still a challenge. This negatively affects teaching and learning (Ochieng, 2001). (Gatheru, 1987)

Gatheru (1987) in a study on the factors that contribute to job satisfaction and dissatisfaction among secondary school teachers in Nyeri municipality indicated that in 1964 there was a high staff turnover in the teaching profession. People moved from teaching to other professions which offered better terms of services including salaries. This led to decline of

educational standards. This happened on time when the government required qualified teachers in the formally European managed schools.

#### **2.4 Home Environment and Academic Performance of Students in Examinations**

Students capability and motivation to learn are deemed by the quality of home and school environment, the students' health, nutrition status and previous learning experiences, including the degree of parental stimulation. The principle source of children's capacity and motivation to learn is the family through domestic endowment and the direct provision of nutrients health care and stimulus (Handley, Higgins, Sharma, Bird, & Cammack, 2009). A study by Clarissa (1992) in Barbados examined home environmental factors that have a positive influence on achievement of secondary students. She observed that family stability, unity, and security had a positive influence on school achievement. According to Desarrollo (2007) in Latin America the extent to which parents or other family members are actively engaged in a student's education had a positive influence on student achievement.

According to Buhere (2007) parental contribution to the children's academic performance put emphasis on the attitudes and expectations of the parents, which in turn help the children to perform well. He said parents attitudes not only have influence on their children's performance but also influence the type of subjects they have to study in order to fulfill the expectations (Buhere, 2007). Home background therefore affects student's academic performance as asserted above, however there are some students from the poor background who perform well and even better than students from good home background.

One of the critical issues concerning education in developing countries including Kenya is the distraction from schooling that children come across. Some children have to contend with pressing poverty at home that can be realistically alleviated by taking advantage of opportunities for immediate employment in the agricultural sector (Harbison & Hanushek, 1992).

Fuller (1990) argues that where there is frequent lack of support from parents, students tends to progress slowly through the grades and drop out of school before the prescribed period of compulsory attendance is completed. Japan and USA studies reveals that pupils later performance is higher where parents encourage them to achieve, expect earlier mastery of skills, and ask questions rather than prescribing actions that children should take (Wamalwa, 2008).

Inability to meet basic needs at home also contributes to low levels of educational attainment in Africa. Poor children spend more time contributing directly or indirectly to household income than other children. As a result they are less likely to spend this time at school work, are more likely to be absent from school during periods during peak labour demand and are more likely to be tired and ill prepared to learn when they are in the classroom (World Bank, 2000).

Buhere (2007) holds the view that success in learning a subject by the students relates closely to the learners asocial background. He goes on to say that children of the white collar jobs and middle class parents have the greater chance of success than those of the blue collar jobs who have the least incomes. In line with the above view Sen Barat (1992) in his studies found out that students who exhibit a high level of motivation tend to come from higher social-economic status families and they perform better (Sen Barat, 1992). Gachoka (2008) held that because of poverty, children go to school hungry. Although reliable estimates on the number of children who come to school every day feeling hungry do not exist, short-term or temporary hunger is unquestionably a pervasive condition in developing countries. In a school setting, temporary hunger commonly occurs when children come to school without having eaten breakfast (Gachoka A. , 2008). The result is short-term fasting and a child is more easily to be distracted by irrelevant stimuli (Pollitt, Ernesto, Liebel, & Greenfield, 1983) (1983). Because hunger appears to cause inattentiveness, it is likely to influence school performance and learning.

## **2.5. Other Factors Influencing Performance of Students**

The Literature reviewed above shows that students' performance is influenced by factors such as self-concept and non-school related factors such as students' cultural background and the way schools are administered (Desarrollo, 2007).

### **2.5.1 Self-Concept and Academic Achievement.**

Educators believe that an understanding of what is involved in self-concept and of what it is, is essential if education is to achieve its ultimate goal: the development of man's fullest possible potential. The individual is the focus and the point of departure in terms of experiencing the world and acting upon it is adverse and complex nature (Reck, 1980). From the point of view of humanistic psychology, as expounded by Maslow (1954) and Rogers



(1969), the importance of self-concept is viewed as the hall-mark not only of academic achievement but, more broadly, of the healthy person .

Reck (1980). Numerous studies linking self- concept and academic achievement in subjects such as language and Mathematics and examination performance generally have been carried out in Africa and elsewhere. Omizo, et al (1981) carried out a study with a sample of 296 Mexican- American standards seven students. The purpose of the study was to relate students' self-concept and their performance in Total Language (vocabulary, spelling, grammar and reading comprehension), Total Mathematics (Mathematical concepts, application and computational skills) and their composite scores on the lower tests and basic skills (total level of development and achievement including work and study skills). One of the reasons for this study was a review of literature, which had shown that poor academic performance by Mexican- American students was a function of low self-concepts. The study showed that more male subjects (168) than female subjects (128) had a high level of self-concept and that performance on the tasks was linked with a positive self-concept. Similarly, Song and Hattie (1984) studied self-concept among 537 and 611 Korean boys and girls respectively. The subjects were randomly selected from schools in Seoul and ranged in age of 14 to 15 years. The relationship between the self-concept and academic performance was greater among boys than girls. On the other hand, other studies have observed no distinction between male and female self-concept (Ezeilo, 1983). They point out that in single sex schools no significant difference was observed between boys and girls, whereas in co-educational schools, sex differences are accentuated in the direction of traditional sexual stereotypes. In his study of 226 male and female in Nigerian secondary, tertiary and university ranging in age from 14 to 50, Ezeilo (1983) observed that male and female subjects' self-concept were comparable and not significantly different. Similar results are reported by Wolf and Blix (1981) for their study of 2429 subjects drawn from standard 1 to 8. The study showed that a pupil's attitude to Mathematics serves as a predictor of his performance in Mathematics. Central to this finding is self-concept in the sense that a person with a positive self-concept is more likely to lead to good performance. Interestingly enough, the study showed that achievement in Mathematics, or any other subject for that matter, is determined by one's attitude to the subject rather than one's attitude being determined by one's achievement in the subject. Shavelson and Bolus (1982) elaborate that self-concept is a moderation and possibly a cause of academic achievement.

Schofield (1981) noted that academic achievement, particularly in Mathematics is significantly influenced by attitudes of the learners. It is argued that children who enjoy a given subject are likely to spend more time and energy gaining mastery of the subject. As a result, they are reinforced by the success they achieve, which in turn continues to reinforce them to perform well in the subject. Such interest can be facilitated by the teacher's interest too.

### **2.5.2 Non-School Related Factors**

Basically, the academic achievement of a pupil is determined by two factors: He's will to achieve and his ability to achieve (Ansu, 1984). Both these may be influenced directly by the school the pupil attends. A number of social factors have a bearing on the student's will and ability to perform well in the academic field. Some of these factors according to Ansu (1984) are:

- The subculture of the ethnic community to which the pupil belongs, be it race, tribe, linguistic community or religious group.
- the pupil's social class or stratum
- the family's and
- pupils peer group

All these are likely to expose the pupil to certain attitudes, values (defined as the basic principles in life which guide an individual thoughts and actions), and levels of aspiration. The social stratum class and the family provide, in addition, a certain type of material environment, depending on the income and wealth with which they are associated.

### **2.5.3. Sub-Culture of the Ethnic Community**

The sub-culture of an ethnic group may have some influence on the academic performance of the students because it may be instrumental in transmitting certain ideas and attitudes affecting motivation and levels of aspirations; personality traits that may bear on academic ability and linguistic expressions and logical concepts which mediate the learning process. Research findings in Nigeria among the Ibo reveal that culture that emphasis on individual achievement and initiative; and one with a preference for egalitarian leadership, are values that produce persons who are likely to strive for high income, statues and political power through their own efforts, and by the manipulation of newly introduced opportunities in the field of education and economy.

On the other hand, a culture that emphasizes traditional values such as submission to established authority and rejection of innovation results in individuals who are less motivated to seek personal achievement outside the traditional community, or even make use of new opportunities available within it. An example of this comes to Kenya where, in the two Sub-Counties of Narok and Kajiado in the Rift Valley, the utilization of educational opportunities has been assessed with reference to primary school enrolment of the Kikuyu, the Kipsigis and Maasai. The assessment reveals that Maasai enrolment lags far behind that of other ethnic groups despite various compensatory measures (such as provision of boarding facilities and the waiving or at least the lowering, of schools fees in some cases) which have been in force in Maasailand for several decades.

In the Northern Nigeria state of Bauchi, a sum of 200 000 was set aside especially for educating the children of nomad Fulani herdsmen. Education, in this case is tied up with the question of settling the nomads on a more permanent basis. The government of the state attempted to settle the Fulani by providing them with grazing land. In spite of such efforts, only limited success was achieved.

A report by UNESCO (1995) reveals that many cultural factors hinder the education of girls. In countries where girls marry at the age of 12 or 13 years, the school is considered as a hindrance to the normal development of the young girl. School enrolment for girls in Nigeria for example is a case in point. Here, cultural traditions for example, early marriage are in conflict with the school as an institution. The high rate of school dropout which occurs very early in the first years of learning is a form of resistance against coercive methods used in the schools (UNESCO, 1995).

Wamahiu & Mwiria (1995) in a study in Kwale Sub-county, Coast Province of Kenya found that undertakings of traditional roles by girls led to their irregular attendance of school and interfered with participation in school activities. The same study also established that several factors in traditional education among the Digo of Coast province acted as barriers to effective participation in formal education of students (Wamahiu & Mwiria, 1995).

#### **2.5.4 The Social Stratification/social Class and Family**

One of the most important social factors that bear on academic achievement is the system of social stratification in a given country. Social stratification refers to the arrangement of members of society into categories and groups based on superiority and inferiority in terms of

a specific criterion. Thus with reference to income earned, economic factors is significant in educational achievement of students. Society is characterized by inequalities of wealth and other aspects. Such economic differences are accompanied by different material conditions, life styles, social prestige, ideas and attitudes, language use, and even patterns of infant and childcare all of which have a bearing on academic achievement. Of course, the school operates to some extent as a counterweight to the family (Ansu 1984).

Tyler (1977) cited in Ayoo (2002) argues that social-economic background of students tend to influence their achievement. They maintain that students whose parents are educated tend to provide environments conducive for learning. They are also encouraged by their parents to study and read relevant books and literature (Ayoo, 2002). Ndiritu (1999) noted that children from well to do socio-economic background tend to do better. This is as a result of high incomes of parents which enable them to buy supplementary textbooks and other study materials (Ndiritu, 1999). Choice of school according to her study was found to be a main determinant of educational achievement.

According to UNESCO (1995), other economic aspects that have implications on academic achievement relate to high birth rates in agrarian societies, which give rise to both cultural and economic problems. In certain countries, generally where income is low, the education of the young girls is seen as waste of resources, since the time spent in school could be invested in domestic work or paid employment. In Gambia, ten percent (10%) of children who leave primary school have to occupy themselves with the care of sisters and brothers. In Mauritania, Senegal, Mali, Algeria and Chad, girls work as house maids in the large towns and are expected to take care of their own needs, as well as supplement family income. Kenya similarly is affected. The East African Standard daily newspaper of November 24<sup>th</sup> 1988 reported the Ministry of Foreign Affairs arguing that the withdrawal of government subsidies in secondary schools had left hundreds of children out of school. The paper noted further that at the end of the 20<sup>th</sup> century, most of African children would be out of school because their parents would not afford the rising costs of education. Hard economic time and structural adjustment programmes have made the situation even worse.

Ansu (1984) points out that the family can help or impede the process of education due to size of the family and the nature of relations within it. The family size is said to affect the learning process of the child at home because it is assumed that the larger the family the less attention the parents can give to the individual children. Relations within the family may also

influence the child's mental health and personality traits, which will be closely related to the child's academic achievement. A broken home can prove to be a great obstacle to a child's ability and motivation to succeed academically. It may disturb the child psychologically and emotionally, deprive him or her of valuable parental help, encouragement and guidance, and lead the child ultimately to seek psychological assistance and security outside the family for example, with the peer group of dropouts, a breeding ground for juvenile delinquency.

### **2.5.5 School Administration**

The quality of school administration plays a vital role in academic performance as it is concerned with pupils, teachers, rules, regulations and policies that govern the school system. The following aspects were looked into: Frequency of staff meetings, frequency of checking teachers. schemes of work and lesson plans, adequacy of teachers, prior preparation, frequency of class observation by the Head teacher to determine the efficiency of school administration for these factors may directly impacts on the performance of the students (Kathuri N. J., 1986).

## **2.6 Theoretical Framework**

The theory of the firm guided study. The theory was developed by Cyert and March (Gavetti, Greve, Levinthall, & Ocasio, 2012). This theory is relevant in this study because modern theories of economic growth have focused on developing human capital as an endogenous factor that could accelerate technological progress towards economic growth. This is made on the basis that the behaviour of the people responsible for accumulation of factors of production and knowledge can be modified by policy through education. Education allows the whole production process to benefit from positive externalities so that it becomes more efficient, educated people are more likely to innovate and spread the benefits of education to their co-workers who learn from them and also become more productive thus a rise in levels of education causes a rise in all factors of production. Formal education and family help impart many skills beyond literacy and numeracy (Wango, 2010). Other abilities that are gained include discipline, taking pride in personal work, being flexible, open minded and willing to co-operate. What is learnt in school assumes even more importance because of increased global competition, marked by rapid movement of capital and new technologies from country to country. In such situation it is claimed that a country's level of productivity and ability to compete depend greatly on workers and management skills in using capital and technology efficiently and effectively (Ministry of Education., 2010). Thus the skilled people become the only sustainable and at a competitive advantage that any nation can have. The theory of the firm provides a framework for the analysis of educational inputs in relation to

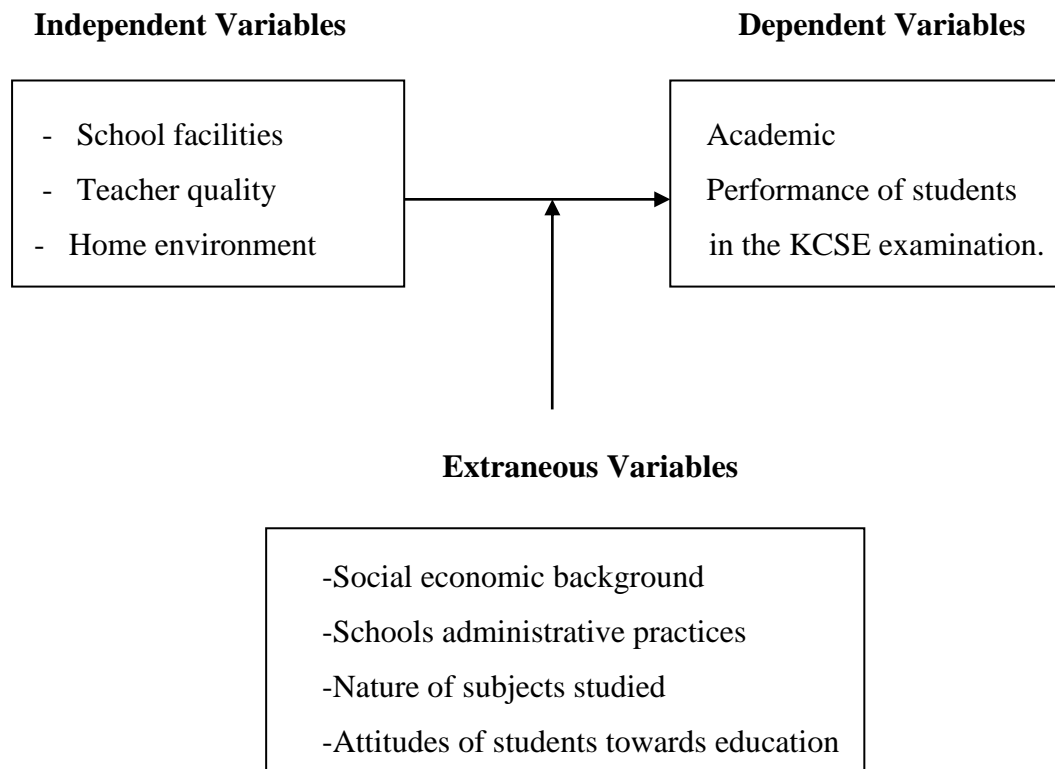
outputs and to determine if proper (academic performance) are being realized. The theory would operate on the premise that resources used in the school are scarce, and the schools must operate at an objective: to produce students who have excelled academically at minimum cost rather to satisfy unspecified public roles. In this respect, Education Production Function (EPF) is viewed as a tool which can be used by schools to predict what happens if resources were added in or subtracted from the system, and to help in analyzing what action should be taken if the price various inputs were to change (Harbison & Hanushek, 1992).

This framework is relevant to the study of the selected factors that influence students' performance in KCSE in secondary schools for it centers on how the connection of teachers, professional qualifications, availability of teaching and learning facilities, students discipline and home environment intermingle and affect students' performance in KCSE Examination.

## **2.7The Conceptual Framework**

Conceptual framework is a diagrammatic representation of concepts of variables that shows the interconnections between the independent, intervening and dependent variables. The framework of this study conceived education as a production system in which individual student performance is the primary product. Students' performance in KCSE is the dependent variable while school facilities, discipline of students, professional qualification of teachers and home environment are the independent variables. However, out of these factors, it was practical to have intervening variables which define and complete the cycle between the variables. These included students, gender, government policy, type of school, school administrative policies, and attitudes of students towards education and nature of subjects studied. As an educational production function (EPF), this framework was being used as a tool to predict what happens if resources were added or subtracted from a system and to helped in analyzing what action should be taken if the price (cost) of the inputs were to change (Harbison and Hanushek, 1992; Haneveld and Craig, 1996).

## Conceptual framework



**Figure 1: Conceptual framework Showing the Relationship Between the Variables**

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter presents a description of research methodology that was used in this study. It describes the research design, location of the study, population of the study, sampling techniques, instrumentation, data collection and analysis techniques.

#### **3.2 Research Design**

The study adopted the descriptive survey research design. A descriptive research design gives a detailed description of the nature of phenomena and examines actions as they were or as they happened without treatment to the variables (Kothari, 2004). The design was selected because it is ideal for determining the nature of prevailing conditions or relationships and practices as they existed (Wiersma & Jurs, 2005). The study investigated the influence of school facilities, quality of teachers, discipline of students and home environment on students' performance. It did not involve any manipulation of variables thus the appropriateness of the design.

#### **3.3 Location of the Study**

The study was carried out in Kuresoi Sub County; Nakuru County. The Sub County neighboring Kuresoi are Molo, Londiani and Njoro. It is divided into four divisions: namely Kamara, Kiringet, Olenguruone and Sirikwa. The Sub County was selected because students performance in KCSE has generally been poor in the last couple of years (Kenya National Examinations Council., 2013)

#### **3.4 Population of the Study**

This study involved the 32 public secondary schools in Kuresoi Sub County. The target population comprised of all teachers and students in those schools. The accessible population of the study was all teachers and form four students. The teachers were selected because they implement the curriculum and are thus in a position to provide data on adequacy of teaching-learning facilities and teacher quality. The form four students were chosen because of the long duration they have been in the secondary school system and were the appropriate persons to provide information on students' home environment.



The public schools in the Sub County had a total 320 teachers and 1600 form four students. The distribution of the teachers and the students by division is in Table 2

**Table 2**  
**Students and Teachers Population in Kuresoi Sub County by Division**

<b>Division</b>	<b>Students</b>	<b>Teachers</b>
Kamara	455	92
Kirenget	401	75
Kuresoi	309	62
Olungurone	434	91
<b>Total</b>	<b>1599</b>	<b>320</b>

Source : DEO's office Kuresoi Sub-County (2012)

### **3.5 Sampling Procedure and Sample Size**

Borg and Gall (1989) define sampling as the process of selection of appropriate number of subjects for a defined population (Borg & Gall, 1989). Best (1998) states that a sample should be large enough to serve as adequate representation of the population about which the researcher wishes to generalize, and small enough to be selected economically in terms of subject availability and expense in terms of both time and money. The sample size of the teachers was determined using the table for determining the sample size of a finite population developed by Kathuri and Pal (1993). The sample size (n) of the teachers was 158 given that their accessible population was 320. Stratification by division was done to ensure that students from all the divisions were involved in the study. The number of teachers from each division was determined using proportionate sampling. At the division level, simple random sampling procedures were used to choose the teachers who participated in the study

The number of form four students who took part in the study was also determined using the table developed by (Kathuri & Pals, 1993). The students' sample size was 276 given that their accessible population was 1599. Stratified sampling techniques were used to ensure that schools from all the divisions were included in the study. The number of students from each division was determined using proportionate sampling. The schools and the students from each division were chosen using simple random sampling techniques. The distribution of the teachers and students sample by division is given in Table 3.

**Table 3**  
**Sample of Teachers and Students by Division**

Division	Students		Teachers	
	Population	Sample	Population	Sample
Kamara	455	79	92	45
Kirenget	401	69	75	37
Kuresoi	309	53	62	30
Olengurone	434	75	91	46
<b>Total</b>	1599	276	320	158

According to Gay and Airasian (1996), a sample of between 10 and 20% of a target population to arrive at a sufficiently representative sample size, with larger populations, requiring smaller samples than smaller ones to be representative. The study sampled 79 of the 455 students (17.4%) and 45 of the 92 (48.98%) of the teachers from Kamara Division. From Kirenget Division, it sampled 69 out of 401 students (17.2%) and 37 out of 75 (49.3%) of the teachers. In Kuresoi Division 53 out of 309 students (19.1%) and 30 out of 62 teachers (48.4%). In Olengurone Division 75 out of 434 students (17.3%) and 46 out of 91 teachers (50.5%) were sampled.

### **3.6 Instrumentation**

Data was collected using the teacher's (TQ) and students' (SQ) questionnaires. The questionnaire was preferred because it allows uniformity in the way questions are asked (Mouly, 1989). SQ was divided into two parts; A and B. Part A was used to generate data on students' personal details while part B was for eliciting data on their home environment. TQ had three sections; A, B and C. The sections were used to generate data on teachers' bio-data, adequacy of teaching-learning facilities and qualitative data. The two instruments were contained both open and close-ended items.

#### **3.6.1 Validity of the Instruments**

The construct and content validity of TQ and SQ were examined by three experts from the department of Curriculum, Instruction and Educational Management of Egerton University. The validation was done as a way of ensuring that the instruments were not biased, the language, layout and format of the instrument was appropriate. Suggestions given by the experts were incorporated in the instruments before they were used in the actual study.

### **3.6.2 Reliability**

A reliable instrument consistently yields the same results when used repeatedly to collect data (Orodho, 2009). Reliability is therefore the degree to which research instruments yields consistent results when administered a number of times. The TQ, and SQ were piloted for reliability. Their reliability was estimated using the Cronbach Alpha method. The method is appropriate when a data tool is administered once and has multiple choice items (Borg & Gall, 1989). TQ and SQ were considered reliable as they yielded reliability coefficients of 0.73 and 7.61 which were above the 0.7 threshold recommended by (Fraenkel & Wallen, 2000).

### **3.7 Data Collection Procedures**

The researcher got an introduction letter from the Graduate School of Egerton University so as to obtain a permit to conduct the research from the National Commission for Science, Technology and Innovation as required by the law before proceeding to the field. Once permission was being granted, the Kuresoi Sub-County Education Officer and the administrators of the target schools was formally contacted. The purpose of the study was explained to them and their cooperation sought. The researcher then arranged with the participants when and where to administer the questionnaires. On the appointed dates, the researcher explained to the participants how to fill the questionnaires and then administered them to the participants. Ample time was given to the respondents to fill the questionnaire. Thereafter, the filled questionnaires were collected.

### **3.8 Data Analysis**

Data collected from the questionnaires were analyzed by use of descriptive statistics using a Statistical Package for Social Science (SPSS version 17.0) for Windows. Descriptive statistics was used in exploring the various selected factors influencing students' academic performance in KCSE. Descriptive statistics were computed for presenting and analyzing the data. Descriptive statistics enables the researcher to describe the aggregation of raw data in numerical terms (Neuman, 2000). Findings were presented in form of means, frequency tables, pie charts and descriptively.

## CHAPTER FOUR

### RESULTS AND DISCUSSIONS

#### 4.1 Introduction

This chapter presents the results and discussions of the study. The findings of the study are organized under various sub-headings based on the research objectives. The chapter contains sections on summary of the characteristics of the subjects, influence of teaching-learning facilities and teachers' qualification on students' academic performance. In addition, it has a section on influence of home environment on students' academic performance

#### 4.2 Characteristics of the Subjects

The study summarized and described the characteristics of the respondents; teachers and students before presenting the results of the hypotheses tests. Kothari (2004) avers that describing the characteristics of a sample provides evidence that it has the attributes of the population.

The characteristics included gender and age

**Table 4**  
**Gender of the Teachers and Students**

Respondent	Gender	Frequency	Percentage
Teachers	Male	93	60.8
	Female	60	39.2
	Total	153	100.0
Students	Male	178	64.5
	Female	98	35.5
	Total	276	100.0

Data in Table 4 shows that the number of the male teachers in the schools was higher (60.8%) than that (39.2%) of their female counterparts. The data also reveal that number of the male students was higher (64.5%) than that of the females. The results suggest a gender imbalance in access to secondary school education in favor of the males in the Sub County.

The teachers were also requested to provide information on their age. Their ages are summarized in table 5

**Table 5**  
**Age of the Teachers in the study**

Age	Frequency	Percentage
Below 25 years	8	5.2
25 – 34	71	46.4
35 – 44	59	38.6
45 – 54 years	15	9.8
55 years and above	0	0
Total	153	100.0

The information in Table 5 reveals that majority (85.0%) of the teachers were in the 25 – 44 years’ age bracket. This means that the teachers are fairly young and are expected to be energetic in teaching and performing duties related to their profession.

#### **4.3 Influence of Teaching-Learning Facilities on Students’ Academic Performance**

The first objective of the study sought to establish whether teaching-learning materials influence students’ academic performance. The influence was determined by testing a hypothesis which stated that there is no statistically significant relationship between teaching-learning materials and students’ academic performance. The teaching-learning materials in schools were measured using a set of 21 statement based respondents’ views on adequacy of the facilities in the teachers’ questionnaire. The instrument was constructed using a 4 point Likert type items were not available was scored zero (0) and adequate was awarded three (3) points. Mean scores for each item was computed and then transformed into an overall mean score (teaching-learning facilities index). The mean scores of the 21 items, the overall mean and their standard deviations are summarized in Table 6

**Table 6**  
**Means and Standard Deviations on Adequacy of Teaching-Learning Facilities as Rated by Teachers**

Teaching-Learning Facilities	N	Mean	Std. Deviation
Staffroom	157	1.10	0.34
Classrooms	157	1.08	0.35
Library	155	0.35	0.58
Science laboratories	157	0.38	0.63
Home science block	153	0.29	0.60
Dormitories	153	0.23	0.53
Teachers houses	153	0.26	0.54
Playfields	153	1.47	0.80
Dining hall	149	0.28	0.53
Electricity	147	1.18	0.72
Staff furniture	157	1.25	0.46
Classroom furniture	155	1.10	0.30
Library furniture	155	0.39	0.65
Laboratory equipment	155	0.39	0.62
Home science equipment	153	0.26	0.47
Dormitory furniture	155	0.30	0.63
Teachers reference textbooks and guides	153	1.61	0.55
Students textbook	151	1.12	0.42
Wall maps	155	0.93	0.62
Laboratory chemicals	155	0.48	0.70
Library books	155	0.44	0.68
Chalkboards/chalk	157	2.51	0.74
Stationery	155	1.33	0.56
Time for syllabus coverage	157	2.50	0.78
Teaching-Learning facilities mean	156	0.87	0.29

The results in Table 6 show that chalkboard/chalk had the highest mean ( $M = 2.51$ ,  $SD = 0.74$ ) while the dormitories mean ( $M = 0.26$ ,  $SD = 0.47$ ) was the lowest. Generally, the means of facilities used to support the teaching of sciences such as laboratory chemicals ( $M = 0.48$ ,  $SD = 0.70$ ), laboratory equipment ( $M = 0.39$ ,  $SD = 0.62$ ) and home science equipment ( $M = 0.26$ ,  $SD = 0.47$ ) had low mean scores. Low means were also observed for library books

(M = 0.44, SD = 0.68), dormitory furniture (M = 0.30, SD = 0.63) and library furniture (M = 0.39, SD = 0.65). The low mean scores are indicators that schools are poorly equipped in these areas. The overall mean score was 0.87 (SD = 0.29), the facilities in the schools were thus considered inadequate given that they were rated using a 0 to 3 scale.

The academic performance of the students was determined after establishing the adequacy of the teaching learning facilities in the schools. Data on students' academic performance was elicited using the teachers' questionnaire. It was used to capture KCSE mean grades of the schools that participated in the study for the years 2009 to 2013. The summaries of the mean grades out of a maximum of 12 are given in Table 7

**Table 7**  
**Kuresoi Sub County Secondary School Students' KCSE Mean Grade for the Years 2009 - 2013**

Year	N	Mean	Std. Deviation
2009	143	4.37	0.87
2010	152	4.62	0.82
2011	152	4.71	0.94
2012	158	4.66	0.91
2013	148	4.71	0.70
Overall KCSE mean 2009 - 2013	158	4.40	1.02

Source: KNEC, 2011, 2012, 2014

Data in Table 7 revealed the mean scores of the statements were in the range of 4.37 (SD = 0.87) to 4.71 (SD = 0.94) while the overall mean was 4.40 (SD = 1.02). The overall academic performance of the students as measured by the grades was considered as poor given that its overall mean score was 4.40 (SD = 1.02) out of a maximum of 12

The relationship between the two variables; teaching-learning materials and students' academic performance was determined by running a bivariate correlation. The Pearson's correlations were used to test the relationship between the Teaching-Learning facilities mean (M = 0.87, SD = 0.29) and the overall KCSE mean (M = 4.40, SD = 1.02). The output of the test is given in Table 8.



**Table 8**  
**Relationship between Teaching-Learning Facilities and Students' KCSE Mean Grades**

Scale	Students' KCSE Mean Grades For the years 2009 - 2013		
Teaching-Learning facilities mean	Pearson's correlation (r)	0.221*	
	p-value	0.006	
	N	156	

\*Significant at the 0.05 level

The results in Table 8 reveal that the relationship between the teaching-learning facilities and students' KCSE mean grades was positive and significant at the 0.05 level,  $r(34) = 0.221$ ,  $p = 0.006$ . This means that schools with adequate teaching learning facilities perform better. On the basis of these results, the first hypothesis which stated there is no statistically significant relationship between teaching-learning materials and students' academic performance was rejected.

The results of the hypothesis test showed that teaching-learning facilities significantly influence students' academic performance. These findings are in consonance with those of Yadar (2007) and the report by UNESCO (2008) which opined that teaching/learning materials such as textbooks, class rooms, teaching aids and laboratories affect academic performance of the learners. The results are also in line with those of Yara and Otieno (2010) who asserted that learning is strengthened when there are enough reference materials, textbooks, and classrooms. The results further support those of Isola (2010), who noted that teaching facilities significantly affects students' academic achievement. The results of Isiola's study are consistent with those of Munda, Tanui and Kaberia (2000), who noted the positive contribution of physical facilities towards students' academic performance.

The results of this study show that students' academic performance is positively affected by availability of teaching-learning facilities. The implication of this result is that schools must be provided with adequate facilities otherwise their students will always end up with poor grades. Schools with inadequate facilities tend to perform poorly because teachers are not able to put their ideas into practice as they lack the equipment and materials necessary for them to translate their competence into reality no matter how well trained and qualified they are (Oladejo, Olosunde G. R., & Isola, 2011). According to Oguntuase, Awe and Ajayi

(2013) provision of teaching/learning resources positively affects teachers' attitudes towards teaching and makes learning interesting, meaningful and exciting to the student. These enhance the students' performance

#### 4.4 Influence of Teachers Quality on Students' Academic Performance

The second objective of the study sought to find out the influence teachers quality on students' academic performance. This was determined by testing hypothesis two which stated that there is no significant relationship between teachers' quality and students' academic performance. The teachers' quality was measured in terms of their highest academic qualification and experience (expressed by the number of years they have been in the teaching profession). A summary of the teachers' highest level of education and experience is given in Table 9.

**Table 9**  
**Teachers' Highest Academic Qualification and Teaching Experience**

Scale		Frequency	Percentage
Highest Academic Qualification n= 145	Others	12	8.3
	S1/Diploma	74	51.0
	BEd&BA/BSc with PGDE	59	40.7
	Total	145	100.0
	Teaching Experience n= 153	Less than 1 year	2
	1 – 2	34	22.2
	3 – 5	48	31.4
	6 – 10	58	37.9
	over 10 years	11	7.2
	Total	153	100.0

Data in Table 9 show that almost all teachers (91.7%) are professionally trained with diploma/S1 and bachelor degrees. Their output in terms of content delivery and academic performance of students is expected to be good. Wayne and Young (2003) observed that students learn more from teachers with high academic and professional qualifications. The distribution of the teachers by experience show that the highest percentage (37.9%) of teachers was in 6 – 10 years' bracket. The results in the table further show that most (76.5%)

of the teachers had experience of three years and above. This means that the teachers were experienced.

The relationship between the teachers' qualification and students' academic performance was determined using the Spearman's correlations test. The overall students KCSE mean grade for 2009 – 2013 ( $M = 4.40$ ,  $SD = 1.02$ ) was correlated with the two components of teachers' qualification; highest level of education and teaching experience (table 10). The outputs of the test are summarized in Table 10

**Table 10**  
**Relationship between Teachers' Highest Academic Qualification, Teaching Experience and Students' KCSE**

Scale		Students' KCSE Mean Grades
Highest academic qualification	Spearman's correlation (r)	0.008
	p-value	0.922
	N	145
Teaching experience	Spearman's correlation (r)	0.051
	p-value	0.525
	N	153

The results in Table 10 reveal that the relationship between teachers highest academic qualification and students' KCSE mean grades was positive but not significant at the 0.05 level,  $r(145) = 0.008$ ,  $p = 0.992$ . This means that teachers' academic qualification does not influence students' academic performance. The results in the table also reveal that the relationship between teaching experience and students' KCSE mean grades was positive but not significant at the 0.05 level,  $r(153) = 0.051$ ,  $p > 0.525$ . This implies that teaching experience does not influence students' academic performance. On the basis of these results, the second hypothesis which stated there is no statistically significant relationship between the teachers' qualification and students' academic performance was accepted.

The results of the second hypothesis test showed that there is no statistically significant relationship between the teachers' qualification and students' academic performance. The results are consisted with those of Owolabi and Adedayo (2012) who aver that a teacher's academic qualification only is not enough to positively affect academic performance of students but a professional qualification in a specified field of study. The results also support

those of Zuzov (Zuzovsky, 2003)sky (2003) who observed that teacher variables such as academic qualifications and years of experience have only marginal and statistically non-significant positive effects on student achievement. The findings however are contrary to those of Abe and Adu (2013) and Owolabi and Adedayo (2012) who consider employing seasoned qualified teachers in all schools as the most important factor in improving students' achievement.

Literature reviews on relationship between students' academic performance and teachers' qualification conflict, with some suggesting a positive relationship and others suggesting no relationship (Goldhaber, 2004; Wenglinsky, 2002). Abe (2014) noted that that number of years of teaching experience may positively related to student achievement. Similarly, research indicates that teacher experience contributes to students learning for teachers in their first few years in the classroom but additional experience does not make a difference after that (Boyd, Grossman, Lankford & Wyckoff, 2006; Goe, 2007). Despite these mixed results, many scholars are of the view that students taught by teachers who are academically and professionally prepared and experienced perform better academically. Owolabi and Adedayo (2012) found in their study that science teachers who had Master's degrees improved student science achievement substantially. Ijaiya (2000) pointed out that experience improves teaching skills while pupils learn better at the hands of teachers who have taught them continuously over a period of years.

#### **4.5 Influence of Home Environment on Students' Academic Performance**

The last (third) objective of the study sought to find out whether home environment influences students' academic performance. The influence was determined by conducting a relationship test between home environment and student's academic. Data on home environment was collected using a set of 10 items in the students' questionnaire. The item measured on 1 to 5 scale various aspects of the home environment as perceived by the students. The mean score of each of the 10 items was computed and transformed into an aggregate mean (overall mean). A summary of the means and standard deviations of the items are in Table 11

**Table 11**  
**Home Environment Means and Standard Deviations**

Home Environment	N	Mean	Std. Deviation
I do not have enough reading materials at home	296	2.02	1.23
The reading space at home is not adequate	292	2.14	1.37
The lighting at home is not conducive for reading	295	2.08	1.24
I cannot concentrate on my studies at home because of a lot of interference from family members and friends	285	2.07	1.25
There is little time to study as I am given domestic work whenever I am at home	287	2.28	1.39
I rarely work on my school assignments because our neighborhood is noisy	294	2.20	1.33
I always cook and clean at home once I am through with school in the evenings	281	2.19	1.31
I work in the family farm and business when not in school	290	2.44	1.40
I look after my brothers and sisters whenever I am at home	281	2.65	1.47
When not in school, I do casual work to earn some money for myself and family	283	2.81	1.55
Home environment mean	300	2.22	1.02

The results in Table 11 show that the mean scores of the items were in the range of 2.02 (SD = 1.23) to 2.81 (SD = 1.55) while the overall mean was 2.22 (SD = 1.02). The overall home environment mean was considered as low given that it was measured using a 5-point scale. This implies that the students were of the view that the environments in their homes were not conducive to performance of academic work.

The third hypothesis was tested by running a bivariate correlation between the overall home environment mean (M = 2.22, SD = 1.02) and students KCSE mean (M = 4.40, SD = 1.01) grade for the years 2009 – 2013 (section 4.3). The results of the bivariate test of the two constructs is in Table 12

**Table 12**  
**Relationship between Home Environment Mean and Students' Performance in KCSE**

Scale	Students' KCSE Mean Grades
Home environment mean	Pearson's correlation (r) 0.156*
	p-value 0.007
	N 299

\*Significant at the 0.05 level

The results in Table 12 reveal that the relationship between the home environment mean and students' KCSE mean grades was positive and significant at the 0.05 level,  $r(34) = 0.156$ ,  $p = 0.007$ . This means that students who are from homes with a conducive environment tend to perform better in their academic work. The third hypothesis which stated that there is no significant relationship between home environment and students' KCSE academic performance was rejected.

The results of the study revealed a positive and significant correlation between home environment and students' academic achievement. Several researchers (Nwachukwu, 2002; Osuafor & Okonkwo, 2013) have linked home environment factors to academic performance at all levels of education. They believe that family background has influence on children performance in school, considering the fact that education starts from the home. The results are consistent with those of Parveen (2007) and Obeta (2014). They noted that social interaction that goes on in a family, can affect a child psychologically and emotionally. When a child is in a poor mental state because of psychological disturbances, his or her academic performance may be affected. A Study by Daleure, Albon, Hinkston and McKeown (2013) concluded that high performing students tend to have warm and nurturing home environments with well-defined limits and abundant encouragement from family members. (Harbison & Hanushek, 1992)

Many educationists believe that the home environment influences a children performance in school (Muola, 2010; Zhang, 2011; Mishra & Bamba, 2012). Specific issues that are linked to students' poor academic performance include lack of family concern for student progress, little or no family contact with school representatives, little or no monitoring of or encouragement of students to complete homework assignments, and lack of support at home for school rules and disciplinary procedures (Codjoe, 2007). Students' especially those in day schools need a lot of support at home if they are to perform well in their academic work. Besides study facilities and a conducive environment, they require parental guidance, motivation, encouragement and supervision whenever they are at home (Bryan, 2005).

## CHAPTER FIVE

### SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

#### 5.1 Introduction

This chapter presents a summary of the major findings of the study, conclusions and implications of the findings on students' academic performance. It also presents the recommendations and makes suggestions on areas that require further research

#### 5.2 Summary of the Major Findings

Three hypotheses were tested during the course of the study. The major findings of the study were:

##### 5.2.1 Characteristics of the Subjects

The study sought information the characteristics of the subjects and made the following findings. On gender the study found that shows that the number of the male teachers in the schools was higher (60.8%) than that (39.2%) of their female counterparts. The data also reveal that number of the male students was higher (64.5%) than that of the females. The results suggest a gender imbalance in access to secondary school education in favor of the males in the Sub County

##### 5.2.2 Influence of Teaching-learning Facilities on Academic Performance

The study sought to find out the influence of the teaching-learning facilities on student academic performance and made the following findings. The chalkboard/chalk had the highest mean ( $M = 2.51$ ,  $SD = 0.74$ ) while the dormitories mean ( $M = 0.26$ ,  $SD = 0.47$ ) was the lowest. Generally, the means of facilities used to support the teaching of sciences such as laboratory chemicals ( $M = 0.48$ ,  $SD = 0.70$ ), laboratory equipment ( $M = 0.39$ ,  $SD = 0.62$ ) and home science equipment ( $M = 0.26$ ,  $SD = 0.47$ ) had low mean scores. Low means were also observed for library books ( $M = 0.44$ ,  $SD = 0.68$ ), dormitory furniture ( $M = 0.30$ ,  $SD = 0.63$ ) and library furniture ( $M = 0.39$ ,  $SD = 0.65$ ). The low mean scores are indicators that school are poorly equipped in these areas. The overall mean score was 0.87 ( $SD = 0.29$ ), the facilities in the schools were thus considered inadequate given that they were rated using a 0 to 3 scale. This shows that there was a statistically significant relationship between teaching-learning facilities and students' academic performance.

### **5.2.3 Influence of Teacher Quality on Academic Performance**

The second objective of the study was the influence of teacher quality on Student academic performance and made the following findings. Almost all teachers (91.7%) are professionally trained with diploma/S1 and bachelor degrees. Their output in terms of content delivery and academic performance of students is expected to be good. The study further found that the relationship between teachers highest academic qualification and students' KCSE mean grades was positive but not significant at the 0.05 level,  $r(145) = 0.008$ ,  $p = 0.992$ . This means that teachers' academic qualification does not influence students' academic performance. The results in the table also reveal that the relationship between teaching experience and students' KCSE mean grades was positive but not significant at the 0.05 level,  $r(153) = 0.051$ ,  $p > 0.525$ . This implies that teaching experience does not influence students' academic performance this therefore means that there was no statistically significant relationship between the teachers' qualifications and students' academic performance

### **5.2.4 Influence of Home Environment on Academic Performance**

The study gathered data on the influence of the home environment on the students' academic performance and made the following findings. The mean scores of the items were in the range of 2.02 (SD = 1.23) to 2.81 (SD = 1.55) while the overall mean was 2.22 (SD = 1.02). The overall home environment mean was considered as low given that it was measured using a 5-point scale. This implies that the students were of the view that the environments in their homes were not conducive to performance of academic work. Furthermore, the relationship between the home environment mean and students' KCSE mean grades was positive and significant at the 0.05 level,  $r(34) = 0.156$ ,  $p = 0.007$ . This means that students who are from homes with a conducive environment tend to perform better in their academic work. Therefore, the relationship between home environment and students' academic achievement was positive and significant.

### **5.3 Conclusions**

The results of the study presented in the previous chapter revealed that there was a significant positive relationship between teaching-learning, home environment and students' academic performance. The results further revealed that the relationship between teachers' qualification and students' academic performance was not significant at the 0.05 level. On the basis of those results, the following conclusions were drawn and generalized to public secondary schools in Kuresoi Sub County:

- 1) Teaching-Learning facilities positively influence students' academic performance choice of the subject



- 2) Teachers qualification as measured by their highest level of education and teaching experience do not influence students' academic performance
- 3) The home environment has a positive influence on students' academic performance.

#### **5.4 Implications of the Study**

Stakeholders in education are always keen to see improvements in students' academic performance. The findings of this study revealed that teaching-learning facilities and home environment influence students' academic performance, whereas teachers' qualifications do not. In order to enhance schools' academic performance, efforts should be made to equip them with adequate teaching-learning facilities. Effort to improve teaching learning facilities must also be accompanied by improvements in other factors that enhance performance such as motivation, teaching methods, a conducive environment both at school and home

#### **5.5 Recommendations**

In light of the findings of this study, the following recommendations were made.

- i) To mitigate inadequacy of teaching/learning materials, it is recommended that parents, the government and other education stakeholders should increase funding to schools in Kuresoi Sub County to enable them acquire adequate facilities.
- ii) The results in the previous chapter also showed that students' academic performance is low. School administrators should put in place mechanisms such as motivation and adoption of effective teaching strategies as ways of improving performance.
- iii) It is further recommended that parents should be encouraged to get involved in their children academic progress by monitoring their activities in and out of school, as well as ensuring that the environment in their homes is conducive to their children. This is because the home has an influence on academic performance.

#### **5.6 Suggestions for Further Research.**

During the course of the study, it was noted that there were a number of areas that require further research. The areas are:

The study only involved public secondary schools it would be interesting to conduct a similar study using samples drawn from private schools

- (i) The study showed that teachers' qualifications do not influence students' academic performance. There is necessity therefore to investigate factors that affect students' academic performance in the Sub County

- (ii) The study further showed that home environment influences students' academic performance. It would be interesting to find out whether school type; day and boarding influence students' academic performance.
- (iii) Similar studies should be carried out in other Sub Countys of Kenya to ascertain whether the same result will be obtained.

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## APPENDIX I: STUDENTS' QUESTIONNAIRE

Dear Participant,

I am a student at Egerton University currently pursuing a master of education degree. I am conducting a research on “Influence of selected factors on the academic performance of secondary school students in Kuresoi Sub-county, Kenya” as part of the course work. You have been chosen to take part in the study in view of your position in the school. I am therefore kindly requesting you to participating in the research by filing this questionnaire. Rest assured that any information given will be used only for this research and will be treated with outmost confidentiality.

Yours sincerely,

David Mburu

### Section A: Bio-data

1. Indicate your gender

Male [ ] Female [ ]

### Section B: Home environment

Please indicate your agreement with the items on home environment in the table below by placing a tick in the appropriate cell. Use the below scale.

Scale: Strongly agree = SA

Agree = A

Undecided = U

Disagree = D

Strongly disagree= SD

Statement	SA	A	U	D	SD
I do not have enough reading materials at home					
The reading space at home is not adequate					
The lighting at home is not conducive for reading					
I cannot concentrate on my studies at home because of a lot of interference from family members and friends					
There is little time to study as I am given domestic work whenever I am at home					
I rarely work on my school assignments because our					

neighborhood is noisy					
I always cook and clean at home once I am through with school in the evenings					
I work in the family farm and business when not in school					
I look after my brothers and sisters whenever I am at home					
When not in school, I do casual work to earn some money for myself and family					

Thank you

## APPENDIX II: TEACHERS' QUESTIONNAIRE (TQ)

Dear Participant

I am a student at Egerton University currently pursuing a master of education degree. I am conducting a research on "Influence of selected factors on the academic performance of secondary school students in Kuresoi Sub-county, Kenya" as part of the course work. You have been chosen to take part in the study in view of your position in the school. I am therefore kindly requesting you to participating in the research by filing this questionnaire. Rest assured that any information given will be used only for this research and will be treated with outmost confidentiality.

Yours sincerely,

David Mburu

### Instructions

This questionnaire is divided into two sections, (A and B), please complete each section according to the instructions. Do not write your name or the name of your school to ensure complete confidentiality.

### SECTION A

Kindly respond to each item by putting a tick (v) next to the response that is applicable to you.

1. Indicate your gender

Male  female

2. What is your age bracket?

a) Below 25 years

- b) 25-34 years
- c) 35-44
- d) 45-54
- e) Over 54

3. What is your highest academic qualification?

- a) M. Ed [ ]
- b) B. Ed/ BA/ B. Sc. With PGDE [ ]
- c) SI/ Diploma in Education [ ]
- d) Others (specify) [ ]

4. How long have you been in the teaching profession?

- Less than 1 year [ ]
- 1-2 years [ ]
- 3-5 years [ ]
- 6-10 years [ ]
- Over 10 years [ ]

**SECTION B**

For each of the question in this section, read the responses and put a tick (v) against the appropriate response

5. a) Indicate the subjects you have been trained to each.....

b) What subjects are you currently teaching? .....

c) What was your subject mean grade in the end of last year examination.....

6. a) what is your current teaching workload per week?

- i. Less than 20
- ii. 20-24 years
- iii. 25-30 years
- iv. More than lessons

b) How do you rate this workload?

Heavy  Moderate  Light

7. a) Are you assigned to teach subject(s) that you were not trained for?

Yes  No

b) If you answer in (a) above is yes, give reasons

.....

8. a) How often do you give students assignments/ homework?

- i. Daily
- ii. Once a week
- iii. Once a fortnight
- iv. Once a month
- v. Others specify

b) Do students complete their assignments/ homework as required?

Yes  No

c) If you answer to (b) above is no, put a tick (v) against reasons that students give for not completing the work.

- i. Lack of adequate time
- ii. Too much homework/ assignments

- iii. Lack of text books work is too difficult [ ]
- iv. Work is too difficult
- v. Any other (specify) [ ]

9. a) please indicate whether you prepare the following documents by ticking as appropriate.

- i. Schemes of work [ ]
- ii. Lesson plan [ ]
- iii. Records of work [ ]
- iv. Students. progress record

10. When do you normally complete the syllabus for your subjects (s)

- a) 3 months before examination [ ]
- b) A month before examination [ ]
- c) Just in the time for exams [ ]
- d) Never completes [ ]
- e) Any other (specify) [ ]

Please indicate the adequacy of the following facilities and resources in your school in the table provided below.

The alternative choices for adequacy are as follows.

Adequate = A

Satisfactory = S

Inadequate = I

Not available = NA

	ADEQUACY			
A. SCHOOL FACILITIES	A	S	I	NA
11. Staffroom				
12. Classroom				
13. Library				
14. Science laboratories				
15. Home science block				
16. Dormitories				
17. Teachers house				
18. Playing field				
19. School dining hall				
20. Electricity				
B School furniture and equipment				
21. Staff furniture				
22. Classroom				
23. Library furniture				
24. Science laboratory equipment				
25. Home science equipment				
26. Dormitory furniture				
C Teaching/ learning resources				
27. Teachers reference books and guides				
28. Students. textbooks				
29. Wall maps and charts				
30. Laboratory chemicals				
31. Library books				
32. Chalkboards and chalk				
33. Other stationary				



34. Please indicate the frequency of the following students. behavior in your school.

Behavior		Frequency		
		Frequent	Sometimes	Rarely
1	Sickness			
2	Truancy/ sneaking			
3	Strikes			
4	Fees problems			
5	Suspension			
6	Punishment			

**Section C: Qualitative data**

35. In your opinion, what are the factors that influence students performance in KCSE examination in your school?

.....

.....

.....

36. (a) how do you rate the school's performance in KCSE?

- i. Above average
- ii. Average
- iii. Below average

b) What in your opinion can be done to improve this performance?

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

Thank you

**APPENDIX III: TABLE FOR DETERMINING SAMPLE SIZE FROM A FINITE**

**POPULATION**

N	S	N	S	N	S
10	10	220	104	1200	291
15	14	230	144	1300	297
20	19	240	148	1400	302
25	24	250	152	1500	306
30	28	260	155	1600	310
35	32	270	159	1700	313
40	36	280	162	1800	317
45	40	290	165	1900	320
50	44	300	169	2000	322
55	38	320	175	2200	327
60	52	340	181	2400	331
65	56	360	186	2600	335
70	59	380	191	2800	338
75	63	400	196	3000	341
80	66	420	201	3500	346
85	70	440	205	4000	351
90	73	460	210	4500	354
95	76	480	214	5000	357
100	80	500	217	6000	361
110	86	550	226	7000	364
120	92	600	234	8000	367
130	97	650	242	9000	368
140	103	700	248	10000	370
150	108	750	254	15000	375
160	113	800	260	20000	377
170	118	850	265	30000	379
180	123	900	269	40000	380
190	127	950	274	50000	381
200	132	1000	278	50000	382
210	136	1000	285	10000	384

Notes: N is population size S sample size Source: Krejcie and Morgan (1970:608) as quoted in Mulusa (1988:86)

APPENDIX IV: REQUEST FOR RESEARCH PERMIT

**EGERTON**

Tel: Pilot: 254-51-2217620  
254-51-2217877  
254-51-2217631  
Dir. line/Fax: 254-51-2217847  
Cell Phone  
Extension: 3606



**UNIVERSITY**

P.O. Box 536 - 20115  
Egerton, Njoro, Kenya  
Email: bpgs@egerton.ac.ke  
www.egerton.ac.ke

OFFICE OF THE DIRECTOR GRADUATE SCHOOL

Ref:.....

EM15/2175/08

Date:.....

20<sup>th</sup> September, 2013

The Secretary,  
National Council of Science and Technology,  
P. O. Box 30623-00100,  
**NAIROBI.**

Dear Sir,

**RE: REQUEST FOR RESEARCH PERMIT – DAVID CHEGE MBURU  
REG.NO: EM15/2175/08**

This is to introduce and confirm to you that the above named student is in the Department of Curriculum, Instruction & Education Management, Faculty of Education & Community Studies, Egerton University.

He is a bonafide registered Masters student in this University. His research topic is entitled **“Influence of Selected Factors on the Academic Performance of Secondary Schools Students in KCSE in Kuresoi District, Kenya.”**

He is at the stage of collecting field data. Please issue him with a research permit to enable him undertake the studies.

We have enclosed all the **necessary documentation** required and a Bankers Cheque No. **015361** for your necessary action.

Yours faithfully,

  
**Prof. M.A. Okiror**  
**DIRECTOR, BOARD OF POSTGRADUATE STUDIES**

MAO/vk

## APPENDIX IV: RESEARCH AUTHORIZATION



### NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

Telephone: +254-20-2213471,  
2241349, 310571, 2219420  
Fax: +254-20-318245, 318249  
Email: secretary@nacosti.go.ke  
Website: www.nacosti.go.ke  
When replying please quote

9<sup>th</sup> Floor, Utalii House  
Uhuru Highway  
P.O. Box 30623-00100  
NAIROBI-KENYA

Ref. No.

Date:

**28<sup>th</sup> October, 2014**

**NACOSTI/P/14/7702/598**

David Chege Mburu  
Egerton University  
P.O. Box 536-20115  
**EGERTON.**

#### **RE: RESEARCH AUTHORIZATION**

Following your application for authority to carry out research on *"Influence of selected factors on the academic performance of secondary school students in KCSE in Kuresoi District, Kenya,"* I am pleased to inform you that you have been authorized to undertake research in **Nakuru County** for a period ending **30<sup>th</sup> November, 2014**.

You are advised to report to **the County Commissioner and the County Director of Education, Nakuru County** before embarking on the research project.

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


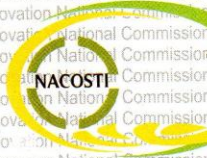
  
**DR. S. K. LANGAT, OGW  
FOR: SECRETARY/CEO**

Copy to:

The County Commissioner  
The County Director of Education  
Nakuru County.





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

  
**REPUBLIC OF KENYA**  
  
**NACOSTI**  
**National Commission for Science, Technology and Innovation**  
**RESEARCH CLEARANCE PERMIT**  
**Serial No. A 2780**  
**CONDITIONS: see back page**

**THIS IS TO CERTIFY THAT:**  
**MR. DAVID CHEGE MBURU**  
**of EGERTON UNIVERSITY, 0-20106**  
**Molo, has been permitted to conduct**  
**research in Nakuru County**  
**on the topic: INFLUENCE OF SELECTED**  
**FACTORS ON THE ACADEMIC**  
**PERFORMANCE OF SECONDARY**  
**SCHOOLS STUDENTS IN KCSE IN**  
**KURESOIDISTRICT, KENYA**  
**for the period ending:**  
**30th November, 2014**

**Permit No : NACOSTI/P/14/7702/598**  
**Date Of Issue : 28th October, 2014**  
**Fee Received :Ksh 1,000**

  
**Applicant's Signature**  
  
**Secretary**  
**National Commission for Science, Technology & Innovation**

