

**SCHOOL-BASED VARIABLES INFLUENCING STUDENTS’  
PERFORMANCE IN KENYA CERTIFICATE OF SECONDARY  
EDUCATION (KCSE) IN PUBLIC DAY SECONDARY SCHOOLS IN  
NYERI COUNTY, KENYA**

**NJOGU BEATRICE WANJIRU  
E55/CE/24289/2013**

**A PROJECT SUBMITTED IN PARTIAL FULFILMENT OF THE  
REQUIREMENT FOR THE AWARD OF DEGREE IN MASTER OF  
EDUCATION OF KENYATTA UNIVERSITY**

**SEPTEMBER 2020**

## DECLARATION

I declare that this project is my original work and has not been presented in any other university or institution of learning for consideration. This research project has been complemented by referenced sources duly acknowledged. Where text, data (including spoken words), graphics, pictures or tables have been borrowed from other sources, including internet, these are specifically accredited and references cited in accordance in line with anti-plagiarism regulations.

Signature..... Date.....

Njogu Beatrice Wanjiru  
E55/CE/24289/2013

**Supervisors' declaration:** This proposal has been submitted for appraisal with our approval as university supervisors.

Signature..... Date.....

Prof. John Aluko Orodho  
Associate Professor of Education and Research  
Department of Educational Management,  
Policy and Curriculum Studies,  
Kenyatta University

Signature..... Date.....

Dr. Charles M. Magoma  
Senior Lecturer  
Department of Educational Management,  
Policy and Curriculum Studies  
Kenyatta University

## **DEDICATION**

This project is dedicated to my daughter Terry Bridget whom I greatly love and to my parents Mr. and Mrs. Njogu, my sisters Caro, Flora, Purity and my brother Fr. Moses for their financial and moral support and motivation which has been highly invaluable and is always highly appreciated.

## **ACKNOWLEDGEMENT**

I wish to acknowledge the almighty God for the gift of life, good health and providing me with the resources I needed to do this work.

My heartfelt appreciations goes to my supervisors, Prof. John Aluko Orodho and Dr. Charles M. Magoma. Their constant and effective guidance, immense support, encouragement and concern led to the success of writing this project. I owe them great gratitude.

My special thanks go to my colleagues to Ms Hannah, Mr. Mbuthia, Mr. Kaguamba, Mr King'ori and the school principal Mrs. Njoroge of Kaigonde Secondary School for their moral support and encouragement as I started conducting this research up to production of this document.

My gratitude also goes to my classmates for their motivation and positive contributions towards my academic growth throughout the time we were together. Their interactive discussions, honest view on my progress and sincere support encouraged me throughout the study.

My heartfelt thanks go to my daughter Terry Bridget whom I greatly love and the entire Njogu's family for their patience, moral support, understanding and their effort to be always in touch with me during my study.

Finally, I wish to sincerely express my gratitude to the respondents who supplied the raw data during fieldwork.

May God bless you all

## TABLE OF CONTENTS

<b>DECLARATION</b> .....	<b>iii</b>
<b>DEDICATION</b> .....	<b>iv</b>
<b>ACKNOWLEDGEMENT</b> .....	<b>v</b>
<b>ABBREVIATIONS AND ACRONYMS</b> .....	<b>viii</b>
<b>CHAPTER ONE</b> .....	<b>1</b>
<b>INTRODUCTION AND CONTEXT OF STUDY</b> .....	<b>1</b>
1.2 Background of the study .....	1
1.3 Statement of the Problem.....	13
1.4 Purpose of the Study .....	14
1.5 objectives of the study .....	14
1.6 Research Questions.....	15
1.7 Significance of the Study .....	15
1.8 Limitations of the Study.....	16
1.9 Delimitations of the Study .....	16
1.10 Assumptions of the Study .....	16
1.11 Theoretical Framework.....	17
<b>CHAPTER TWO</b> .....	<b>20</b>
2.1 Introduction.....	20
2.2 School -based Variables.....	20
2.3 Teacher Characteristics and Students’ Performance.....	21
2.3.1 Teacher Qualification and Students’ Performance .....	24
2.3.2 Teaching Experience and Students’ Performance .....	25
2.3.3 Teaching Methods and Students’ Performance .....	27
2.3.4 Teacher-student Ratio and Students’ Performance.....	28
2.4.1 Leadership Style and Students’ Performance .....	32
2.4.2 Instructional Supervision and Students’ Performance .....	34
2.5 Instructional Resources and Students’ Performance.....	36
2.5.1 Teaching Equipments and Resources and Students’ Performance .....	37
2.5.2 Physical Facilities and Students’ Performance .....	37
2.6 Student -based Variables.....	39
2.6.1 Discipline and Students’ Performance.....	39
2.6.2 Language Use and Students’ Performance .....	40
2.6.3 Absenteeism and Students’ Performance.....	41
2.7 Summary and Gaps .....	42
Table 2.1 Summary of Key Gaps.....	43
<b>CHAPTER THREE</b> .....	<b>49</b>
<b>RESEARCH METHODOLOGY</b> .....	<b>49</b>
3.1 Introduction.....	49

3.2 Research Design.....	49
3.2.1 Variables .....	49
3.3 Study Location .....	50
3.4 Target Population.....	50
3.5 Sampling Technique and Sample Size.....	50
3.5.1 Sampling Techniques.....	51
3.5.2 Sample Size.....	51
3.7 Pilot study .....	53
3.7.1 Validity .....	53
3.7.2 Reliability.....	54
3.10 Logistical and Ethical considerations .....	55
<b>CHAPTER FOUR.....</b>	<b>57</b>
<b>PRESENTATION OF FINDINGS, INTERPRETATION AND DISCUSSION .....</b>	<b>57</b>
4.1 Introduction.....	57
4.2 Response Rate.....	57
4.3 Demographic information.....	58
4.3.1 Gender.....	58
4.3.2 Age category of the respondents.....	60
4.3.3 Length of service as head teacher .....	61
4.4 Extent to which teacher characteristics influence students’ performance in KCSE.....	62
4.4.1 Highest academic qualification.....	62
4.4.2 Teaching experience and Academic Performance .....	64
4.4.3 Teachers teaching load.....	66
4.4.4 Teaching methods .....	67
4.5 Influence of school administration on students’ accomplishment in KCSE.....	69
4.5.1 Administration style.....	69
4.6 Effects of instructional resources on learners’ achievement in KCSE. ....	75
4.6.1 Availability of instructional resources .....	75
4.6.2 Observation on availability and adequacy of instructional resources.....	76
4.7 Effects of student Characteristics variables on achievement in KCSE.....	77
<b>CHAPTER FIVE .....</b>	<b>79</b>
<b>SUMMARY, COCLUSION AND RECOMMENDATIONS .....</b>	<b>79</b>
5.1 Introduction.....	79
5.3 Conclusions.....	81
<b>REFERENCES.....</b>	<b>84</b>
<b>APPENDIX I: .....</b>	<b>92</b>
<b>HEAD TEACHERS’ QUESTIONNAIRE.....</b>	<b>92</b>
<b>APPENDIX II: .....</b>	<b>96</b>
<b>TEACHERS’ QUESTIONNAIRE .....</b>	<b>96</b>
<b>APPENDIX III .....</b>	<b>100</b>
<b>STUDENTS’ QUESTIONNAIRE .....</b>	<b>100</b>

<b>APPENDIX IV .....</b>	<b>103</b>
<b>OBSERVATION SCHEDULE .....</b>	<b>103</b>
<b>APPENDIX V .....</b>	<b>105</b>
<b>RESEARCH PERMIT .....</b>	<b>105</b>

## LIST OF TABLES

Table	1.1	KCSE results for some public day secondary schools 2009-2013.....	5
Table	3.1	Sampling Frame.....	38
Table	4.1	Respondents' response rate.....	44
Table	4.2	Respondent's academic qualification.....	49
Table	4.3	Professional documents.....	53
Table	4.4	Teachers perception head teachers' leadership behavior.....	56
Table	4.5	Availability of administrative materials in the office.....	57
Table	4.6	Availability of administrative materials in the staffroom.....	58
Table	4.7	Adequacy of instructional resources.....	59
Table	4.8	Availability of physical instructional resources.....	60
Table	4.9	Students response on level of indiscipline in their schools.....	62

## LIST OF FIGURES

Figure		1.1			
framework.....				12	Conceptual
Fig	4.1		Gender of the		respondents
.....				45	
Fig	4.2		Age category of the		respondents
.....				46	
Fig	4.3		Service as head		teachers
.....				47	
Fig	4.4		Professional qualification of teachers and head		teachers
.....				50	
Fig	4.5		Teachers		workload
.....				52	
Fig	4.6		Students rating of administration style		
.....				55	
Fig	4.7		Students response on discipline in schools		
.....				61	

## **ABBREVIATIONS AND ACRONYMS**

EFA	Education For All
FDSE	Free Day Secondary Education
FPE	Free Primary Education
GOK	Government of Kenya
ILO	International Labour Organisation
KCPE	Kenya Certificate of Primary Education
KCSE	Kenya Certificate of Secondary Education
MLA	Monitoring Learning Achievements
MOEST	Ministry of Education, Science and Technology
SACMEQ	Southern and Eastern African Consortium for Monitoring Education Quality
UN	United Nations
UNESCO	United Nations Education, Science and Cultural Organization

## ABSTRACT

The purpose of this study was to investigate how school based factors influence student's performance in Kenya Certificate of Secondary Education in public day secondary schools in Nyeri County. Specifically, the study sought to establish the influence of teachers' characteristics, school administration, instructional resources and student-related variables on students' performance in KCSE. The study adopted a descriptive survey design. The target population comprised 18000 students, 225 teachers and 11 head teachers in eleven public day secondary schools in Nyeri County giving a total of 18,390. Sampling method was purposive in selecting 11 head teachers, simple random (60%) in selecting 135 teachers, and the systematic technique sampling the 48<sup>th</sup> unit to form 375 students sample size. The entire sampling yielded a sample size of 521 for the study. The research instruments were observation checklist and questionnaires. The reliability of the research instruments was established through test-retest technique. Descriptive statistics were used to analyze data and the results were presented in the form of frequency tables and graphs and presented in direct quotes. Qualitative responses were analyzed thematically and explained based on the study objectives. The findings of the study on teachers' characteristics showed that most teachers had the academic qualifications required, most had workloads which they felt were too high and that some teachers did not prepare lesson plans and schemes of work and were not keeping updated notes. The study found that most students had a positive attitude towards their administration and that they felt that the administration was not likely to affect their performance. Administrative materials such as black book and school timetable were missing and this was a major factor that contributed to poor performance by the students. The study established that laboratories, library, text books, chairs and desks were lacking in many schools, while some having dilapidated infrastructure and unmaintained class rooms. Further, the study found that some students' behaviors such as theft, drug abuse and bullying were rampant in the schools and they swayed the students' concentration on. The study concluded that administrative and learning materials, school learning infrastructure and students behavior factors were associated with poor performance of the students in KCSE among public day schools in Nyeri County. Suggested strategies to improve students' performance in KCSE were: increasing instructional resources; number of teachers; and motivation for both teachers and students. The study recommended that teachers should follow the required guidelines in teaching such as preparing relevant teaching materials and adequately cover the syllabus. School administration should put necessary measures on supervision of students' behavior and progress. The school should also provide teachers with the resources required to promote quality education thus enhance good performance in KCSE. Suggested for further studies was a study on school-based variables affecting students' performance in KCSE in public boarding secondary schools.

# **CHAPTER ONE**

## **INTRODUCTION AND CONTEXT OF STUDY**

### **1.1 Introduction**

Chapter one contains the background of the study, problem statement, purpose of the study, objectives of the study, research questions, and study limitations, delimitations of the study, assumptions, theoretical framework, conceptual framework and operational definition of terms.

### **1.2 Background of the Study**

Education contributes to both personal growth and the growth of a country economically. According to Chirchir, Manduku & Makero (2018), education lays foundation for democracy, improvement of health research and services and sustainable use and conservation of the environment. In Kenya, education is cornerstone to economic progress and social development and political transformation. The United Nations (UN) reports that quality education provides learners with opportunity to become socially active, politically influential and economically productive which are core requirements if sustainable growth and development is to be achieved (Musau & Migosi, 2015). It is therefore undisputable that education not only empowers individuals but also transforms a country.

A country develops by exploiting both human and natural resources. Education promotes skill development, realization of talent and different abilities that individuals hold. Proper exploitation and empowerment of people's talent ad skills

contributes to overall success of a country. The government and other education stakeholders ought to invest heavily and effectively to bring out the best from human beings for economic progress of a country (Suharno, Nugroho & Harjanto, 2020). Academic success is recognized as starting and completing of the set curriculum, attaining relevant knowledge and acquiring expertise that will be used in the future professional and personal growth. The International Labour Organisation (ILO), asserts that the major economies have been built by the human capital and recognizes that Africa has been left in proper exploitation and utilization of the same (ILO, 2012). Effective exploitation of human capital is complemented by investing in technology, research and innovation; Africa should prioritize on technological advancement like the developed countries are doing.

The global perception of education holds the same opinion; education as a tool for economic transformation, social developments and political advancements. The fourth goal of the United Nations Sustainable Development is on education. The annual reports in the last century indicate low progress in education progress in many countries. As of 2017, approximately 265 million children had no access to education with their ages being between six and seventeen years (UN, 2018). Notably, the same reports show that 50% of those who progress to secondary levels end up dropping out of school and a third of those who complete lack optimum reading, writing and mathematics skills (UN, 2018).

Africa and south Asia are the leading regions with low level of attainment of the United Nations Sustainable Development fourth goal. According to the UN (2018),

the two regions records a high level of illiteracy among adults; over 750 million men and women cannot read, write or attend a mathematical problem successfully. Basically Africa and south Asia is the home for half of the illiterate population in the world. In regards to Africa, sub Saharan region is the most associated with the illiteracy problem; majority of schools both primary and secondary lack the basic requirements for effective learning. Electricity, water and access to internet are a problem facing half of institutions in those regions (UN, 2018).

The global call for improved education settings have led continued investment in education by the African governments (UN, 2018). All levels of education have continuously received improvements in terms of infrastructure to promote education progress. According to Glewwe and Muralidharan (2015), the performance of students in main exams is very low and that is the main problem facing education in Africa. The African governments have invested heavily in education but the academic performance is still questionable. For example, in Botswana, education in the primary and secondary levels is free and accessible to all. However, the performance of students in the country is far from reaching the average level of developed countries like Japan.

The government of Tanzania has not been left out in the wake for investing in education. The government has designed a number of education policies to guide it in achievement of global goals for education. The vision 2025 for education in Tanzania aims at providing the people of Tanzania with quality, universal and transformational education for social and economic development through

innovation, technological advancement and research (Luketero & Kangangi, 2019). However, the performance of students in the region is still low and requires more investments. The government efforts do not match the student's performance in Tanzania which has been on the fall in the last decade.

Kenya is not an exceptional in the issues of student's performance in the national exams. Kenyan students sit for main exams after eight years of primary and four years of secondary. The primary level main exam is a national exam and its results are used to place students to different secondary schools. The secondary level examination is done nationally after completion of four years. The results are determinants of the tertiary level progress for students, the tertiary level is the career level; student's career journey begins at this level. The secondary level performance of a student is thus very crucial in shaping the career path of an individual. Despite a 12 year journey in primary and secondary schools, student still perform poorly in Kenya. The ministry of education and other education stakeholders has been on the look for this problem for so many years.

Much research that has been conducted show that schools perform differently. Many factors have been associated to this variation in schools performance. Factors that contribute to this variation have been categorized as either internal or external (Odumbe, Simatwa & Ayodo, 2015). Internal factors are school based issues that may influence the performance of secondary school students. Such internal factors may include but not limited to: available resources for teachers, the adequacy of teachers, the available facilities and resources (physical) and school head's type of

leadership and supervision among others (Chirchir, Manduku and Makero, 2018). Physical facilities available in school such as laboratories and classrooms and books play a huge role in students' performance. Human and financial resources are also crucial aspects and are key components of school based factors. Straining financial and human resources in schools interferes with the quality of education and directly impacts the performance of students. The teacher student ration among many public schools has been reported to be 1:60 or much which exceeds the standards for quality delivery (Odumbe, Simatwa & Ayodo, 2015).

Kenya's system of education provides for 8 years in primary and 4 years in secondary education. After 4 years of secondary education the students are subjected to a Kenya Certificate of Secondary Education examination which varies from School to School and from year to year. Factors that can cause this variation in performance can either be school based factor or external factors among others (Odumbe, Simatwa & Ayodo, 2015).

The success of an academic journey can be traced through the academic performance of a student (Maina, 2018). The level of understanding and application of knowledge, skills and capacities targeted in the curriculum can be tested in the national exams. This makes the student performance in the main exams very important for educators, ministry of education and other stakeholders in education. As such, policy makers in education though the performance of students in the national exams are able to identify problems associated with poor performance and can thus develop better policies to improve student's performance in the future. The

results of quality education are reflective in the performers of students at all levels. However, studies in Kenya (Mbeche, 2012; Kietia, 2017; Maina, 2018; Deya, 2019) have shown cases of low students' performance in secondary school, a motivating factor to this study. The contribution of school based factors shall be evaluated among public schools in Nyeri County.

### **1.2.1 Academic Performance in Public Day secondary Education**

A secondary school is an institution where academic performance is developed in preparation for tertiary education and future careers. According to Suharno, et al. (2020), the performance of a student in secondary level is linked to the career path of a student. The type of colleges and universities to join, the type of course to select, the level of education in tertiary level to join and which careers to pursue and which not to are all linked to the heavily rely on secondary level academic performance. Thus, to the students at this level, academic performance is an important determinant of future lives.

The government of Kenya introduced free primary education in 2003 (18 years ago) and later free secondary school education (12 years ago). The government aimed at ensuring all Kenyans a can access free, quality and universal education. The program promoted access to quality education for Kenyans by addressing education barriers such as high cost of education and inequality to access. The program resulted to higher number of pupil's transition to secondary school and student's retention in schools.

The ultimate goal of secondary education is to prepare students to join tertiary level and acquire skills that will help them become productive members of the society in the future (De Silva, Khatibi & Azam, 2018). The quality of education and other complements that determine the academic performance of a student are thus very important. According to Luis, Marilyn, Rodriguez-Zubiaurre (2016), academic performance of learners is important in all secondary schools and should be a priority to all governments. Academic performance has been found to impact on the human productivity of a nation and the supply of human resource for various occupations that enhance economic and social growth goals (Kapur, 2018). Performance in academics is founded on a variety of factors including: psychological, environmental and social economic among others. To determine the academic performance of a student there are several indicators that can be used. According to (Julia, Andreas & Tina (2020), the level of student's participation in ongoing lessons, timely completion of class homework, grades scored in internal exams and overall participation in events outside the class can tell more about the academic performance of a student These factors may however depend on regions and school environments.

In Kenya, the outcome of curriculum implementation at secondary school level is evaluated through the Kenya Certificate of Secondary Education). How students performs in the national exam is used to rate the quality of education provided in a school (Mutindi, 2018). Improper and inadequate resources for both students and teachers is directly linked to the quality of education offered; lack of such facilities compromises the quality of education offered in any institution (Kietia, 2017).

MOEST (2005) cited poor infrastructure in schools as one of the major barriers to good KCSE performance in Kenya.

The Kenyan education system places a minimum grade(C+) which students must obtain before they are admitted to universities. Scrutiny of education statistics between 2011–2014 shows that, most schools had their students stacked in the lower end of the KCSE individual ranking (Soft Kenya, 2015). Notably, those are public county schools that usually admit over 70 per cent of students that join secondary education each year. The major factor that is associated with poor performance of students in national examination is inadequate learning facilities. Although resources play a crucial role in student's performance, other school based factors are involved. Administrative style in a school, student absenteeism, teaching methods and the level of discipline among students are also key elements that cannot be ignored in the quest for student's performance (Kietia, 2017; Maina, 2018; Mutindi, 2018). Whether this has continued to present day Kenya is an important focus of this current study.

### **1.2.2 Academic Performance of Public Day Secondary Schools in Nyeri County**

Public day secondary schools in Nyeri County have recorded poor performance in the national examination for many years. Most of the schools have been attaining a low mean grade of D+ and below. Majority of these schools in the County have scored below that 4 in some of the years. To understand the underlying issues that contribute to the low performance of students in public day schools in the County,

this study investigated the school based variables to understand how they affect student's performance in the main examinational (KCSE). The study was undertaken in 11 public day schools in the county, 2018. Table 1.1 shows the results for some public day secondary schools in Nyeri County from 2009 to 2013.

**Table 1.1: KCSE Results for some public day secondary schools for the years 2009 to 2013 in Nyeri County**

SCHOOLS	MEAN SCORE					
	2009	2010	2011	2012	2013	MEAN SCORE (2009-2013)
Gichira	4.667	4.090	4.583	4.369	4.980	4.5378
Kiandu	3.832	4.140	3.999	4.472	4.722	4.2330
Gititu	3.050	3.130	3.425	3.311	3.540	3.2912
F.T Nyammo	3.952	3.460	3.491	3.431	3.500	3.568
Ngooru	4.290	4.170	4.325	3.359	3.302	3.8892
St Mary Kariguini	.....	1.920	2.140	2.797	3.150	2.5018
Gachatha	3.218	2.900	3.305	3.383	3.024	3.1660
Gaaki	3.479	3.170	3.733	3.680	2.925	3.3974
Ithekahuno	3.440	3.270	2.984	3.027	2.913	3.1268
Mutathiini	2.316	2.690	2.769	2.468	2.546	2.5578
St Joseph Wamagana	2.506	2.640	2.747	2.646	2.417	2.5912

**Source: Nyeri District Secondary Schools KCSE 2009 to 2013 Result Analysis**

#### **1.2.4 School Based Factors**

School based factors relate to the management of school and learning environment with teachers as the ultimate human capital and the cornerstone of the education structure. Three key players have a major duty of ensuring schools operate

successfully; school principals, the Board of Management and Parent-Teacher Association. According to Mutindi (2018), the three players ensure that there is a conducive learning environment characterized with infrastructure, curriculum, pedagogies, and leadership and staffing for effective learning.

Zainab, Indoshi, Okwach (2019) opined that successful attainment of the set goals for a school involves teacher's contribution who are key players in teaching and learning processes in a school. Teachers have the requisite skills and abilities to deliver quality education, manage students and interact with students successfully. Teachers undergo specific training aimed at achieving maximum results out of the classroom and out of classroom interaction with learners. According to York, et al (2015), provision of students' performance requires principals to play a crucial role in successful execution of education strategies and objectives into feasible and practical initiatives in the local school setting. Principals must set pace, provide support and be at the front in the implementation of both school based policies and the guidelines from the ministry of education.

Glewwe and Muralidharan (2015) contended that in many African countries day secondary schools have been affected by socio-economic activities, which lead to low retention and participation rate of students in school. In Kenya socio economic activities (child labour) have affected very many counties and led to total lack of discipline and poor performance of the schools. Daily school attendance was poor and sometimes schools were left with very few learners which largely jeopardize the work of teachers. Odumbe, et al. (2015) asserted that free education for all in day

secondary in Kenya continues to experience challenges relating to access and quality including the overstretched facilities, overcrowding and poor learning environment.

### **1.2.5 School Based Factors and Academic Performance of Public Day Secondary School Students**

There are a number of factors that influence academic performance of learners. According to Maina (2018), such factors include but not limited to: learning resources available in a schools, the style of administration, schools resources for teachers, teacher's characteristics, quality and attitudes and the social-economic level of a student among others. Sub-Saharan Africa is the most associated with the illiteracy problem; majority of schools both primary and secondary lack the basic requirements for effective learning. Electricity, water and access to internet are a problem facing half of institutions in those regions (UN, 2018). According to Mutindi (2018), school based factors such as the available resources to both teachers and students, school's physical facilities and principal's leadership style had positive and significant relationship with students' performance at KCSE. The findings further found out that the performance of students in Kathiani Sub County for many years has been deteriorating.

Teachers related factors have also been evaluated to relate to academic performance of students. According to Zainab, Indoshi, Okwach (2019), an effective and improved teacher-student relationship in the learning process is linked to improvement in student's performance in the main examinations. Specifically, the researchers discovered that an enhanced teacher-student relationship fostered

improvements in Kiswahili. The study recommended that teachers be attending regular refresher courses to improve on their relationship with students thus promoting improvements in the outcomes.

Chirchir, Manduku and Makero (2018) recommend that teacher's professional growth should be cultivated to ensure that their delivery is well founded and informed by the current practices. They should be equipped with the recent technologies and research discoveries to boost their output. Stakeholders in education must be willing to subject teachers to refresher courses, seminars, training and benchmarking programs to cultivate their output quality. Students grab what the teacher offers and therefore the teacher should be in position to deliver quality for students to absorb quality education.

School facilities may affect learning processes and programs in secondary schools. Magweva (2017) investigated the relationship between student performance and physical facilities in Zimbabwe. The study defined physical facilities to include school land, classrooms, laboratory, library, equipment, books, school vans and student desks. The study found that physical facilities had many direct effects to student's performance. Nannyonja (2007) on factors that influence poor performance in Uganda discovered that high level of indiscipline among students, inadequate teaching staff and negative attitudes among students contributed to their low performance in national examinations. Lack of support from the local community in South Africa such as provision of teaching and learning facilities,

payment of school levies largely influences school outcomes (Miller and Seller 2007).

In a study carried out by Kieti (2017), it was discovered that there were variation in performance of secondary schools in Matungulu Sub-County. Some schools were performing better than others despite the region sharing economic, social and demographic structures.. What were not clear are the factors that have enabled a few schools to perform well while the majority continues to perform poorly in KCSE.

The government, ministry of education and parents has very high expectation of student performance in the national examination. They put a lot of resources and invest heavily on policies that aim at improving the outcomes in the final examinations. As a result of their investment, they put a lot of pressure on teachers and school heads to improve the performance of the schools. Some schools strategize on offering extra classes; others engage their teachers on benchmarking programs; other schools implement a reward system for best performing students; and other schools adopt technology to advance their delivery level. However, this study seeks to evaluate. However, this study seeks to evaluate the how school based factors are linked to academic performance of students in public day schools in Nyeri County.

### **1.3 Statement of the Problem**

The government of Kenya in 2008 introduced free day secondary school education. The goal was to offer basic education to all children as stipulate in the 2010 Kenyan

constitution. In addition to funding the day schools expenses, the government launched a project to supply day schools with essential facilities and resources so as to ensure that education is universal and accessible to all students. That said, the level of student's performance in KCSE among day schools in Nyeri County has still been lagged behind in the last 10 years.

Majority of day schools in Nyeri County has been achieving a mean score of D+ and below for many years. Day schools in Nyeri County have been outperformed by their counterparts in public boarding schools. Notably, there has been paucity of research on to the factors influencing the low academic performance among public day schools students in Nyeri County. The purpose of this study is to investigate the factors that influence student's performance in national examinations among public day secondary schools in Nyeri County.

#### **1.4 Purpose of the Study**

The purpose of this study is to investigate how school based factors influence student's performance in Kenya Certificate of Secondary Education in public day secondary schools in Nyeri County.

#### **1.5 Objectives of the Study**

- i) To establish the effect of teacher's characteristics on student's performance in KCSE in public day secondary schools in Nyeri County.
- ii) To determine the effect of school administration on the performance of students in KCSE in day schools in Nyeri County.

- iii) To identify how instructional resources influence the performance of student in KCSE in public day schools of Nyeri County.
- iv) To identify the effect of student characteristics variables on the performance of students in KCSE in public day secondary schools in Nyeri County.

### **1.6 Research Questions.**

- i) How do the characteristics of a teacher influence the performance of students in KCSE?
- ii) What is the effect of school administration on the academic performance of student in KCSE?
- iii) What is the influence of instructional resources on student's academic performance in KCSE?
- iv) How do the characteristics of a student influence their academic performance in KCSE?

### **1.7 Significance of the Study**

This study would inform the ministry of education, education policymakers, principals and educators on the factors that affect students' performance in KCSE. They were to be in a position to intervene and look for means to eliminate the negative factors so as to improve. The study would be beneficial to education policy assessment on Free Day Secondary Education (FDSE).

Whether school-based factors affect quality learning in day schools would be illuminated in this study. Thus, requisite reforms would be informed by the study findings. The findings were also important in informing other education stakeholders so that they can all work together towards getting solutions to the problems thus lead

to improvement in performance. Additionally, the findings of this study would provide literature for future researchers.

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

Accessing respondents was constrained by the largely dispersed location of the public secondary schools in Nyeri County. Aspects of weather variations (rainy/sunny) affected travel, with some schools being far from tarmac roads, thus delaying data collection process. Further, some of the teachers were not willing to respond due to the academic nature of the study, viewing it a waste of time. Organization for access to respondents necessitated prolonged arrangements with Principals and teachers.

### **1.9 Delimitations of the Study**

The scholar pursued authority to undertake the study from the University and NACOSTI. The letters assured respondents of the seriousness of the study and a conviction that the study was conducted for academic purposes alone. Appointment was sought with Principals in organizing access to teachers and students. To ensure timely data collection, research assistants were recruited, trained and engagement. Only public day secondary schools were involved in the study.

### **1.10 Assumptions of the Study**

The study assumed that resp honest responses to the questions and that the sample was a true representation of the whole target population. It also assumed that KCSE is an acceptable tool to evaluate curriculum implementation through students' performance after being in secondary school for four years and that the selected school-based variables that are under investigation are responsible for the dismal performance. It also assumed that funding was available and that the researcher did

not know the degree of effect the school based factors had on the performance of public day school students in Nyeri County.

### **1.11 Theoretical Framework**

The Education production Function theory guided the study. The theory was proposed by Dewy, Husted & Kenny in 1998. The theory incorporated the economic aspects of production into education. Coleman report of 1966 demonstrated the effects of various school inputs on students' achievement. He related various inputs affecting students, learning to measured outputs. The outputs include home and school-based factors such as syllabus coverage, school administration, teacher qualification, students' attitude, education level of parents, parental contribution and family income. Students achievement, transition rates, and successful transition to employment defines the output. Examinations provide an easy way to compare achievement and performance.

This theory is supported by Jimenes (1986), Callan and Santerre (1990) and Nelson and Hevert (1992) who have provided empirical evidence that there is at least limited substitutability between educational inputs, for example teachers, physical facilities, teaching learning resources, financial resources and students' performance.

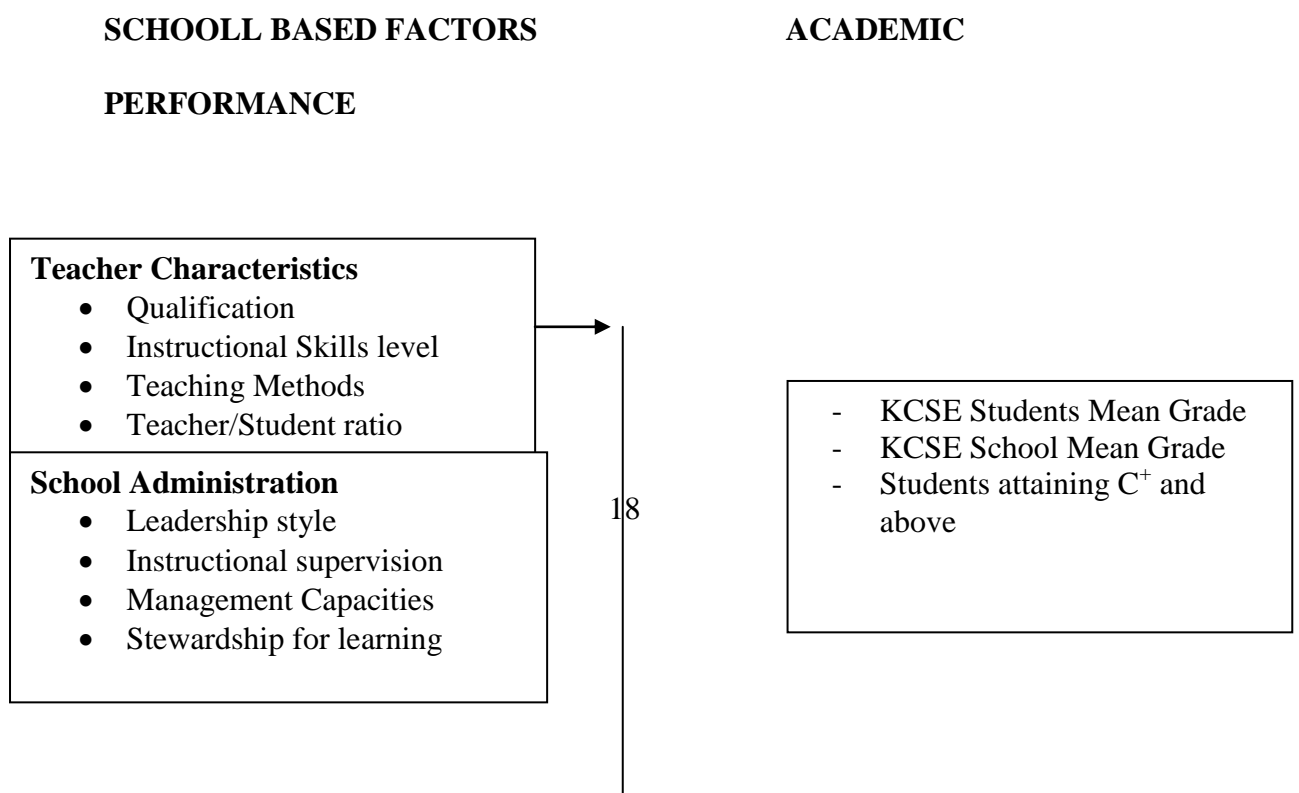
This theory can be applied in this research because it comprises inputs and their influence on output. Inputs includes but not limited to resources available in schools, human resources, curriculum supervision and physical resources and the output being students' performance in the national examinations.

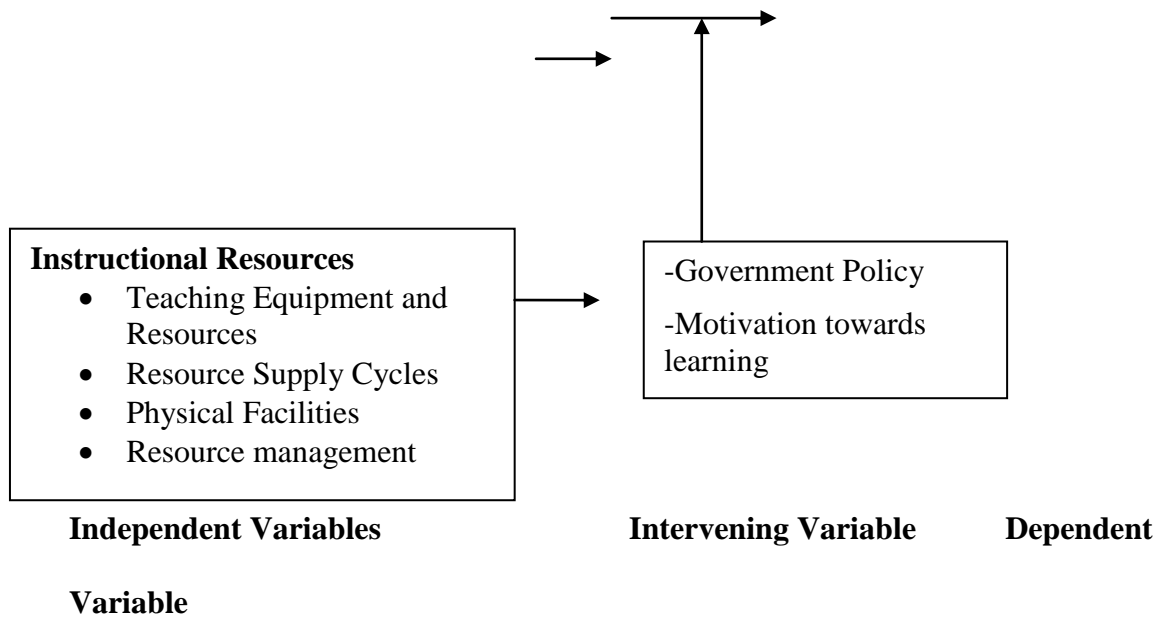
This study aimed at understanding how various school-based variables affects the performance in the main examinations, KCSE. School based variables that affect students' performance includes teacher characteristics, teaching resources, school

administration, students' discipline and syllabus coverage. The theory is important in conceptualization of the school-based factors including teachers characteristics, school administration, instructional resources and students' characteristics.

### 1.12 Conceptual Framework

The conceptual frame relates school-based variables which are the independent variables to academic performance which is the dependent variable. This is illustrated in figure 1.1 below.





**Figure 1.1: Conceptual Framework**

**Source: Research (2017)**

The connection between independent variables, intervening variables and dependent variables is displayed in the conceptual framework. The research examines whether this link is significant. According to the conceptual framework, school-based variables such as teachers' characteristics, instructional resources, school administration and students-based variables can either lead to a favorable or unfavorable school environment. Consequently, favorable school environment is likely to contribute to good academic performance while unfavorable school environment is likely to contribute to poor student's performance in the national examination. The framework further shows that government policy and motivation towards learning may influence the way independent variables interact to either lead

to good or poor academic performance. The study was to illustrate the possibility of this interlink being true in the public day secondary schools in Nyeri County.

### **1.13 Operational Definition of Terms**

**Academic performance:** marks or grades attained by students in KCSE

**Examination:** a process of evaluating whether a student has learnt a particular concept

**Poor academic performance:** attainment of a grade below C+ in KCSE

**Public day secondary school:** a secondary school that is government owned and students go home every day after classes.

**School based variables:** physical facilities, human capital and financial resources that are available in schools that promote academic performance.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter presents literature reviewed based on the objectives of the study.

#### **2.2 School -based Variables**

Much research has been conducted to investigate how school-based factors influence the performance of students in the national examinations. Many school based factors have been identified to affect academic performance among students. According to

Mbeche (2012), learners' academic performance is influenced by factors such as inadequate facilities in schools, inadequate teachers, indiscipline, anxiety as well as learner's motivation. This study investigated the school-based variables that influence students' performance in KCSE and they were categorized into four groups namely teacher characteristics, instructional resources, school administration-based variables and student-based variables.

### **2.3 Teacher Characteristics and Students' Performance**

Mbeche (2012) asserts that teacher's characteristics are the inherent qualities that are measurable through the academic performance of their students and their profession achievements. According to Zainab, Indoshi, Okwach (2019), quality teachers do more than teaching; they impart knowledge through productive relationship with students, positive attitude towards colleagues and students and friendly interactions with students. Such teachers allow students to express their ideas freely, tailor their efforts to every student's needs and respect every student's opinion.

According to Arwa (2019), good teachers create an enabling environment for all students to thrive and perform excellently. Such teacher fosters a collaborative environment among students, supports team work and spearheads the student-teacher collaboration. They do not distant themselves from students, and students approach them with ease. They accommodate their student personal and academic needs and act in care and empathy. Being accommodative, caring and supportive promotes good relationship between teacher and students and enhances achievement of good grades in examinations. However, Kamau (2010) underscore that differences in teacher effectiveness produce remarkable differences in students' learning. This means that teachers have different characteristics, some which

promote quality learning and others that may lead to poor performance by the learners. Schools can make a great difference in terms of students' achievement by optimizing on good teacher-student relationship; hierarchical differences between teachers and teacher affects learning by the students.

Kieti et al. (2017) advocates that being a skilled leader is an important characteristic of the teacher. The author suggests that an effective leader possess a set of qualities that is unique. Teachers who possess such skill lead by example, value team effort, establish a community like environment in class where every student is important and respected. They do not judge their students; they are flexible to accommodate their student's ideas and are accessible to their students for personal issues as well as academic problems. Such teachers evaluate their delivery methods and strive to improve so that students can easily grasp the various concepts.

Kapur (2018) posit that collaborating with other teachers on an ongoing basis makes the teacher better. Rather than bearing perceptions of weakness, effective teachers ask for help and guidance from their colleagues. They borrow from most experienced colleagues and encourage team work with colleagues. They accept their areas of weakness and strive to improve. They have excellent communication skills and interacts with students and colleagues constructively. They treat fellow teacher with respect, value their beliefs and opinions and conduct themselves professionally. Other qualities that make an effective teacher include: interpersonal skills, problem solving skills, decision making skills. They lead by example, solve student problems decisively and stand out among other teachers. They have strong educational background and a reputable teaching experience. Teacher characteristics affect students 'performance in an examination (Akinsolu, 2010). According to Wirth and

Perkins (2013), the attitudes of a teacher toward students and fellow colleagues influence the attention of students during the learning process.

A study in Kenya by Zainab, Indoshi, Okwach (2019) sought to explore how teacher's related factors influenced student's performance in Kiswahili composition. The study was carried out in public secondary schools in Kisumu West Sub-County, Kenya. The study employed descriptive study design and used a sample size of 48 teachers and 29 heads of department and 310 students in form four, sampling technique adopted was purposive and data was collected using two sets of questionnaires and an interview schedule. The research discovered that teacher's related factors were linked to students' academic performance. However, the study focus was on one subject-Kiswahili, though it is important to consider the context of all subjects, a divergent approach in the current study.

Olayeye (2011) pointed out that there is a strong correlation between the characteristics of a teacher and the performance of pupils. The author further asserts that quality education depends on effective instruction. This implies that when the teacher is not able to give instructions effectively, then the quality of learning is compromised. Litunya (2006) similarly hold the same opinion; the author suggest teacher's related factors are linked to the student's ability to understand and grasp content and these outcomes are displayed in the performance of a student in main examinations. According to Adayemo (2015), the learning in the classrooms has a lot to do with teacher's qualities. Teachers' qualities are thus important in a students' academic achievement, though how they impact on day secondary school students will further be sought through the case of Nyeri County.

### **2.3.1 Teacher Qualification and Students' Performance**

According to Twoli (2006), teachers are cornerstone in the quest for quality learning and positive performance of students in the national examinations. They are the foot soldiers in implementing policies and guidelines designed to improve academic outcomes. Teachers spend most of their time interacting with students and therefore they are key partners in academic journey of a student. Teachers are therefore charged with the responsibility of sharing and passing relevant knowledge and skills, develop talent and impart quality competences to students. Their primary objective is to help student attain quality grades in national examinations by preparing them effectively through the four years in secondary education. To do that effectively, teacher must be well qualified; teacher qualification is linked to students' performance in exams.

According to Litunya (2006), a well-qualified teacher can be judge through a number of ways. They possess reputable educational background; a qualified teacher is trained and certified in their relevant field and also holds a major. Similarly, Hardy and Smith (2006) asserts that well qualified teachers have excellent academic qualification, have a reputable working experience, and continues to pursue and major in their relevant areas of specialization. All this is known to give teachers basic foundation for teaching.

Although teacher qualification in most instances is defined in terms of a degree in education, there is much that teachers learn through in-service courses and workshops (Zainab, et al., 2019). Hardy and Smith (2006) hold that teaching qualities and competences can be improved through regular seminars, benchmarks, refresher courses and workshops as well as peer evaluations. Teacher qualification

has been documented in studies such as Huang and Moon (2009) to account for approximately 40-60 % of high student performance in national examinations. According to Adeyemi (2010) and Yala & Wanjohi (2011), teacher's qualification is characterized with professional and educational background and years of experience; these are principal predictors of student's academic performance.

Kamau (2010) noted that attaining academic and professional qualification by teachers is a pre-requisite in ensuring teachers competence to ensure students perform well. The skills of teachers in pedagogy and influence to the students' preparedness are critical to evaluate in establishing academic performance of day school students in KCSE. The author notes that a competent teacher significantly promotes quality grades for student through effective delivery in class and out of class. Teachers who are well qualified not only helps student learn with ease but also influences their academic performance. The training the graduate teachers go through in institutions of learning prepares them by imparting requisite information and abilities to make them teach well and this result to higher achievement by the students. Whether teachers' capacity development is enhanced in the secondary education system remains a gap sought to be filled in this study.

### **2.3.2 Teaching Experience and Students' Performance**

The experience teachers have in teaching has influences the performance of a student to some extent. a study conducted by Kamau (2010) found that one factor that was contributing to low performance of students was low teaching experience among teachers. According to the author, the more experienced a teacher is, the more knowledgeable they are. A knowledgeable teacher has the ability to share

insights and ideas with ease; they are able to help student to grasp course concept effectively and promotes good student' performance in examinations.

In another study conducted by Gibbons et al. (2007), student who were taught by teachers with many years of experiences were found to perform better than their counterparts. This is because experienced teacher have a deeper understanding of the concept as opposed to inexperienced teacher. They are also aware of tricks and methods of managing a class and addressing problems related to the course. The can be able to tailor learning process to address the variations in student's ability to understand certain concepts in the course. Whether the experience of the teacher enhances the performance of public day school students in Nyeri County remains a contextual gap examined in the current study.

One way teachers gain experience is by attending in-service training. This is because they gain knowledge and skill that are applicable in real life situation with students. They are able to handle students and interact with them effectively. This knowledge is gained as teachers interact with other teachers from other schools on different issues regarding students and teaching. Meltzel et al. (2010) claims that experienced teachers are well positioned to prepare student for the major examinations than inexperienced teachers. This is because they have mastered the tricks of the examiners in the past main exam and are thus in good position to predict what the examiner could be preparing. Being test-oriented prepares student to think and behave in the psychology of the examiner which helps them perform better in the major examinations. However, focus should also be on the overall development of the students in public day secondary schools.

Teachers also gain verbal ability from many years of teaching which an important aspect in their teaching. According to Strong et al., (2007), there is a strong correlation between the verbal ability of a teacher and the performance of a student. Ideally, experienced teacher have improved verbal skills and there are easily understood by students. Majority of teaching is through talking which makes the verbal ability a key component in effective classroom delivery. The more years a teacher has in teaching, the more verbal ability they gain. Whether this applies in public secondary schools in Nyeri County shall be evaluated.

### **2.3.3 Teaching Methods and Students' Performance**

Teachers use different methods to teach during their lessons. The classroom practices especially teaching methods influence students' achievement. (Wanyama, 2013). This means that a teacher should use the most appropriate method for different levels of students to ensure that learning takes place. According to Wanjiru (2009), it is important for teacher to apply their knowledge about objectives so that they create suitable learning models that would foster quick and efficient learning by students. The language of instruction should also be appropriate for the particular level of students to make them understand what the teacher is teaching. Good communication skills invoke active participation in learning process, and possible better performance in KCSE.

Kunjeke (2013) asserted that teaching methods should be diverse to cater for the needs of the students. Waudo and Ouya (2010) explained that teaching methods should be designed on the basis of student's needs. Effective learning should be characterized with free student participation through asking and answering questions throughout the learning process. An interactive learning process boosts self-esteem

of students, confidence and reasoning. This contributes to good performance of student in class as well as in the main examinations. As teaching methods may enhance students understanding of subjects and preparedness for exams, whether this impacts on overall performance in KCSE was evaluated.

#### **2.3.4 Teacher-student Ratio and Students' Performance**

Teacher-student ratio also affects students' performance. Kenya is a developing country in which enrolment at secondary school level has considerably been expanding from the time that the free primary education was introduced together with the introduction of subsidized public day secondary schools (Ayodo, 2009). This has created a strain on the teacher-student ratio in many schools which affect students' performance. Richardson (2008) suggested that the reason secondary schools in the urban areas perform better than their counterparts in rural areas is the availability of skilled teacher in urban areas.

Luketero & Kangangi (2019) conducted a study in Kirinyaga Central Sub-county with a goal of determining what factors affect student's performance in KCSE. The study adopted a descriptive research technique and sampled 136 participants among which were 68 heads of departments, 34 deans and 34 school captains. Participants were drawn from 34 schools. The study discovered that the teacher-student ratio was positively correlated to student's performance. There was a methodological gap in sampling students, since only the students' leaders were included, while there is need for a general view from ordinary students in public day secondary schools.

In another study conducted by Mutindi (2018) which aimed at establishing how school based factors influence academic performance of students in Kathaini Sub-County; similar conclusions were made. The researcher used the education

production function theory and adopted a descriptive study methodology. The study used simple random sampling technique and stratified sampling technique to sample 330 participants (30 principals, 30 heads of departments and 270 students from 32 secondary schools in the sub-county. Questionnaires were used to collect data from students and head of departments while an interview schedules were used to collect data from principals. It was discovered that teaching resource, teacher adequacy, physical facilities and head teachers supervisory roles had positive and significant relationship with students' performance at KCSE. Contextual gap is evident in the general target of public secondary schools. Further, the context of day school learning may be influenced by social- demographic factors of different regions. The current study focuses on public day secondary schools with a different school environment from public boarding schools in Nyeri County.

Sifuna (2006) noted that the dissemination process of competent teachers in different regions in Kenya played a significant role in shaping student's performance in KCSE. According to the author, some schools are provided with adequate number of skilled teacher while other does not. The distribution of teacher seems unfair because some regions have enough number of teachers whole other do not. Similarly, Raju (2009) agrees that some schools especially in the rural areas do not have an adequate number of teachers. According to the author, the available teachers are often stretched to meet the needs of all students and the school management is forced to bring in tutors who are not fully trained and that affect the quality of education. Additionally, Wanyama (2013) asserts that management of students in schools will low number of teachers is very difficult; teachers in many cases have workloads and that compromises the quality of education they offer to students.

Obwoye (2012) agrees that high workloads by teachers of between nineteen and twenty four lessons with others having over twenty four classes to attend to in one week interferes with quality delivery in the classrooms. According to the author, only students with the ability to learn quick benefit while a majority is left out in the dark. The UNESCO report (2012), confirmed the issues of teacher shortage in Kenya. The report highlighted that the shortages of teacher was a major reason for poor performance among for many students in Kenya. The report also note that lack of finances to hire skilled teacher and purchase quality infrastructure played a part in low performances recorded in the country. It is critical to evaluate whether staffing of teachers in public day secondary schools affects teacher's performance and the impact on students' KCSE performance.

#### **2.4 School Administration**

The school administration positively or negatively affects the students' performance. According to Kombo (2006), a well-organized and structured lays foundation for successful learning and outcomes in the national examinations. It is the duty of the administration to manage all school affairs including finances, resources and time. Wiseman (2000) and Kombo (2006) further noted that large schools attract effective school heads that are able to spearhead good performance of such schools. According to the authors, effective leaders delegate duties strategically, supports implementation of set actions and policies and monitor as well as evaluate the progress of a program to ensure it is successful. According to Olembo (2006), effective school heads instill discipline to students; discipline plays a huge role in shaping a student's performance in class. The administration through the leadership

of an effective principal promotes high performance of students in the national examinations.

Some studies have recognized school administration and government as one of the reasons for poor academic results. Kieti, et al. (2017) conducted a study to investigating how administrative practices affects student's performance. The study was conducted in Matungulu Sub-County, Kenya. The study design was descriptive methodology and the study employed simple random sampling techniques to select participants. The researcher discovered that administrative practices played a significant role in shaping the schools operations that influenced academic performance. The study however did not explain how public day secondary schools' administration was related to the academic performance of students in KCSE.

According to Miller and Seller (2007) promoting an atmosphere that inspires learners to work together as a team, collaborate, share insights and knowledge in group discussions and projects enhances good performance of a school in the national examinations. The students work together as a group and assist the weak students and this improves the overall performance of students in examinations. School administration that motivates students was to make them more responsible and more interested in studies. Litunya (2006) agrees that the school administration is the backbone of good school management and overall performance of teachers, staff and students. When all stakeholders play their parts well, academic performance of students is boosted significantly. According to the author, the administration is charged with the responsibility of planning, coordinating and facilitating all activities that promote learning. This makes the governance and administration functions of a school very critical in ensuring effective learning,

though the case of public day schools in Nyeri County shall be evaluated in the current study in establishing whether it enhances academic achievement of students.

#### **2.4.1 Leadership Style and Students' Performance**

According to Katana (2007), the leadership of a school is a key aspect for optimum performance in the main examinations. A school principal is the chief leader and is charged with the responsibility of spearheading the school to perform well in national exams. Effective leadership requires school principals to foster an enabling environment for learning by engaging in a number of strategic actions such as: enhancing cooperation of teacher and students in implementing both short term and long term goals and conducting staff meetings to convey information and listen to the views of teachers. All these helps to bring about a good performance. The author also suggests that school principals should have mission and vision that directs the school to perform well in the major examinations. In the case of Nyeri County public secondary schools, this study evaluated the leadership characteristics and effect on effective learning and students KCSE performance.

Okumbe (2007) explains that a school is a functional unit of the education system. It is a processing device through which the education system meets the aspirations of the society. This being the case, school principals should ensure that the school and its objectives are in harmony so that all the objectives are achieved and this call for proper leadership of the school. Obadara (2005) argues that the administration is supposed to develop a proper communication channel for student, teacher and parents for information to flow smoothly. This heightens the relationship between stakeholders and thus boosting collaboration among them. When all parts of walk together in the achievement of good grades in the final examinations, the process

becomes smooth for every part. School administration should therefore foster collaboration between all education stakeholders to improve student's performance in the national examinations.

Aniah (2005) asserts that effective school leaders use leadership strategies to change teachers' instructional practices by communicating goals, providing incentives, providing resources and promoting professional development. They thus help to create a conducive working environment for teachers which help improve students' academic achievement. Moses (2009) discovered that there is a connection between the administration's leadership style and the performance of students in KCSE. Similarly, Achieng (2005) found that the type of leadership that promotes active communication between school heads, their subordinates and students enhances quality grades in the final examinations among students. The author revealed that the type of leadership displayed by the administration is a prime indicator of the results to expect in the national examinations. According to Musungu and Nasongo (2008), an effective administration creates a learning environment, streamlines teacher's commitment and improves student discipline thereby improving the quality of education. As a result, the students' performance improves especially in the main examinations. Whether this is premised in public secondary school leadership shall be evaluated in the current study.

Githua and Nyabwa (2008) asserted that schools that perform poorly in KCSE have poor administration leadership. According to the authors, school administration is charged with the responsibility of equipping the school with adequate teachers, resources and facilities that enhance quality education and hence good performance in KCSE. The authors argue that I school administration fails to execute their duties

properly, teaching and learning will be compromised and the final results in KCSE will be poor. Additionally, the authors point out that qualification of school heads together with supervision strategies and leadership style they employ do influence students' achievement.

According to Purdul et al.; (2014), principals should ensure that the schools and its objectives are in harmony and this can be through delegation processes which are aimed at increasing goal achievement. Kamande (2005) explains that democratic leadership has a high influence on KCSE because they work with others seeking their opinion which improves academic performance. How the head teachers ensured learning cooperation and coordination in public day secondary schools was evaluated in the current study.

#### **2.4.2 Instructional Supervision and Students' Performance**

This is the assistance given to teachers for the improvement of instruction. Teachers are expected to teach students, ensure that the learning process is smooth and to prepare students to sit for examinations (Akunga, 2012). This requires teachers to engage in an instructional dialogue and therefore the school administration should provide instructional supervision to all its teachers. Instructional supervision is thus a focus for improving teacher knowledge, skills and abilities to make informal decisions and solve problems effectively. Successful supervision may promote a vision to implement change in organization that facilitates improvement.

The principal is the instructional leader of a school. The ultimate purpose of instructional supervisors is to ensure that teachers are well equipped and facilitated to work excellently. The instructional supervisors budgets resources and financials, plans, executes and monitors in services that supports teachers and evaluates policies

designed to ensure that teachers are working in an enabling environment. Additionally the instructional leader coordinates all education stake holders by facilitating communication networks for connecting teachers to the administration, parents and students. It is important to establish whether there are standards/guidelines by the education ministry for effective instructional supervision so as to enable comparative analysis of all types of secondary schools.

The principal should monitor teacher's performance by making informal visits to classrooms and promote teacher quality professional development (Desimone, 2006). This is because promoting and encouraging professional advancement and growth help teachers to improve on their tactic and methods of delivery in class which then translates to quality education. Professional development also helps teachers to tailor their teaching methods so that the needs of all students can be addressed individually. A shaky leadership and administration practice threatens the cooperation between teachers and students and kills the motivation and morale of key stakeholders thereby jeopardizing the quality of education. According to the author, administration's style and practices directly influences the quality of education which has direct impacts on the performance of students in KCSE. The supervisory role of school principals public day schools in Nyeri County will be assessed in this study to understand its effects on the performance of students in KCSE.

According to Wanjiru (2009) in Kenya, school supervision and inspection is conducted with the main goal being to make sure that the rules established by the school heads are strictly followed. It does not play its intended role of ensuring that there is conducive teaching-learning environment in schools to improve students'

academic achievement. She further explains that unfriendly supervision by the head teachers tends to affect the teaching and learning process negatively thus supervision should be carried out with integrity and love. However, MOEST (2005) found that poor management was among the primary factors that contribute to poor performance. Whether this has continued in the recent past is critical to establish. This study will seek to understand whether supervisory process impacts on teaching and learning in public day secondary schools in Nyeri County.

## **2.5 Instructional Resources and Students' Performance**

According to Wanyama (2013), instructional materials such as models may illustrate in details the points being made by a teacher and expand some of the presented details in broad general principles for better understanding. This implies that their use helps to bring about effective and good quality learning in a school. Education facilities have a direct bearing in participation and performance of learners. (Obwoye, 2012).

When a school lacks teaching resources, they are bound to perform poorly in examinations compared to students from schools with enough and good quality teaching resources. According to Kombo (2006), there is a correlation between instructional resources and the performance of students in KCSE. However, according to Wanjiru (2009), most schools particularly those in rural based areas hardly have any teaching resources and aids anywhere in classrooms during the lesson except some form of blackboard, duster and chalk. This leads to poor performance in examinations by students.

### **2.5.1 Teaching Equipments and Resources and Students' Performance**

Chirchir, Manduku and Makero (2018), conducted a study in Njiru Sub-county. The research investigated how school based factors influenced academic performance of pupils in the region. The study employed a mixed method study approach and simple random sampling technique. 150 participants were drawn for the study including 20 head teachers and 130 teachers. The study revealed many schools in the region had insufficient textbooks and writing material to serve the population of pupils efficiently.

According to Miller and Seller (2007), lack of enough resources such as books and other instructional materials contributes to poor performance of students. According to the authors, teaching equipment help teachers to illustrate and explain concepts in a simpler manner. The author further posits that secondary schools that do not have laboratories usually perform poorly in science subjects because of students missing the practical lessons. However, access to such important instructional materials for day secondary schools may be affected by varied factors, and this will be evaluated in the current study. Similarly, Litunya (2006), asserts that day schools especially in the rural areas lack crucial teaching resources and as result, they perform poorly than their counterparts in urban areas. However, the case of day schools is critical to evaluate to illuminate the reasons for access challenges. Whether this is the case for public day secondary schools in Nyeri County in last few years remains a critical gap.

### **2.5.2 Physical Facilities and Students' Performance**

Physical facilities influence the performance of a student significantly. In a study conducted by MOEST (2005), it was discovered that facilities like text books,

playground, library, school bus, class rooms and library are important aspects and promote good performance of a student. Physical facilities have a significant role in school and they complement teaching and learning process. A well-equipped school was discovered to do well in national examination compared to their counterparts. According to Okumbe (2007), physical facilities promote learning and teaching process. The author noted that the head teachers are responsible for management and maintenance of the school plant equipment. They should organize and ensure cleanliness of the physical facilities to enhance proper running of the school which in turn creates a conducive learning environment.

Wambua, Murungi & Mutwiri (2018) explored how physical facilities in a classroom influenced the pupil's performance in social studies. The study was conducted in Kibwezi Makueni County and involved primary schools in the region. Descriptive study design was used and the sample was obtained using stratified sampling technique. Observation schedules and questionnaires were the tools used to collect data. The researchers found that in schools where physical facilities were well equipped, student's performance in the subject was good. Contrary, where schools had little or no physical resources for supporting social studies, pupil's performance in social studies was very low. However, the study focus was on primary school social studies, and this study is based on public day secondary education with different needs for instructional facilities in general.

Barasa and Nyongesa (2007) discovered that physical facilities available in a school determine its performance in the national examination. According to the authors, the performance of schools could be distinguished on basis of the physical facilities available in a school. The author asserted that schools that were well equipped with

facilities like playground, books, library, buses, water, electricity, laboratory and dormitories performed better in KCSE compared to their counterparts with little of the physical facilities. Physical facilities play a huge role in the development of educational programs and complement teaching through practicality aspect of interacting with students in different settings. They ensure that students are involved in a wide variety of activities to foster learning. According to Monari (2007), availability of physical facilities contributed to quality teaching and learning and thus good results in KCSE among secondary school students in Nyacheki Sub-County.

Availability of instructional resources determines the quality of education offered in a school, which then determines how students perform in KCSE. Instructional materials are important in demonstration during lesson delivery and their use brings about effective learning. Obwoye (2012) cited poor infrastructure in schools to be among the many barriers to KCSE performance among many day secondary schools in Kenya. Wanyama (2013) noted that inadequate instructional materials lead to poor academic performance. Where adequacy of instructional materials affected public secondary schools in Nyeri County remains a contextual, gap for this current study.

## **2.6 Student -based Variables**

These are variables affecting a student's academic achievement. Below are some of student based variables that were examined.

### **2.6.1 Discipline and Students' Performance**

Discipline is essential for smooth learning of school and society. Olembo (2006) explains that discipline in the school is a function of the administration. The

effectiveness of any organization depends on the level of discipline displayed by the members of that organization. Indiscipline among students has been suspected to have had a negative effect on learning programs, academic performance and tainted the reputation of otherwise reputable schools (Adu, 2006). Kapur (2018) conducted a study in India with the goal of establishing how discipline among students affects their performance in the major examinations. The study established that students' unrest and indiscipline undermine the quality of education. Also, indiscipline promotes drop outs and repetition which often leads to wastage and low performance by the learners. Discipline however is a social cultural factor that varies with different individuals, cultures and social structures. Thus, evaluating how the level of discipline among students in public day schools in Nyeri County influenced the academic performance in KCSE was a key focus of this current study.

### **2.6.2 Language Use and Students' Performance**

Examinations in secondary schools except for Kiswahili are set in English. The textbooks that teachers use in classrooms and those that students read are also written in English. This means that unless students understand the English language well, they were most likely to perform poorly in an examination (Mutindi, 2018). According to Adeyemi (2010), the use of local language was a huge barrier for effective learning. Majority of the courses are prepared in English and therefore students could experience challenges in grasping concepts and vocabularies. This hinders teacher's delivery because student's level of understanding is very minimal. Inability to read and understand or communicate effectively at secondary school level is a great problem which would consequently lead to low student performance in KCSE.

Olembo (2006) cited failure to understand questions as one of the weaknesses noted in many schools that leads to poor performance in examinations. Proficiency in language use may be an important influence on cognitive behavior of the students. However, language use motivation in the school may improve its effectiveness in the learning process. How public secondary schools in Nyeri Country promote English language in learning process is a contextual gap.

### **2.6.3 Absenteeism and Students' Performance**

Absenteeism by students may affect their academic performance (Akunga, 2012). This a big issues in many secondary schools where students miss classes due to lack of school fees, illness or discipline related issues. Whenever a student misses a lesson, they lose the concepts taught on that lesson. When one misses classes they consequently miss all the concepts taught during that period. This puts them in a very difficult position to handle the missed concepts and grasp them successfully. Since teachers do not revisit the missed concepts for the purpose of a student or students who were absent, it becomes an issue for such students in performing should the concepts they missed appear in the national examination. According to the author, students find it hard to understand what was taught in their absence and this leads to poor performance in an examination.

Odumbe, et al. (2015) while focusing on day-secondary schools investigated how absenteeism affects student performance in KCSE. The study adopted a descriptive study methodology and simple random sampling technique. A sample of 800 participants was drawn and data was collected using student and teacher's questionnaires as well as interview schedules. Absenteeism was associated with the level of income of the family, distant to and from the schools, student's attitudes,

substance abuse and peer pressure. As a result of absenteeism, students performed poorly in national examination in the region. Contextual gap was evident in the divergent social-demographic characteristics of different Sub Counties in Kenya, which may affect day school learning for secondary school students. This study focused on Nyeri County.

According to Purdul et al (2014), absenteeism of students from schools due to being sent home for fees is the topmost reason why schools are performing poorly. The students remain at overstay at home and therefore lose much time that would have been spent on learning. Whether this is the case for day secondary school students in Nyeri County was a gap examined in the current study. Kamau (2005) established a linkage between class attendance patterns and learner academic achievement. He discovered that there is a significant relationship between absenteeism and how students perform in KCSE. The author recommended that students should make an effort to attend school regularly in order for them to achieve high academic performance. However, conceptual gap exist on the examination of the reasons behind absenteeism among students attending day schools in Nyeri County.

## **2.7 Summary and Gaps**

The purpose of this study was to investigate how school based factors such as: teacher's characteristics, instructional resources, school administration and student based variance affects the performance of students in KCSE in public day schools in Nyeri County. Much research has been conducted in attempt to address the problem of poor performance of students in secondary schools. Table 2.1 displays a summary of studies that have been conducted and the key gaps in every study.

**Table 2.1 Summary of Key Gaps**

<b>Researcher/ Author</b>	<b>Study Focus</b>	<b>Study Findings</b>	<b>Knowledge Gaps: Conceptual, Contextual, Methodological or Empirical Gaps</b>	<b>Current study Focus</b>
<b>School Based Factors and Students Performance</b>				
Mutindi (2018)	School-based factors affecting the performance of students in KCSE in public secondary schools, Kathiani Sub County.	Teaching resource, teacher adequacy, physical facilities & head teachers supervisory roles had positive and influenced the performance of student in KCSE	-Significance of teachers' pedagogical capacities - Significance of students' characteristics	-Influence of Teachers qualifications, skills - Influence of students' characteristics on KCSE performance
<b>Teacher Characteristics and Students' Performance</b>				
Zainab, Indoshi, Okwach (2019)	How teacher related factors influence the performance of a student in Kiswahili composition among	There is a significant connection between teacher related factors	-Contextually, study focused on Kiswahili composition - Methodological-	-Study focuses on Nyeri County Public day Secondary

<b>Researcher/ Author</b>	<b>Study Focus</b>	<b>Study Findings</b>	<b>Knowledge Gaps: Conceptual, Contextual, Methodological or Empirical Gaps</b>	<b>Current study Focus</b>
	secondary schools, Kisumu west sub- County.	and student performance	Study conducted in Nyanza County Public secondary schools	Schools students' KCSE mean grade as performance indicators
Luketero & Kangangi (2019)	Factors affecting the level of performance in secondary school students in Kirinyaga County.	Teacher-students ratio was seen to be highly influencing students' performance	Teacher-students ratio in public day secondary schools	Teacher - students ratio in day schools, Nyeri County
Nannyonjo (2007)	Factors affecting learning achievements in Uganda	Head teachers' leadership styles influence students' achievement	-Study was conducted in Uganda	- Study focused to Kenya, public day secondary schools

<b>Researcher/ Author</b>	<b>Study Focus</b>	<b>Study Findings</b>	<b>Knowledge Gaps: Conceptual, Contextual, Methodological or Empirical Gaps</b>	<b>Current study Focus</b>
<b>School Administration and Students Performance</b>				
Kieti, et al. (2017)	Influence of administration style on the performance of students in KCSE, Matungulu Sub-County.	Effect of administrative practices on academic performance was strongly positive and important	Influence of administration style on the performance of students in Nyeri County public day schools.	Influence of administration style on the performance of students in Nyeri County public day schools.
Akunga, J.O. (2012)	Influence of school-based factors on Students' performance in national examination (KCSE) in Kisii County	Head teachers lacked supervision and cited lack of teachers' cooperation in supervision, commitment and motivation	The study was conducted in secondary schools located in Kisii County.	The current study was conducted in public day schools located in Nyeri County.

<b>Researcher/ Author</b>	<b>Study Focus</b>	<b>Study Findings</b>	<b>Knowledge Gaps: Conceptual, Contextual, Methodological or Empirical Gaps</b>	<b>Current study Focus</b>
<b>Instructional Resources and Students Performance</b>				
Chirchir, Manduku and Makero (2018)	Effects of school-based factors on performance in public primary schools in Njiru Sub-County	Majority of the schools in Njiru do not have enough textbooks which affected their performance	study assessed primary schools in Njiru sub-county	Current research focuses on Nyeri County Public day Secondary Schools students'
Wambua MM, Murungi CG, Mutwiri C. (2018)	Classroom learning environment in social studies among pupils in lower primary, Makueni County.	Availability and use of physical facilities necessary for social studies was below average	-Focus was on lower primary social studies subject -Environmental learning needs differ with	-Focus was on secondary education

<b>Researcher/ Author</b>	<b>Study Focus</b>	<b>Study Findings</b>	<b>Knowledge Gaps: Conceptual, Contextual, Methodological or Empirical Gaps</b>	<b>Current study Focus</b>
			secondary education	
<b>Students Characteristics and Academic Performance</b>				
Kapur (2018)	What contributes to poor performance of secondary schools students in India	Students' unrest & indiscipline undermine the quality of education	Study was conducted in the Indian context	Study focus was Kenya
Odumbe, et al. (2015)	Factors affecting good performance among secondary school students in KCSE, public day schools in Migori county.	High cases of students absenteeism facilitated by lack of school fees, long distance between school and home, negative attitudes among student	Divergent social-demographic characteristics of different Sub Counties in Kenya	study focused on day secondary schools Nyeri County

<b>Researcher/ Author</b>	<b>Study Focus</b>	<b>Study Findings</b>	<b>Knowledge Gaps: Conceptual, Contextual, Methodological or Empirical Gaps</b>	<b>Current study Focus</b>
		contributes to poor performance		

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter addresses the following areas: research design, study location, target population, sampling technique & sample size, research tools, pilot study, data collection method, data analysis and finally logistical and ethical consideration.

#### **3.2 Research Design**

This research adopted a descriptive survey model to investigate the school-based variables affecting students' performance in KCSE. Descriptive survey design addresses incidences, dispersal and interrelations of educational variables. It describes the nature of the phenomenon, examines actions as they happen rather than manipulation of variables (Orodho, 2012). The author further notes that a descriptive survey involves collection of information by interviewing participants or through administering questionnaires to study participants. It was suitable as it helped to collect facts and views from different categories of respondents. It is thus the most effective method for meeting the requirements of the research questions and objectives.

##### **3.2.1 Variables**

The independent variable comprised school-based variables that influence the students' performance in KCSE. These specifically included teacher characteristics, school administration, instructional resources and students' characteristics. The dependent variable is students' performance in KCSE, which is indicated through

the mean grades and mean scores obtained by different schools and the number of students achieving C+, the entry mark to university education.

### **3.3 Study Location**

The research was conducted in public day secondary schools in Nyeri County. It was also chosen because the performance of public day secondary schools in Nyeri County have been dismal as shown by KCSE results analysis for a number of years. Yet no empirical research has been documented in the area to help the education stakeholders to understand the variables that contributed to the dismal student's performance in public day secondary schools and help the students to improve on the academic performance.

### **3.4 Target Population**

A target population refers to a group of people, things, occurrences and events or elements being studied by a researcher. For this study, the target population comprised of 11 public day schools in Nyeri County. It was to include all 18000 students, 225 teachers and 11 head teachers of the schools, totaling 18,236 respondents. This population was selected because it was accessible to the researcher thus it is possible to collect information from the schools.

### **3.5 Sampling Technique and Sample Size**

The study discusses sampling techniques and sample size in this section. According to Kothari (2011), a good research employs a good sampling technique to draw a quality sample from the target population. The sample drawn must represent the target population efficiently; should be compatible on many characteristics, which are important to the study.

### **3.5.1 Sampling Techniques**

All the eleven public day secondary schools from Nyeri County were stratified into categories depending on their average mean score for the years 2009-2013 KCSE results. Simple random sampling method was employed to choose schools from each category to participate in the research. All school principals from the sampled schools participated in the study. Both teachers and students who participated in the study were randomly selected.

### **3.5.2 Sample Size**

According to Orodho (2012), a sample is a small number of individuals or objects that is selected from a population and contains elements that represent the entire target population successfully. The schools were stratified into categories depending on their average mean score for the years 2009-2013 KCSE performance. All the head teachers (11) of the selected schools were purposively selected to participate. Simple random sampling was used at 60% of the 225 teachers from each of the selected schools to form a sample of 135 respondents. Franklin (2012) argues that a sampling rate of 10% and above is suitable for social studies, making the rate in this study feasible.

Systematic sampling was employed in sampling the students' population. The formula is the most preferable when the study population is relatively large. According to Francis and Grimshaw, et al (2010), systematic sampling involves arranging the target population in a chronological order and selecting samples at regular intervals. This method adopts a random start and then select participants in a selected interval until a good sample size is achieved. Thus, in this current study, the 48<sup>th</sup> student was randomly selected (inclusive of all gender) and the sample size was

375 respondents. The overall sample size was 521 respondents as indicated in the table below (table 3.1)

**Table 3.1: The sampling frame**

<b>Respondents</b>	<b>Population</b>	<b>Sample size</b>
Principals	11	11
Teachers	225	135
Students	18000	375
Total	18,236	521

**Source: Researcher (2018)**

### **3.6 Research Instruments**

The study collected data using semi structured questionnaires and observation schedules. Semi structured questionnaires were selected because by using them the respondents can give more honest answers because all people responded to the same questions hence no room for biases. Two sets of questionnaires (one for both principals and teachers and the other for students) were used. The questionnaires contained both open-ended where the respondents were to respond as they wish and also close-ended where the respondents gave specific answers. Each item was developed to address specific objectives or research question of the study.

Observation schedule was also preferred as an appropriate tool to collect first hand data from the schools by the researcher. The main reason why observation schedule was used is because it eliminates biasness. Franklin (2012) advocates that the information collected using observation schedule is reliable because it capture current events and situations; it is not informed by past data. The researcher used observation checklist to record what is observed during data collection.

### **3.7 Pilot study**

The sustainability of research instruments was tested in a pilot study carried out in 3 secondary schools in Kirinyaga County. The selected schools for pilot study had similar characteristics to those of the sample used in the study.

#### **3.7.1 Validity**

Validity refers to the correctness of the inference, which is founded on the study questions. Kothari (2011) elaborates that it is the extent to which results obtained after analyzing data accurately represents the phenomenon being studied. Content

and face validity will be achieved through enough and timely preparation of research instrument through the help of the supervisors and relating the items to the objectives will be observed. The clarity of the language to use will be confirmed by subjecting the respondents to the instruments through a pilot study with a view of confirming their capacity to understand the language used in the instruments. In case of any misunderstanding or ambiguity, the researcher will make changes on the instruments to ensure that it conforms to the understanding of the target group.

### **3.7.2 Reliability**

According to Kothari (2011), the reliability is a measure of the extent to which a research tool produces steady outcomes of data after repeated trials. The consistency of the research tool was established through a pilot study. They were pretested in three public day secondary schools in the neighboring County of Kirinyaga. Test-retest technique was employed whereby they were administered to the respondents in two-week intervals. Cronbach's alpha was used to determine the reliability of the research tools whereby a Cronbach's alpha of 0.8 was elicited and taken as acceptable reliability. According to Francis and Grimshaw, et al (2010), the reliability coefficient will be expected to be equal to or greater than 0.7 otherwise; the instruments will have to be revised.

### **3.8 Data Collection Procedure**

The scholar obtained permission from the University and the National Commission for Science, Technology and Innovation (NACOSTI) to conduct research. After obtaining the permit to proceed, the research sought informed consent from the principals of the sampled schools. The researcher distributed questionnaires and the purpose of carrying out research explained to the respondents. Any clarifications

regarding the questionnaires were made. An observation schedule was also used to gather data from the school. The researcher mainly relied on primary data collected directly from the respondents and school environment.

### **3.9 Data Analysis techniques**

According to Gachuiga (2010), data analysis involves strict inspection of data, modeling the data, cleaning it and transforming it so that important information can be highlighted and conclusions made. Kadenyi and Kamuyu (2006) explain that such data needs to be prepared, veiled and keypunched into a computer for examination and analysis. Quantitative data was analyzed using Statistical tools SPSS version 25 through percentages, means and standard deviation. Qualitative data obtained was analyzed using content analysis method. The study findings were presented using bar graphs, pie charts and frequency tables, upon discussions.

### **3.10 Logistical and Ethical considerations**

Preparation for the research began with a reconnaissance visit to the study area in order to help the researcher make appropriate arrangement. Appropriate travel arrangements were made and data collection materials prepared in advance. All respondents were made aware of the exact date and time of collecting data. Prior to collecting data, the research obtained a permit from Kenyatta University School of Education and NACOSTIO to undertake research in Nyeri County. Permission was also sought from the County's education office to carry out research in Nyeri County. Informed consent was established and obtained from the principals of schools that were selected for study and the purpose of the research explained to them. The respondents were assured confidentiality of the information they provide in the questionnaires.



## CHAPTER FOUR

### PRESENTATION OF FINDINGS, INTERPRETATION AND DISCUSSION

#### 4.1 Introduction

The study was aimed at establishing the school-based variables influencing performance of students in KCSE among public day secondary schools in Nyeri County. The following were the objectives of study: to establish the extent to which teacher characteristics affect students' performance in KCSE; to determine the influence of school administration on students' performance in KCSE; to identify the effects of instructional resources on students, performance in KCSE and to identify the effects of student-related variables on students' performance in KCSE.

#### 4.2 Response Rate

The inquiry anticipates responses from 521 participants including 375 students, 135 teachers and 11 head teachers. However, due to unavoidable circumstances, the researcher was not able to achieve 100% response rate. The Table 4.1 displays the reaction rate from various participants. The highest reaction rate was realized among teachers at 100% for the head teachers whose responses were adequate for analysis, followed by students at teachers at 88.9%, and students at 88.3%. Overall, the study achieved 88.6% response rate which was commendable. Kothari (2011) advocated that a response rate of 70% and above was suitable for social studies.

**Table 4.1 Respondents' response rate**

Respondents	Expected Respondents	Actual Respondents	Response rate (%)
-------------	-------------------------	-----------------------	-------------------

Head teachers	11	11	100.0
Teachers	135	120	88.9
Students	375	331	88.3
Total	521	462	88.6

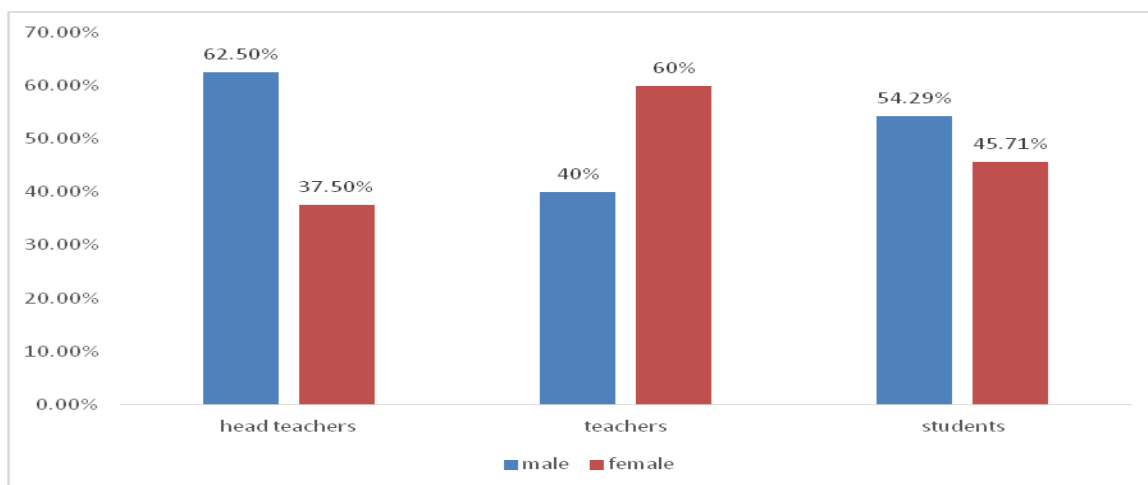
**Source: Researcher (2018)**

### 4.3 Demographic information

Some of the demographic and general information deemed useful in this study included: age, gender, level of study of the students, teachers' qualification, period of experience and teaching load. These variables were considered because they had potential to affect the nature of responses given by study participants.

#### 4.3.1 Gender

The research protocol required each participant to indicate their gender. The sample population included head teachers, instructors and learners. This is displayed in Figure 4.1.



**Figure 4.1 Gender of the respondents**

**Source: Researcher (2018)**

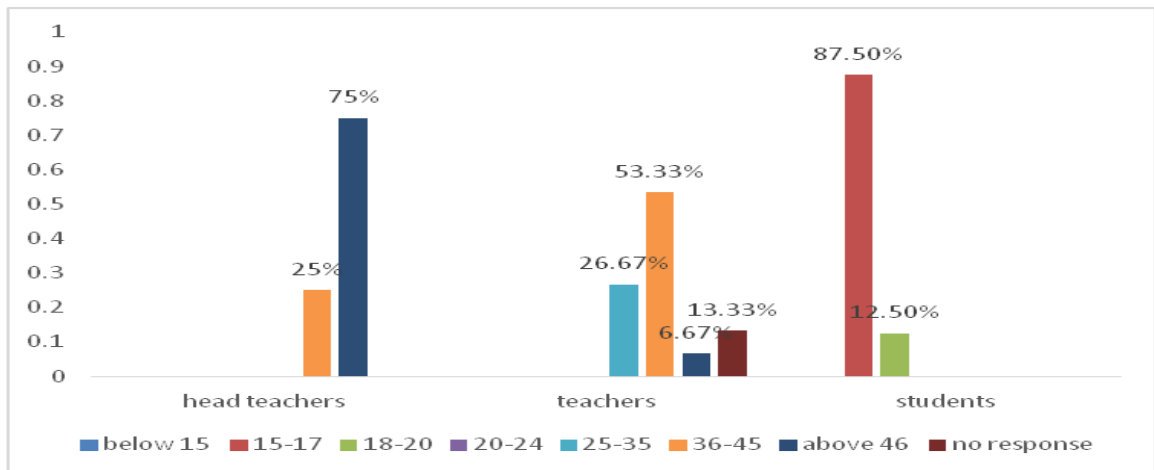
The findings showed a higher prevalence of male school heads (62.5%) than female (37.5%). On the other hand, female instructors were more by a 60% rate than their counterpart who occupied the 40% remaining. The proportion of male to female students was not equal standing at 54.29% and 45.71% female. This agrees with the findings of Wanjiru (2010) who postulated that gender inequality is at its highest in the Kenyan education system having the male gender taking priority over the females.

The findings also imply that while there were more males in management positions in day secondary schools, most of the teachers in these schools were female. Notably, gender parity was evident in the representation of head teachers, having lower percentage of female respondents. However, the one third gender equity rule prevailed. The findings agree with those of Gachuiga (2010) who found out that there were more male head teachers in secondary schools as compared to female head teachers. Manori J (2007) in his study also found out that many female teachers shied away from applying for administrative positions in secondary schools.

Gender parity of the head teachers may affect leadership and guidance in curriculum and subjects' achievement. It further shows that there was little gender parity in students and teachers in schools. Report by UNESCO (2007) indicated that the reason why there was poor participation and performance in science and mathematics by female students is because girls lacked role models in science and mathematics. Results also concur with those of Wanjiru (2010) who in her study unveiled the higher occupancy rate of male principals in high schools (83.3%) as compared to females (16.7%).

### 4.3.2 Age category of the respondents

The study further sought to establish the age category of the respondents. Their responses were as displayed in Figure 4.2.



**Figure 4.2 Age category of the respondents**

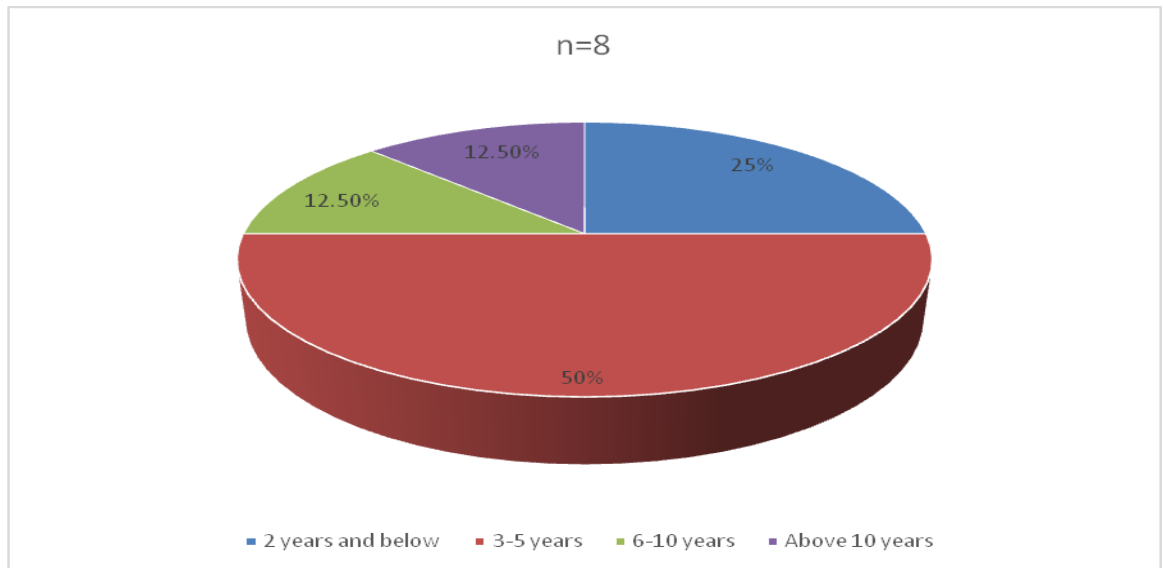
**Source: Researcher (2018)**

Findings in figure 4.2 indicate that the highest number (75%) of school heads aged above 46 years while 25% were aged 36-45 years. Simultaneously, most of the instructors (53.33%) were aged 36-45 years, 26.67% were aged 25-35 years while 6.67% were aged above 46 years. However, 13.33% of the teachers did not indicate their age in the questionnaire. Majority of the students (87.5%) were 15-17 years old while 12.5% were aged 18- 20 years.

The results insinuated that most of the school heads were mature and could exert leadership in the school and learning processes. Most teachers who were on their middle ages and thus energetic and could embrace innovations in learning processes, while having energy to impart knowledge and skills to the students in day secondary schools.

### 4.3.3 Length of service as head teacher

The researcher requested the school heads to state the length of their service in their career as head of their specific schools. Their responses were as displayed in fig 4.3



**Fig 4.3 Service as head teachers**

**Source: Researcher (2018)**

Most of the head teachers (50%) reported that they had served as head teachers for 3 to 5 years while 25% mentioned that they had served for 2 years and below. The inquiry inference was that most of the head instructors had been promoted recently since only one reported to have served for 10 years and more. This insinuated that most head instructors have enough experience in the learning environment and had attained skilled required by the education sector for leadership that make them good managers. The findings agree with those of Nasongo (2013) who found out that the more experienced a head teacher is the better placed they were to employ good measures to improve academic performance.

The results also correspond with those of Wanyama (2010) in his research to probe the institution-based aspects determining learners' achievement in KCSE in Narok who noted that the heads that had greater experience were better versed with the strategies that they used in their schools to improve academic performance. They also agree with those of Likoko (2013) who found out that more experience of headteachers directly and indirectly reflected on the academic achievement of learners' and thus, the holistic performance of the school.

#### **4.4 Extent to which teacher characteristics influence students' performance in KCSE**

The first objective of the inquiry was to determine the impact teacher-related-characteristics have on the performance in KCSE. Various teachers' related characteristics were explored as discussed in subsequent sections.

##### **4.4.1 Highest academic qualification**

The research requested instructors and school heads to indicate their highest scholastic qualification and their response were recorded in the table 4.2.

**Table 4.2 Respondent's academic qualification**

Education level	<u>Teachers</u>		<u>Head teachers</u>	
	<u>Frequency</u>	<u>Percent</u>	<u>Frequency</u>	<u>Percent</u>
Postgraduate	16	13.33	7	62.5
B.Ed.	80	66.67	4	37.5
Diploma	24	20	0	0

Total	120	100	11	100
-------	-----	-----	----	-----

---

**Source: Researcher (2018)**

From the results in table 4.2, a most of the head teachers comprising 62.5% had a post graduate degree compared to 13.33% of the teachers. None of the head teachers had a Diploma level qualification. This shows that most of the head teachers had higher education level requisite for administrative functions in Secondary Schools in Kenya. Basically, teachers in these schools had minimum qualifications of a Diploma in Education required by Ministry of Education to adequately instruct secondary school students. Attendance of related courses may further enhance teaching schools and as advocated by Kieti et al. (2017), being a skilled leader is an important characteristic of the teacher.

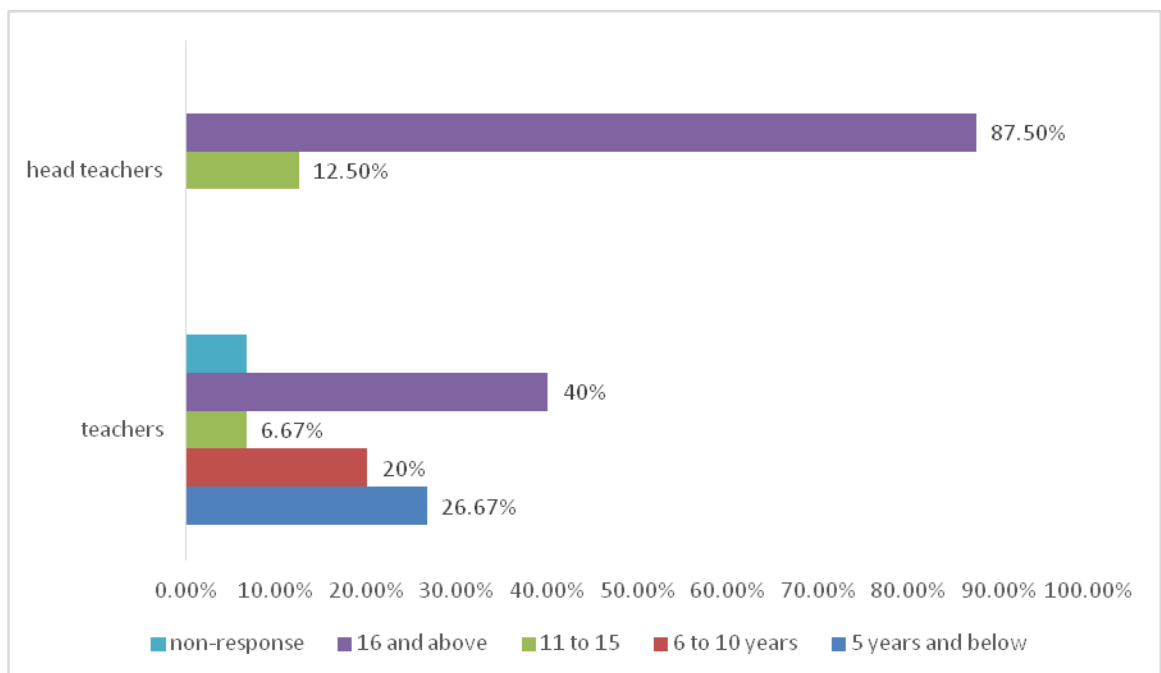
Deductions from the data obtained may be that many of the head instructors had better qualifications in school learning supervision and operations by the virtue of being trained as teachers. Researches in this area indicate that instructors' academic qualification had a direct impact on their effectiveness in passing down knowledge to students. Majority of teachers in this study had Bachelor of Education hence they had better understanding of the aspects determining school efficiency and academic achievement.

The results revealed that the institution's leadership was better qualified to man the activities therein and the instructors possessed the necessary qualification to offer prominent learning experience for respective students. Quality of education is dependent on the professional qualification of teachers and according to Wanjiru (2009) for such teaching to take place, well qualified and enthusiastic graduate

teachers should be employed since they have good mastery and expertise in the subject as well as the necessary pedagogical skills. This implies that the teachers with high educational qualifications are in a position to comprehend the institution-based variables influencing students' achievement and are also likely to create a more conducive learning environment in schools.

#### 4.4.2 Teaching experience and Academic Performance

The researcher further sought to identify the upskill acquittance of both teachers and the head teachers. Their reactions were as displayed in Figure 4.4



**Fig 4.4 Teaching experience of teachers and head teachers**

**Source: Researcher (2018)**

The findings in fig 4.3 indicate that most of the head teachers (87.5%) had been actively participating in the profession for over 16 years. This insinuates that most head teachers had worked in the teaching profession just as expected as the basis for promotions. The same was true for instructors whose majority (40%) had more than

sixteen years of educational acquittance. However, a considerable proportion (26.67%) and 20% had teaching skills of 5 years and below and 6 to 10 years respectively. Teachers in the secondary schools under study had adequate teaching experience hence poor performance in KCSE may not be blamed on absence of experience on the side of instructor. Experienced and qualified teachers enhance learning and achievement of students. It can thus be deduced that the teachers could be effective in knowledge dissemination.

The findings of the study concurred with those of Gibbons (2007) who found out that more experienced instructors have a good mastery of classroom content and diverse behaviors of students; hence, can effectively drive students towards achieving the best results in their exams. Adeyemi (2010) in his study concluded that teaching experience is a critical variable and observed that experienced teachers always have better strategies to apply at any given situation better ways of bringing the subject matter being taught to students. Yala and wanjohi (2011) posits that experience improves skills, enhances knowledge and productivity of the teacher.

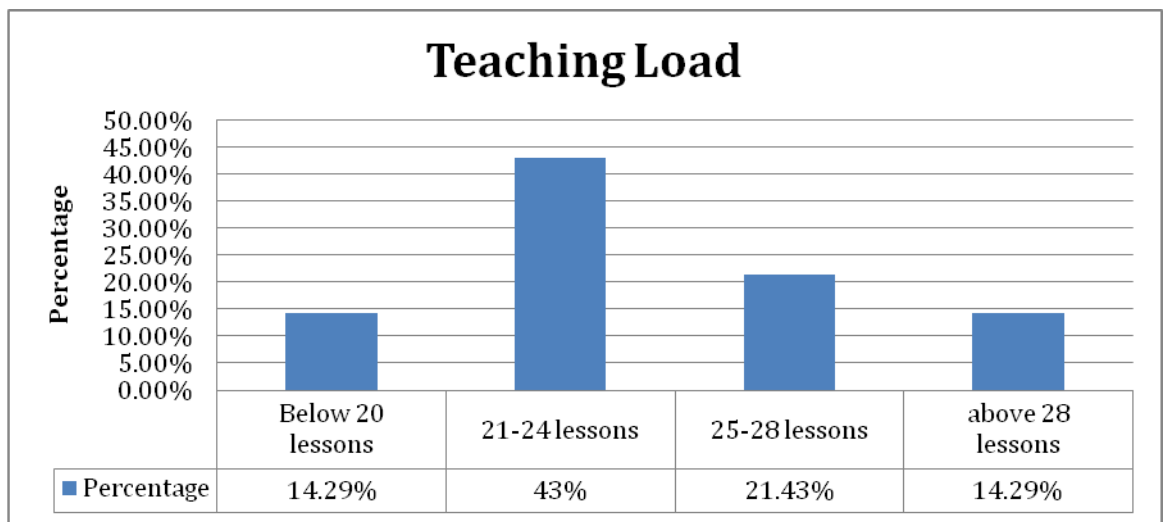
The findings also concur with those of Wanyama (2013) who found out that the more teaching skills a school head has, the better they are at employing good measures to improve academic qualification. They also agree with those of Wanjiru (2010) who noted that agility, pliability, coherence, requisite comprehension of academic materials and confidence are the fruits of successful teaching experience. Instructors who have competence and proficiency in their profession are well equipped to identify a classroom problem and select the right institutional resources to bring the issue to a successful conclusion. Eventually both student and teachers attain a level of satisfaction that prompts effective learning. Apparently, the head

teachers had great experience and hence well versed with the strategies that they can use in their schools to improve academic performance.

#### 4.4.3 Teachers teaching load

Instructors were further requested to identify their teaching load as displayed in figure

4.5



**Figure 4.5 Teachers workload**

**Source: Researcher (2018)**

For the data displayed in fig 4.5, it can be noted that many of the instructors (43%) had a workload of 21-24 lessons, 21.43% had 25 to 28 lessons while 14.29% reported to have below 20 lessons and above and above 28 lessons each. When asked whether they were comfortable with the workload, 71.29% reported that they were comfortable while 28.71% said they were not comfortable.

In general, it can have depicted that teachers had been accustomed to high workload to an extent of being comfortable with it. Moreover, Obwoye (2012) agrees that high workloads by teachers of between nineteen and twenty-four lessons with others

having over twenty-four lessons per week hampered education hence affecting academic achievement. The results also agree with those of Likoko (2013) who found out that high workloads reduced the effectiveness of a teacher thus affecting students' academic performance.

#### 4.4.4 Teaching methods

The inquiry further sought to identify the teaching techniques employed by instructors in impacting knowledge to students as a preparation for KCSE. Instructors needed identify the professional documents they were using to prepare their lessons. Table 4.3 displays their responses.

**Table 4.3 Professional documents**

Professional document	<u>Yes</u>		<u>No</u>	
	<u>Frequency</u>	<u>Percent</u>	<u>Frequency</u>	<u>Percent</u>
Lesson plans	69	57.14	51	42.50
Schemes of work	120	100	0	0
Records of work	86	71.43	34	28.33
Students' progress records	120	100	0	0

**Source: Researcher (2018)**

As shown in table 4.3, a considerable proportion of teachers (57.14%) did not prepare lesson plans while 28.47% were not keeping students records. However, all teachers prepared schemes of work as well as students' progress records. The implication is that some teachers were not keeping all the professional documents that are said to be compulsory by the Ministry of Education.

Teachers were further asked to state whether they covered the syllabus in good time before the start of KCSE. Most of them (71.43%) reported that they covered in time while 28.57% said they never covered. Failure to cover syllabus in time was also mentioned by Ministry of Education report (2013) as a major cause of poor examination accomplishment in KCSE in some areas. The results did not agree with those of Wanjiru (2010) who found out that most teachers did not cover the syllabus on time and this led to poor performance by the students. It appears that Nyeri is one of the areas where day secondary school teachers do not cover syllabus in time. Moreover, those who said they never covered syllabus were also requested to identify the degree to which they covered they syllabus. Equal proportions mentioned very little extent, little extent and great extent.

Instructors were further requested to state whether they offered remedial classes in their schools. Ninety five (95) out of one hundred and thirty five (135), which is (71%), admitted that they offered remedial teaching in their schools with only (29%) saying they never offered such a program. Majority who had the program said it was allocated one time in the morning before normal lessons started and an extra hour in the evening normally after lessons.

All those who said they offered remedial teaching asserted the main purpose was to help in covering the syllabus. According to them remedial lessons were helpful in that the lengthy topics could find extra time to be taught. Again, the lost time during school events and short holidays could be recovered. Of the 95 teachers who had the program run in their schools admitted it equipped the students in preparation to KCSE. This agrees with the findings of Adeyemi (2010) who noted that top performing schools in national examinations offered remedial classes which

facilitated in offering individualized teaching and group work discussions and presentations.

#### **4.4.5 Other school-based factors affecting students' performance**

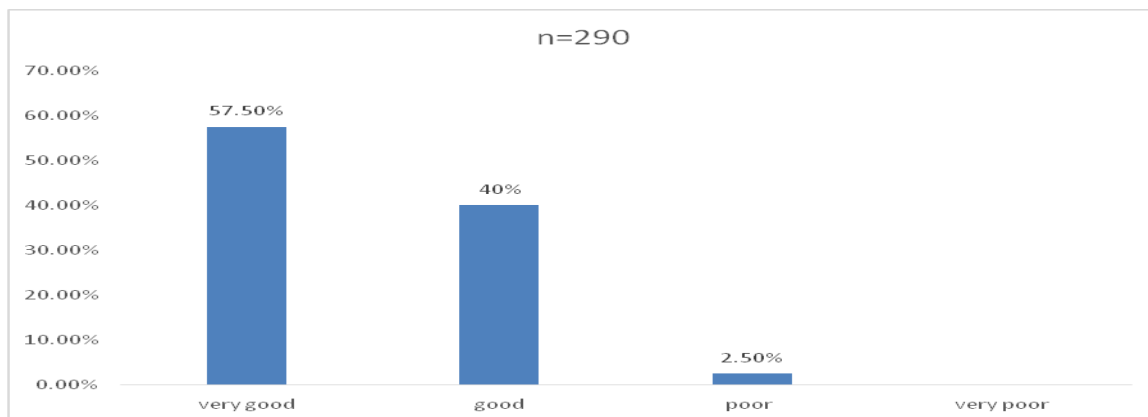
The teachers were asked to inform on other institutions based aspects affecting learners' academic achievement in day high schools, and the results according to significance were: adequacy of quality teaching materials (52%); lack of resourceful facilities like library and laboratories (15%); school fees challenges (14%); low parental engagement on students learning (11%); Social engagements of students after school like peer pressure of non-schooling youth; engagement in economic activities such as farming, reducing classroom attendance and motivation (8%). Administrative factors for learning and teaching resources significantly affected students learning and performance. Mutindi (2018) study also found that teaching resource and physical facilities had positive and notable correlation with students' achievement at KCSE. The fact that the students attend school on weekdays, their mostly unsupervised weekend activities seem to affect personal behavior and effective learning, as well as KCSE achievement in day high schools in Nyeri County.

#### **4.5 Influence of school administration on students' accomplishment in KCSE**

The second objective of the inquiry was to identify the role played by school administration in improving or declining KCSE performance in day secondary schools.

##### **4.5.1 Administration style**

Students were entreated to rate the administration style of their institutions. Their reactions were as displayed in Figure 4.6



**Figure 4.6 Rating of administration style**

**Source: Researcher (2018)**

Majority of the students (57.5%) rated the administration style as very good, 40% rated it as good while only 2.5% rated it as poor. The findings show that students had positive attitude towards their administration, which is also mentioned by Litunya (2006) as being crucial in improving student academic performance in a school. When asked whether they felt the administration in their school contributed positively to their accomplishment in KCSE. Only 20% admitted that it would while 80% said it would not. This implies that there was likelihood that students were not pegging their success on administration per se though it has potential of influencing performance as explained by some students.

However, some students mentioned that improved school discipline guidelines and implementation would improve performance, which agreed with Twoli (2006) who noted that school leadership is a vital aspect in the achievement of an institution of learning. They also agree with those of Aniah (2005) asserts that effective administration style contributes to good performance in high schools because they school leaders use leadership strategies to change instructional practices by

communicating goals, providing incentives, providing resources and promoting professional growth.

The inquiry further endeavored to examine the opinions of instructors regarding the leadership behavior of the head teachers. They were presented with a likert-scale statement where they rated the frequency to which the head teachers display the leadership behaviors displayed in Table 4.4 -In the scale, 1-represents always, 2-frequently, 3-occasionally, 4-seldom, 5-never.

**Table 4.4 Descriptive statistics of teachers’ perception of head teachers’ leadership behavior**

Head of school behaviors	N	Mean	Std. Deviation
He/she makes the altitude clear to all staff members that he/she is the head of the school.	120	2.1875	1.14828
He/she consults other staff members when making important decisions	120	2.3125	.69270
He/ she works without a plan.	120	3.4375	1.07576
He/she makes teachers feel that their contribution is important.	120	2.0625	.66901
He/she delegates duties and authority to the staff members.	120	2.0000	.62217
He/she treats other staff members as his/her equals.	120	2.5625	1.64488
He /she accept new ideas from other staff	120	2.4375	1.07576

---

members.

He/she demonstrates real concern for the 120 1.8437 .88388  
teachers' welfare.

---

Average 32 2.59687 1.08132

---

**Source: Researcher (2018)**

The findings in Table 4.4 show that on average, school heads occasionally practiced the leadership behavior displayed (m=2.6), however, the head teachers appear to have practiced some leadership behaviors seldom; for instance, dictatorship (m=3.81) and working without a plan (3.44). In general, it can be observed that teachers reported their head teachers to have displayed the required leadership behavior though some aspects such as delegation could have been done in excess to an extent of leaving executive work teachers or non-teaching staff.

However, the high standard deviations (sd=1.08) show that respondents had highly varied opinions in regard to head teachers leadership behavior. Moses (2009) revealed that there is a positive correlation between the hegemony styles of the school head and learners' achievement. The findings agree with those of Nyabwa (2008) who revealed that leadership plays a significant role in determining the success of students in high school. Poor leadership and administration practices are responsible for the diverse issues found in high schools.

**4.5.2 Administrative materials**

The researcher further employed direct observation to establish the level of adequacy of the administrative materials. Table 4.5 displays the findings observed in the office.

**Table 4.5 Observation on availability of administrative materials in the office**

Item	Available		Not available		Available but not updated	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
School timetable	7	62.5	4	37.78	0	0
Teachers' register	3	26.67	8	73.37	0	0
Black book	1	11.11	7	62.5	3	26.67
Students' book	2	22.22	3	26.67	6	51.11
<b>Total</b>	<b>13</b>	<b>100</b>	<b>22</b>	<b>100</b>	<b>8</b>	<b>56</b>

**Source: Researcher (2018)**

From the findings in Table 4.6, on 62.5% of the schools surveyed had school timetable at the time of the study. Moreover, teacher's register was found in only 26.67% of the schools while black book was found in thirty three schools though only five schools had updated one. Up to 26.67% of the schools studied did not have student's permission book.

The researcher further observed the availability of administrative materials in the staffroom and the results were as displayed in Table 4.6

**Table 4.6 Researchers observation on the availability of administrative materials in the staffroom**

Item	Available		Not available	
	Frequency	Percent	Frequency	Percent
School	7	62.5	4	37.88

timetable	7	62.5	4	37.88
Students	11	100	0	0
register	8	72.72	3	26.68
Lesson notes	5	48.89	6	51.11
Records of work	2	22.22	9	77.78
Progress records				
Offences book				

---

**Source: Researcher (2018)**

The findings in Table 4.6 show that important administrative materials were conspicuously missing in the staffroom while in some schools these materials were not updated. For instance, the researcher did not find a school timetable in 4 out of the 11 schools surveyed. However, it was found that lesson notes were available in all the schools, indicating a significance guide in pedagogies. Progress records were available in slightly over half of the schools, showing fair reports on students' class performance, a basis for continued academic improvement. Offence book was not available in over 75% of the schools visited, which further shows that teachers were not keen on keeping records of criminal students in their school. This agrees with Akunga (2012) who noted that failure by teachers to keep proper administrative records by teachers was a major factor that contributed to poor performance by the students.

#### 4.6 Effects of instructional resources on learners' achievement in KCSE.

The fourth aim of this research is to establish the availability of basic instructional resources and establish how their inadequacy affected KCSE performance among students in day secondary schools.

##### 4.6.1 Availability of instructional resources

Head teachers were enjoined to state the extent of sufficiency of the instructional resources displayed in table 4.7

**1=very adequate 2=adequate 3=Inadequate 4= Very inadequate.**

**Table 4.7 Adequacy of instructional resources**

	N	Mean	Std. Deviation
Laboratory	11	2.5000	1.19523
Classrooms	11	2.6250	1.06066
Text books	11	3.1250	0.83452
Chemicals and Equipment	11	3.3750	0.74402
Library and Library Books	11	3.3750	0.74402
Average	11	2.875	0.957235

**Source: Researcher (2018)**

On average, the findings show that majority of the head teachers admitted that instructional resources were inadequate (m=2.875). The most inadequate once were library and library books (m=3.375), laboratory chemicals (m=3.375) and textbooks (m=3.125). In general, instructional resources were inadequate to enable students prepare thoroughly for KCSE. Wambua, et.al. (2018) study concurs while establishing that school resources were not only meager to force students to

scramble for them but also in poor conditions. This would eventually affect quality of learning.

#### 4.6.2 Observation on availability and adequacy of instructional resources

The researcher further employed observation method to establish the extent to which schools were prepared to deliver quality contents to students as a preparation for KCSE. The findings were as displayed in Table 4.8

**Table 4.8 Researcher’s observation on availability of physical resources for Instructions**

Item	Available		Not available		Available in bad conditions	
	<u>Frequency</u>	<u>Percent</u>	<u>Frequency</u>	<u>Percent</u>	<u>Frequency</u>	<u>Percent</u>
Classrooms, desks, chairs	6	51.1	0	0	5	48.9
Library with books	1	11.1	10	88.9	0	0
Laboratories	3	44.4	5	11.1	3	44.4

**Source: Researcher (2018)**

The findings from Table 4.7 indicate that schools had little resources to support their mission and provide state-of-art education to learners. For instance, only 50% of the schools had desks and classroom chairs that were in good condition. Moreover, only one school had library with books. Though twenty day schools had a laboratory, all of the laboratories were not in good conditions. This implies that most schools lacked adequate physical facilities which make the teaching-learning process not to

take place effectively leading to poor performance. Chirchir, Manduku and Makero (2018) findings are in concurrence as they stated that many schools in Njiru has a deficiency in textbooks; hence their academic achievement was equally low.

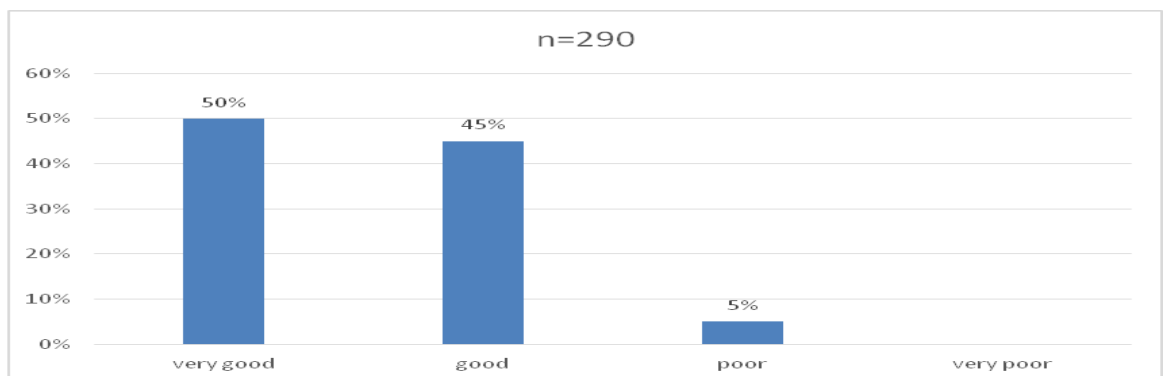
The results further correspond with those of Nasongo (2013) who postulated that insufficient and poor institutional facilities correspond with the level of performance of these schools particularly in national examinations. They also agree with those of Wanyama (2013) who noted that adequate instructional materials help to bring about effective teaching and learning since education facilities have a direct bearing in participation and performance of learners.

#### **4.7 Effects of student Characteristics variables on achievement in KCSE**

The fourth objective of this inquiry was to evaluate the students' related variables that may affect their performance in KCSE.

##### **4.7.1 a) Students indiscipline.**

Students were urged to rate the level of instruction in their schools.



**Fig 4.7 Students response on discipline in schools**

**Source: Researcher (2018)**

Results in figure 4.7 showed that half of the learners (50%) rated their school discipline as very good while only 5% rated it as poor. The implication is that

students felt their schools did not have major challenges of indiscipline. This result concurs with the findings of Kapur (2018) that students' unrest and indiscipline was observed in Indian schools and undermine the quality of education.

**4.7.1 b)** The researcher further sought to establish the frequency to which the indiscipline cases displayed in table 4.9 occurred in their schools. Their responses were given in a scale of 1 to 5 where 1-never, 2-sometime, 3-rarely, 4-often and 5-always.

**Table 4.9 Students response on level of indiscipline in their schools**

	N	Mean	Std. Deviation
Fighting	290	1.75	0.870
Stealing	290	2.14	0.845
Drug abuse	290	1.68	1.090
Bullying	290	1.49	0.885
Strikes	290	1.51	0.935
Sneaking	290	1.64	0.942
Average	290	1.701667	0.927833

**Source: Researcher (2018)**

The findings in Table 4.5 show that majority of the students admitted that indiscipline cases displayed occurred sometimes (m=1.7). Stealing (m=2.14) and fighting (1.75) were the major indiscipline cases mentioned by students. When asked whether the standard of indiscipline affected their KCSE performance, most of the students (55%) said it affected while 45% did not associate it with KCSE performance. The implication is most of the students were worried about

indiscipline cases portrayed by their colleagues, where some reported to have lost cash, clothing, books among other important items required for learning. Adu (2006) asserts that students' indiscipline undermines the quality of education and promotes dropouts and repetition which often leads to wastage and low performance by the learners.

## **CHAPTER FIVE**

### **SUMMARY, COCLUSION AND RECOMMENDATIONS**

#### **5.1 Introduction**

This chapter contains the following sections; summary of the study, conclusion and relevant recommendations based on the study findings.

#### **5.2 Summary of the Study**

The summaries of the findings are discusses as per the order of the study objectives.

##### **5.2.1 To investigate the degree to which teacher characteristics affected students' performance in KCSE.**

The effect of teachers' characteristics (school-based factor) on the performance of students in day schools, Nyeri County was sought. In terms of academic qualification, majority of teachers in public day secondary school had achieved a Bachelor of Education with most teachers' teaching experience being above three years. The study revealed that most teachers had workloads of between twenty one and twenty four lessons a week with majority of teachers reporting it to be too high. The study realized that some teachers were not even preparing basic lesson plans

and schemes of work. They were also not keeping updated notes, hence there was a high possibility they were giving students obsolete information.

### **5.2.2 To determine how school administration influence the performance of students in in KCSE.**

It was discovered that school administration was at its best in most of the schools. The leadership style of many principals was reported correct and just. It was revealed that important administrative materials were missing or rather un-updated in many schools. For instance, the black book was not present in many offices. Also, the school timetable that is meant to enable the head teacher to keep track of what should be going on in school as well as teachers register were missing in some schools.

### **5.2.3 To identifying how instructional resources affects academic performance of students in KCSE.**

It was found that some of the instructional resources that are meant to promote knowledge and skills that can tackle critical subjects such as Chemistry were either missing or were in bad condition in many schools. These included laboratories, libraries, text books, chairs and desks. further, some schools had very dilapidated infrastructure, unmaintained class rooms, unattended fields and other schools even lacked.

### **5.2.4 To understand the influence of student-related variables on the performance of students in KCSE.**

It was found that some students involved themselves in bad behaviors such as theft, drug abuse, bullying and other forms of criminal offences that were highly influential and addictive.

### **5.3 Conclusions**

The study made conclusion in the order of the study objectives

#### **5.3.1 To investigate the extent to which teacher characteristics affected the performance of students in KCSE.**

Public day school's teachers were well qualified to provide adequate skills that could enable students to perform well in KCSE. However, their failure to follow the required guidelines of preparing contents, attending classes and preparing relevant training materials compromised the quality of training offered. The tough workload of teachers hindered effective teaching and delivery of knowledge was compromised.

#### **5.3.2 To understand how school administration influences the performance of students in KCSE.**

School administration contributed in declining KCSE performance because of failing to put necessary mechanisms of supervision, recording and providing teachers with resources required to promote quality education. There was a likelihood of laxity on the side of management and some teachers could opt to be absent or miss classes deliberately.

#### **5.3.3 To identifying how instructional resources affects the performance of students in KCSE.**

Most of the schools lacked instructional resources such as laboratories, libraries and textbooks that are very important in ensuring that effective teaching and learning took place and this leads to poor performance in the schools.

#### **5.3.4 To understand the influence of student-related variables on the performance of students in KCSE.**

Some students' behaviors such as bullying, theft and drug abuse were rampant in the schools and such behaviors swayed the student's concentration on studies and led to poor performance.

#### **5.4 Recommendations**

Recommendations were made in the order of the study objectives.

##### **5.4.1 To investigate the extent to which teacher characteristics affected the performance of students in KCSE.**

The government should employ more teachers in the secondary schools so as to reduce the teaching load of the teachers thus give them enough time to adequately prepare their lessons.

##### **5.4.2 To understand how school administration influences the performance of students in KCSE.**

The school management and administration should display affective leadership by fostering collaboration among key education stakeholders, creating and sustain an enabling learning environment and monitoring as well as supporting both students and teacher with facilities to promote quality education.

##### **5.4.3 To identifying how instructional resources affects students' performance in KCSE.**

The government, MOEST and policy makers should strive to provide all schools with necessary physical equipment and material resources.

##### **5.4.4 To understand the influence of student-related variables on the performance of students in KCSE.**

The school administration and other education stakeholders should put in place guidance and counseling programs in the school to guide the students on the dangers of the vices such as bullying, theft and drug abuse.

### **5.5 Suggestion for further studies**

This section gives suggestions for further as follows:

1. A study should be carried on home-based variables that affect students' academic performance in KCSE.
2. A study should be carried conducted to on effects of school based variables on students' performance in KCSE in public boarding secondary schools.

## REFERENCES

- Achieng, F.O. (2005). *Head teachers Communication Strategies and their Effects on Academic Performance in Nyando District*. Unpublished M.Ed. Project.U.O.N.
- Adesoji, F.A. & Olatunbosun ,S.M. (2008) .*Student, Teacher and School Environment Factors As Determinants of Achievement in Senior Secondary School Chemistry in Oyo State, Nigeria*. The Journal of International Social Research Volume 1and 2 pages 13-34.
- Adeyemi, B. (2010). *Teacher Related Factors as correlates to Pupils Achievement in Social Studies in South West Nigeria*. Electronic Journal of Research in Educational Psychology, 8(11) :( 313-332.
- Adeyemo, D.A. (2005). *Parental Involvement Interest in Schooling and School Environment as Predators of Academic self-efficacy among Fresh Secondary School Students in Oyo State, Nigeria*. Electronic Journal Research in Educational Psychology, 5-3: 163-180.
- Adu, E.O & Olatundun, S.O. (2007) .*Teachers' Perception of Teaching as Correlates of Students' Academic Performance in Oyo State, Nigeria*. Essays in Education; 20:57-63.
- Agosiabo, C. (2007). *Effective Schools: Theory and Practise*.2<sup>nd</sup> Edition. Dettal Place; Stanley Thornes L.t.d.
- Akinsolu ,A.O. (2010). *Teachers and Students' Academic Performance in Nigerian Schools: Implications of Planning*. Florida Journal of Educational Administration and Policy. Volume 3 Issue 2:86-103.
- Akunga, J.O. (2012). *Influence of school-based factors on Students' performance in KCSE in public secondary schools in Masaba south District, Kisii County, Kenya*. Unpublished M.Ed Thesis. U.O.N.
- Aniah, S.A (2005) .*Influence of Supervision on Secondary School Teachers' Productivity in Cross-River State of Nigeria*. Unpublished M.Ed Thesis. University of Calabar, Calabar.

- Arwa, C.A. (2019) *Institutional Factors Influencing Implementation of School Feeding Programme in Public Primary Schools in Matungulu Sub-county, Machakos County, Kenya*
- Ary, D. (2006) *Introduction to Research in Education*. 7<sup>th</sup> Edition. Canada. Thomson Wands Worth Publishers.
- Ayodo,H.(2009) *Making Homework Less Work*. The Standard. 11<sup>th</sup> December 2009. Page 38.
- Barasa, J.M & Nyongesa. (2007). *Educational Organization and management* Nairobi. Jomo Kenyatta Foundation.
- Barru ,R.(World Bank 2006). *Education and Development: Quality Counts*. Retrieved on 13/08/2015 from <http://www.worldbank.org/edn/pdf/education>.
- Beecher, D.(2009) *Transforming Urban School System: Intergrated Governance in Chicago and Birmingham* .U.K: Publication series No. 20.
- Chirchir Jane, Dr. Joshua Manduku, Dr. Syallow C. Makero (2018) The Effects of School Based Factors on Academic Performance in Public Primary Schools in Njiru Sub- County, Nairobi Kenya. *International Journal of Scientific and Research Publications*, Vol 8, Issue 4, April 2018 71 ISSN 2250-3153
- Clotfelter, C.T, Ladd, H.F & Vidgor J.L.(2007) *Teacher Credentials and Student Achievement in High Schools: A Cross-subject Analysis with student Fixed Effects*. Working paper II Washington D.C. Urban Institute, National Center for Analysis of Longitudinal Data in Education Research.
- Denscombe, M.(2007) *The good Research Guide for Small Scale Social Research Projects* 3<sup>rd</sup> Edition New York . Open University Press.
- Densimone, L., Rowley K. & Smith T. (2006) *Teacher participation in content-focused professional development and role of state policy*. West Port, CT: Praeger Publishing Company.
- De Silva, A. Khatibi, A., & Azam, F.S.M. (2018) What Factors Affect Secondary School Students' Performance in Science in the Developing Countries? A Conceptual Model for an Exploration. *European Journal of Education Studies* ,Volume 4, Issue 6, ISSN 2501 1111
- Deya, M. Ochieng. (2019) *Management Factors Influencing Academic Performance In Agriculture in Public Day Secondary Schools In Kisumu West Sub-*

- County. An Unpublished Masters of Education In Leadership And Education Management Thesis, Kenya Methodist University
- Gachuiga ,I. (2010) .*Factors which Influence Performance in Biology: A case of Public Secondary Schools in Garissa and Ijara Districts of Kenya.* Nairobi. Lambert Academic Publishing.
- Githua, B.N.& Nyabwa R.A.(2008). *Effects of advanced organizer Strategy during instruction on Secondary School Students' Mathematics Achievement in Kenya's Nakuru District.* International Journal of Science and Mathematics Education, 6(3) 439-457.
- Gravestock, P. & Gregor-Greenleaf, E. (2008). *Student Course Evaluations: Research, Models and Trends.* Toronto Higher Education Quality Council of Ontario.
- Glewwe, P. and Muralidharan, K., (2015). *Improving School Education Outcomes in Developing Countries: Evidence, Knowledge Gaps, and Policy Implications.*
- Hardy,I & Smith,E.(2006) *Contesting Tertiary Teaching Qualification: An Australian Perspective. Teaching in Higher Education, Volume II (2):337-350.*
- Hascher, T., & Hadjar, A. (2018). *School alienation – Theoretical approaches and educational research.* Educational Research,60, 171–188
- Huang, F.L & Moon, T.R.(2009). *Is Experience the Best Teacher? A Multilevel Analysis of Teacher Characteristics and Student Achievement in Low Performing Schools.* Education Assessment Evaluation 21: 209-234.
- Julia Morinaj, Andreas Hadjar & Tina Hascher (2020) *School alienation and academic achievement in Switzerland and Luxembourg: a longitudinal perspective.* Social Psychology of Education, 23:279–314
- Kadenyi ,N. & Kamuyu,D. (2006). *Introduction to Educational Research.* Njoro. Egerton University.
- Kamande ,N.I. (2005). *Influence of Headteacher Leadership Styles on students' KCSE Performance in Public Schools: Maragwa District, Kenya.* Unpublished M.Ed Thesis U.O.N.

- Kamau ,B. (2010). *Impact of Pre-school Progress on Mathematics Performance in Lower Primary Schools of Makuyu zone, Murang'a South District*: Unpublished M.Ed Project. U.O.N
- Kamau, H.N.(2005). *Factors Affecting KCSE Performance in Public Secondary Schools in Tana River District*. Unpublished Med Project.U.O.N.
- Kapur, Radhika. (2018). Factors Influencing the Students' Academic Performance in Secondary Schools in India.
- Katana, J. (2007) .*Factors Affecting Performance in KCPE in Magarini Division of Malindi District*. Unpublished M.Ed Project. U.O.N.
- Kietia, J.M., (2017) *An Investigation into Factors Influencing Students' Academic Performance in Public Secondary Schools in Matungulu Sub-County, Machakos County*. Unpublished Med Project, South Eastern Kenya University, Machakos, Kenya
- Kitari, M.J. (2005). *An Investigation of Factors Affection Performance in K.C.P.E Examination in Kathonzweni Division, Makueni District*. Unpublished M.Ed Thesis: U.O.N.
- Klier, A. (2005) .*Girls and schools in Sub-saharan Africa. From Analysis to Action*. Washington DC: World Bank.
- Kombo, D.K. (2006). *Proposal and Thesis Writing. An Introduction*. Nairobi: Pauline Publishers African Limited.
- Kothari, C.R. (2011). *Research Methodology; Methods and Technology*. 2<sup>nd</sup> Edition New Age. New Delhi International Publisher Limited.
- Kunjeke ,J.O. (2013) .*Factors Influencing Students' KSCE Performance in Geography in Public Secondary Schools in Migori District Kenya*. Unpublished M.Ed Project. U.O.N.
- Lezotte ,L.W (2010). *What effective schools do: re-envisioning the Correlates*. Indianapolis, IN: Solution Tree.
- Litunya, R.A.(2006). *Benchmarking and Performance in Public Secondary Schools in Nairobi Province, Kenya*. Unpublished MBA Project. U.O.N.
- Likoko, S., Mutsotso, S. & Nasongo, J. (2013). *The Adequacy of Instructional Materials and Physical Facilities and their Effects on Quality of Teacher*

*Preparation in Emerging Private Primary Teacher Training Colleges in Bungoma County, Kenya.* International Journal of Science and Research (IJSR), India Online ISSN: 2319-7064

Luis Concepcion, Marilyn Nales-Torres, Ana Rodriguez-Zubiaurre (2016). The Relationship between Videogame Use, Deviant Behavior, and Academic Achievement among a Nationally Representative Sample of High School Seniors in the United States. *American Journal of Educational Research*. 2016; 4(16):1157-1163

Luketero, S. W., & Kangangi, E. W. (2019). The Factors Influencing Students' Academic Performance in Kenya Certificate of Secondary Education in Kirinyaga Central Sub-County, Kirinyaga County, Kenya. *International Journal For Innovation Education And Research*, 7(4), 1-11.

Lydia, L.M & Nasongo, J.W (2009). *Role of Headteacher in Academic Achievement in Secondary School in Vihiga district, Kenya.* Current Research Journal of Social Sciences 1(3) 84-92.

Magweva, C.(2017). *Teachers and Learners Perception on Continous Assessment in Ordinary Level Chemistry in Triangle Masvingo Province Zimbabwe.* Unpublished MScEd-Chemistry Thesis Bundura University.

Maina S. Njagi (2018) *Factors Influencing Provision of Quality Education in Newly Established Secondary Schools in Mathira Constituency, Kenya.* Unpublished Master of Educational Leadership and Policy. Karatina University. Nyeri

Malusu, J.K. (2005). *Evaluation Research for Beginners: Practical Study Guide.* Nairobi. Nairobi University Press.

Manori, J.O. (2007) *.Analysis of factors which contribute to poor performance in KCSE Examination in Nyacheki Division, Gucha District, Kenya.* Unpublished M.Ed Thesis U.O.N.

Mbeche, G.C. (2012). *Factors Affecting Students Performance of Aurial Skills at KCSE in Nairobi Secondary Schools.* Unpublished MA Thesis. Kenyatta University.

- Meltzer, J. & Ludger, W. (2010). *The impact of Teacher Knowledge on Student Achievement: Evidence from within-teacher within-student variation*. Munich. University of Munich.
- Miller, D. & Seller. (2007). *School Facilities and Pupils Academic Achievements*. Transkei University Research Study, South Africa. Unpublished.
- Mirera, E. (2012). *Head teachers and Instructional factors Influencing Students Performance in KCSE in Public Secondary Schools in Nyamira District Kenya*. Unpublished M.Ed Project. U.O.N.
- MOEST, (2005). Sectional Paper No.1 2005 *Policy Framework of Education, Training and Research. Meeting the challenges of Education, Training and Research in Kenya in the 21<sup>st</sup> century*, Nairobi.
- MOEST, (2009). *Nyeri District Secondary School KCSE 2009 and 2013 Result Analysis*. Nyeri.
- Moses, O. (2009). *Effects of Head teachers' leadership Styles on Students' Performance in KCSE in Public Schools in Homabay District*. Unpublished M.Ed Project .U.O.N.
- Musau, L. & Migosi, J. A. (2015). *Teacher qualification and students' academic performance in science mathematics and technology subjects in Kenya*. International Journal of Educational Administration and Policy Studies Vol. 7(3), pp. 83-89.
- Musungu, L.L & Nasongo, J.w. (2008). The Head teacher's Instructional Role in Academic Achievement in Secondary Schools in Vihiga District Kenya. Educational Researches and Review 3(10) 316-323 Retrieved on 26/07/2015 on <http://www.academicjournals.org/ERR>.
- Mwai, B.N. (2007). *Factors Influencing Performance in English: A case Study of Gichugu Division, Kirinyaga District, Kenya*. Unpublished M.Ed Thesis: U.O.N.
- Mutindi, M. J. (2018) *School Based Factors Influencing Students' Performance in Kenya Certificate of Secondary Examination in Public Secondary Schools in Kathiani Sub-County*. Unpublished Med Project, South Eastern Kenya University

- Nannyonja ,H. (2007). *Education Input in Uganda: An Analysis of Factors Influencing Learning Achievement in Grade Six*. Washington DC. World Bank.
- Obadara, O.E. (2005). *Perceived Full-range leadership, Teacher Factors and the academic performance of Secondary schools in Ogun State, Nigeria*. PhD, Thesis. University of Ibadan, Ibadan Nigeria.
- Odumbe, Awino & Simatwa, Enose & Ayodo, T.M.O.. (2015). Factors Influencing Student Academic Performance in Day-Secondary Schools in Kenya. A Case Study of Migori Sub county. *Greener Journal of Educational Research*. 5. 078-097.
- Okumba, J.A. (2007), *Educational Management : Theory and practice*. Nairobi University Press. Nairobi.
- Olayeye,F.O.(2011) .*Teacher Characteristics as Predictor of Academic Performance of Students in Secondary Schools in Osun State, Nigeria*. European Journal of Educational Studies 3(3): 505-512.
- Orodho, J.A. (2012). *Techniques of writing Research Proposals and Reports in Educational and Social Sciences*. Nairobi. Kanezja HP Enterprise.
- Orodho,J.A. (2009). *Evaluation of Educational and Social Science Research Methods*. Nairobi: Kanezja Enterprise.
- Orodho J.A, Ampofo, S.Y, Bizimana, B & Ndayambaje,I.(2016).*Quantitative data management: A Step by Step Guide to Data Analysis Using Statistical Package for Social Sciences (SPSS) for Windows Computer Programme*.Nairobi.Kanezja Happyland Enterprises.
- Orodho J.A, Khatete I& Mugiraneza J.P. (2016). *Concise statistics: An illustrative Approach to Problem Solving*. Nairobi. Kanezja Happyland Enterprises.
- Otula P.A.(2007). *Mastery of Modern School administration*. Nairobi. East Africa Publishers.
- Purdul, J.N, Chege, E.and Thinguri, R. (2014). *A Study of Factors Affecting Students' Performance in KCSE in Public Secondary Schools in Amboseli Division, Loitokitok District Kenya* Educational Research International Vol 3(5) retrieved on 28/09/2015 at [www.evint.savap.org.pk](http://www.evint.savap.org.pk).
- Raju ,B.M .(2007). *Education in Kenya*. Nairobi: Educational Books.

- Richardson,A.R.(2008) .*An Examination of Teacher Qualification and Students Achievement*  
*inMathematics,etd.Auburn.edu/etd/bitstream/handle/.../Richardson-Antoine-8.pdf.*
- SACMEQ, (2005). *A study of conditions of schooling and Quality of Education.*  
 Nairobi Research Report: SACMEQ II Project.
- Sifuna, D.N & Kaime, J. (2007). *The Effect of Inservice Education and Training (INSET) Programmes in Mathematics and Science on Classroom Interaction. A case study of Primary and Secondary Schools in Kenya.*  
*African Education Review,4(1).*
- Sifuna,D.N & Nobuhide, S. (2010). *Challenges of Quality Education in Sub-Saharan African Countries,* New York, Nova Science Publishers, Inc.
- Stronge,J.H;Ward,T.J, Tucker P.D & Hindman, J.L(2007). *What is the Relationship between Teacher Quality and Students' Achievement? An Exploratory study.*  
*J.pers Eval Educ.(2007) 20:165-184.*
- Suharno, Nugroho Agung Pambudi, Budi Harjanto. (2020) Vocational education in Indonesia: History, development, opportunities, and challenges. *Children and Youth Services Review* 115, pages 105092.
- Twoli ,N.W. (2006). *Sex Differences in Science Achievement Among Secondary Schools in Kenya.* Phd. Discertition. Australia. Flinders University of South Australia.
- UNESCO.(2007) .*Efa. Global Monitoring Report: The Role of the Organizational and Social context of schools.* <http://portal.org/education>.
- UNESCO .(2008) .*Challenges of Implementing Free Day Secondary Education in Kenya. Experiences from Districts.* Nairobi UNESCO.
- UNESCO.(2008). *Gender and Education for All: the leaf to Equality Summary Report.* Paris UNESCO.
- Wambua MM, Murungi CG, Mutwiri C. (2018) Physical facilities and strategies used by teachers to improve pupils' performance in social studies in Makueni County, Kenya. *Int J Pregn & Chi Birth.*;4(6):241-245.
- Wanjiru, G.H. (2009). *School based factors that influence Students' academic performance in KCSE in public Secondary schools in Taita District Kenya.*  
 UON.



- 2.
3. Age 25-35  36-45  Above 46
4. Highest academic qualification  
 Postgraduate  B. ED   
 Diploma in Education  Any other  
 (specify).....
5. Teaching experience  
 5 years and below  6-10 years   
 11-15 years  16 years and above
6. The length you have been a head teacher in your current school  
 2 years and below  3-5 years   
 6-10 years  Above 10 years
7. Have you attended any in-service course?  
 Yes  No

**Section B**

**Please select the most appropriate response by putting a tick against it.**

7. What is the size of your school?  
 Single stream  Double stream   
 Triple stream  others   
 (specify).....
8. (a) Do your school have shortage of teachers  
 Yes  No
- (b) If yes, please indicate the subjects affected.....  
 .....  
 .....
9. Tick the professional documents that teachers in your school prepare  
 Lesson plans  Schemes of work   
 Records of work  students' progress records

10. How often do you inspect the work of your teachers to check the quality of their performance?

Once a month

Once a term

Twice a term

Any other (specify)

.....

11. (a) How do you rate the syllabus coverage in your school

Very good

Good

Poor

Very poor

(b) Do you think syllabus coverage affect KCSE performance?

Yes

No

12. Do you have remedial classes in your school?

Yes

No

(b) If yes, does it improve KCSE performance? Explain

.....

.....

13. How would you rate KCSE performance in your school in the last five years

(2010-2014?)

Excellent

Good

Average

Poor

Very poor

(b) If poor, what could have been the major causes of the poor performance?

.....

.....

.....

.....

14. How often do you hold staff meetings in your school?

Once a month

Once a term

Any other

(specify).....

15. Please put a tick on the box corresponding to the rating you give yourself on various aspects of leadership behavior.

Leadership behavior	Always	Frequently	Occasionally	Seldom	Never
I make important decisions on my own without informing other staff members.					
I allow staff members the freedom to perform their duties their own way.					
I do not try to socialize with other staff members.					
I try to make teachers feel that their contribution is important.					
I outline changes that are needed and closely monitor all actions.					
I delegate duties and authority to the staff members.					
I decide what is to be done and how it is to be done in the school.					
I consider myself as the leader and spokes person of the staff members.					
I consult all staff members before making important decisions.					

16. Please indicate the level of adequacy of the following facilities and teaching/learning resources in your school.

**1=very adequate 2=adequate 3=Inadequate 4= Very inadequate.**

School facility/ Teaching-Learning Resources	1	2	3	4
Laboratory				
Classrooms				
Furniture				
Text books				
Laboratory Chemicals and Equipments				
Library and Library Books				

17. To what extent do you think the following school-based factors affect KCSE performance?

School based Variable	Very great extent	great extent	Little extent	Very little extent
Teacher shortages				
Discipline				
Syllabus Coverage				
Teacher qualification and experience				
School Administration				

## APPENDIX II:

### TEACHERS' QUESTIONNAIRE

I am a student at Kenyatta University. I am undertaking research on school-based variables influencing students' performance in KCSE in Nyeri County. I have selected you to participate in the study. Kindly give an appropriate response to the questions asked. All the information given was be kept confidential and was only be used for this study. Please do not write your name anywhere on the questionnaire.

#### Section A

**Please put a tick against the appropriate response.**

1. Gender Male  Female

2. Age 25-35  36-45  Above 46

3. Highest academic qualification

Postgraduate  B. ED   
Diploma in Education  Any other  
(specify).....

4. Teaching experience

5 years and below  6-10 years   
11-15 years  16 years and above

5. (a) what is your current teaching load?

Below 20 lessons  21-24 lessons   
25-28 lessons  Above 28 lessons

(b) Are you satisfied with your current teaching load?

Yes  No

(c) If no, please explain why

.....  
.....

**Section B**

**Please select the most appropriate response by putting a tick against it.**

6. How often are you inspected by your head teacher?

Once a month  Once a term   
Twice in a month  Once a year  Never

7 Do you prepare the following professional documents? Tick which ones you prepare

Lesson plans  Schemes of work   
Records of work  students' progress records

8. Do you cover the syllabus before the start of KCSE exam?

Yes  No

(b) If no, to what extent do you cover the syllabus?

Very great extent  Great extent   
Little extent  Very little extent

9. Do you have remedial classes in your school?

Yes  No

(b) If yes, does it improve KCSE performance?

Yes  No

10. How would you rate KCSE performance in your school in the last five years (2010-2014?)

Excellent  Good  Average   
 Poor  Very poor

(b) If poor, what could have been the major causes of the poor performance?

.....  
 .....

12. Please indicate the level of adequacy of the following facilities and teaching/learning resources in your school.

**1=very adequate 2=adequate 3=Inadequate 4= Very inadequate.**

School facility/ Teaching-Learning Resources	1	2	3	4
Laboratory				
Classrooms				
Furniture				
Text books				
Laboratory Chemicals and Equipments				
Library and Library Books				

13. Please put a tick on the box corresponding to the rating you give your head teacher on various aspects of leadership behavior.

Leadership behavior	Always	Frequently	Occasionally	Seldom	Never
He/she makes the altitude clear to all staff members that he/she is the head of the school.					
He/she consults other staff members when making					

important decisions					
He/ she works without a plan.					
He/she makes teachers feel that their contribution is important.					
He/she rules with an iron hand.					
He/she delegates duties and authority to the staff members.					
He/she treats other staff members as his/her equals.					
He/she considers himself/herself as the leader and spokes person of the staff members.					
He /she accept new ideas from other staff members.					
He/she demonstrates real concern for the teachers' welfare.					

14. To what extent do you think the following school-based variables affect KCSE performance?

School based Variable	Very great extent	great extent	Little extent	Very little extent
Teacher shortages				
Discipline				
Syllabus Coverage				
Teacher qualification and experience				



**Section B**

**Please select the most appropriate response by putting a tick against it.**

4. Do you have a teacher in every subject?

Yes

No

(b) If no, which subjects don't you have a teacher in?

1..... 2.....

5. Do you have remedial classes in your school?

Yes

No

(b) If yes, when are they conducted?

.....

.....6. How do you rate the standard of discipline in your school?

Very good

Good

Poor

Very poor

(b) How often do the following indiscipline cases occur in your school? Tick the most appropriate

Indiscipline case	Never	Sometimes	Rarely	Often	Always
Fighting					
Stealing					
Drug abuse					
Bullying					
Strikes					
Sneaking					

(c) In your opinion, is the standard of discipline in your school likely to affect your KCSE performance?

Yes

No

Explain your answer

.....

.....

.....

.....

.....

.....

7. How do you rate the administration style of your school?

Very good  Good

Poor  Very poor

(b) In your opinion, is the administration in your school likely to affect your KCSE performance?

Yes  No

Explain your answer

.....

.....

.....

.....

.....

.....

8 To what extent do you think the following school-based variable affect KCSE performance?

School based Variable	Very great extent	great extent	Little extent	Very little extent
Teacher shortages				
Discipline				
Syllabus Coverage				
Teacher qualification and experience				
School Administration				

(b). In your opinion, which other school based variables are likely to affect your KCSE performance

.....

.....

.....

.....

**THANK YOU**

**APPENDIX IV**

**OBSERVATION SCHEDULE**

**1. Office**

Item	Available	Not available	Available but not updated
School timetable			
Teachers' register			
Black book			
Students' permission book			

**2. Staffroom**

Item	Available	Not available	Available but not updated
School timetable			
Students' register			
Lesson notes			
Records of work			

Schemes of work			
Progress records			
Offences book			

**3. Physical facilities**

Item	Available	Not available	Available but not in good conditions or not well equipped
Classrooms, desks, chairs			
Library with books			
Laboratories			

**4. General school organization**

a) Do they hold assemblies, class meetings, and interclass competitions?

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

b) Rating of the punctuality

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

c) Do they engage extracurricular activities and if yes which

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

d)Others.....

.....l;.....  
 .....

**APPENDIX V**  
**RESEARCH PERMIT**



**NATIONAL COMMISSION FOR SCIENCE,  
TECHNOLOGY AND INNOVATION**

Telephone: +254-20-2213471,  
2241349, 3310571, 2219420  
Fax: +254-20-318245, 318249  
Email: dg@nacosti.go.ke Website  
e: www.nacosti.go.ke when reply  
ng please quote

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

Ref. No. **NACOSTI/P/17/91603/17162**

Date **10<sup>th</sup> May, 2017**

Beatrice Wanjiru Njogu  
Kenyatta University  
P.O. Box 43844-00100  
**NAIROBI.**

**RE: RESEARCH AUTHORIZATION**

Following your application for authority to carry out research on *“School based variables influencing students’ performance in Kenya Certificate of Secondary Education in public day secondary schools in Nyeri County,”* I am pleased to inform you that you have been authorized to undertake research in **Nyeri County** for the period ending **10<sup>th</sup> May, 2018.**

You are advised to report to **the County Commissioner and the County Director of Education, Nyeri 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.

**GODFREY P. KALERWA MSc., MBA, MKIM  
FOR: DIRECTOR-GENERAL/CEO**

Copy to:

The County Commissioner  
Nyeri County.

The County Director of Education  
Nyeri County.