

**RELATIONSHIP BETWEEN SELECTED SCHOOL-BASED FACTORS AND  
STUDENTS' PERFORMANCE IN KENYA CERTIFICATE OF SECONDARY  
EDUCATION IN MASABA NORTH SUB-COUNTY IN NYAMIRA COUNTY,  
KENYA**

**NYAMONGO DUKE NYABATE**

**A Research Project Report submitted to Graduate School in Partial Fulfillment of the  
Requirement for the Award of the Degree of Master of Education in Education  
Management of Egerton University.**

**EGERTON UNIVERSITY**

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## DECLARATION AND RECOMMENDATION

### **Declaration**

This project report is my original work and has not been submitted for a degree in this or any other University for examination.

Sign..... Date.....

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### **Recommendation**

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

Sign..... Date.....

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## **DEDICATION**

I dedicate this thesis to my mum Josephine and Late Father Samson Nyamongo, my beloved wife Yuniah for their moral support. My children Ezra, Lorraine, Fiona and Enoch, whom I will hopefully instill a love of learning. May God bless you.

## **ACKNOWLEDGEMENT**

This work would not have been completed with my effort alone. My most heart felt gratitude goes to God for His provision, strength, and enablement. I know if it were not for Him I would not have completed this project. I dedicate my life to Him.

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## **ABSTRACT**

Good performance in Kenya Certificate of Secondary Education is a primary determinant of one's career as it facilitates the transition to the next level of training. The purpose of this study was to establish the relationship between the selected school-based factors and students' performance in public secondary schools in KCSE in Masaba North Sub-County of Nyamira County. The objectives of the study were: to establish the relationship between teacher qualification and students' performance in K.C.S.E.in Masaba North Sub-County; to establish the relationship between school facilities and student performance in K.C.S.E; to determine the relationship between principals' supervisory roles on school performance in KCSE. This study adopted a descriptive research design. The population for the study comprised of 264 teachers employed by Teachers Service Commission in Masaba North Sub-County. Purposive sampling was used to select the principals and Directors of Studies while simple random sampling technique was used to sample the classroom teachers. The sample was determined as follows: 24 principals, 24 Directors of Studies and 24 classroom teachers yielding a total of 72 respondents from 24 public secondary schools in Masaba North Sub-County in Nyamira County. Twelve teachers were not included in the final study because they were used for the pilot study. Data was collected using semi-structured questionnaire for principals and teachers. The questionnaire was pilot-tested for validity in three public schools that were not included in the final study. Cronbach's alpha co-efficient was used to test reliability and yielded a co-efficient of 0.86. The Statistical Package for Social Science (SPSS) version 22 was used for data analysis. Data was presented in charts and tables. The findings of the study revealed that there was a significant relationship between teacher qualifications, school facilities and principals' supervisory role and students' performance in KCSE. Therefore, the study concluded that there is a statistical significant relationship between selected school-based factors and students' performance in KCSE in Masaba North Sub- county in Nyamira County. The study recommends policy makers in the Ministry of Education, Science, and Technology (MoEST) to come up with policies on how teachers' qualifications can be enhanced to improve academic performance at KCSE. The policy makers should also reduce the burden of the principals being supervisors and at the same time being classroom teachers by allowing them to teach a minimum workload if they must teach. The MoEST and Board of Management should look for means to avail the required essential resources to the various schools.

## TABLE OF CONTENTS

|  |            |
|--|------------|
| <b>DECLARATION AND RECOMMENDATION .....</b>  | <b>ii</b>  |
| <b>COPYRIGHT .....</b>   | <b>iii</b> |
| <b>DEDICATION .....</b>  | <b>iv</b>  |
| <b>ACKNOWLEDGEMENT .....</b>   | <b>v</b>   |
| <b>ABSTRACT .....</b>  | <b>vi</b>  |
| <b>TABLE OF CONTENTS .....</b>   | <b>vii</b> |
| <b>LIST OF FIGURES .....</b>   | <b>x</b>   |
| <b>LIST OF TABLES .....</b>  | <b>xi</b>  |
| <b>ABBREVIATIONS AND ACRONYMS .....</b>  | <b>xii</b> |
| <br>   |            |
| <b>CHAPTER ONE .....</b>   | <b>1</b>   |
| <b>INTRODUCTION.....</b>   | <b>1</b>   |
| 1.1 Background to the study.....   | 1          |
| 1.2 Statement of the Problem .....   | 5          |
| 1.3 Purpose of the study.....  | 6          |
| 1.4 Objectives of the study.....   | 6          |
| 1.5 Hypotheses of the study .....  | 6          |
| 1.6 Significance of the study.....   | 7          |
| 1.7 Scope of study .....   | 7          |
| 1.8 Limitations of the study .....   | 7          |
| 1.9 Delimitations .....  | 7          |
| 1.10 Assumptions of the study .....  | 7          |
| 1.11 Operational Definition of Terms .....   | 8          |
| <br>   |            |
| <b>CHAPTER TWO .....</b>   | <b>9</b>   |
| <b>LITERATURE REVIEW .....</b>   | <b>9</b>   |
| 2.1 Introduction .....   | 9          |
| 2.2 Performance Indicators in Schools .....  | 9          |
| 2.3 The Concept of School-based Factors and Performance .....                      | 10         |
| 2.3.1. Relationship between Teachers’ Qualifications and Student Performance ..... | 10         |
| 2.3.2. Role of School Facilities in better learner Performance .....               | 13         |
| 2.3.3. Influence of Principals’ supervisory role on Performance .....              | 15         |
| 2.4 Theoretical Framework .....  | 18         |

|  |           |
|--|-----------|
| 2.5 Conceptual Framework .....   | 18        |
| <b>CHAPTER THREE .....</b>   | <b>20</b> |
| <b>RESEARCH METHODOLOGY .....</b>  | <b>20</b> |
| 3.1 Introduction .....   | 20        |
| 3.2 Research design .....  | 20        |
| 3.3 Location of the study .....  | 21        |
| 3.4 Target Population.....   | 21        |
| 3.5 Sampling Procedures and Sample Size.....   | 21        |
| 3.6 Instrumentation.....   | 22        |
| 3.7 Validity and Reliability.....  | 23        |
| 3.8 Data collection procedures .....   | 23        |
| 3.9 Data Analysis.....   | 23        |
| <b>CHAPTER FOUR.....</b>   | <b>25</b> |
| <b>RESULTS AND DISCUSSIONS .....</b>   | <b>25</b> |
| 4.1 Introduction .....   | 25        |
| 4.2 Response rate.....   | 25        |
| 4.3 Demographic Information.....   | 25        |
| 4.3.1 Gender of the Respondents .....  | 25        |
| 4.3.2 Age of the Respondents .....   | 26        |
| 4.3.3 Number of schools taught since employment (Teacher stability in school).....                         | 26        |
| 4.3.4 Number of years worked in the present school .....   | 27        |
| 4.4 Teachers qualifications .....  | 28        |
| 4.4.1 Academic qualification of teachers.....  | 28        |
| 4.4.2 Number of years taught (teachers' experience).....   | 29        |
| 4.4.3 Number of subjects taught.....   | 31        |
| 4.4.4 Number of Workshops attended .....   | 31        |
| 4.5 School Facilities .....  | 33        |
| 4.5.1 Teaching Resources .....   | 36        |
| 4.6 Principal Supervisory Role.....  | 38        |
| 4.7 Correlation analysis on the relationship between teacher qualifications and students' performance..... | 39        |



|  |           |
|--|-----------|
| 4.8 Correlation analysis on the relationship between School facilities and students’ performance.....            | 31        |
| 4.9 Correlation analysis on the relationship between Principals’ supervisory role and students’ performance..... | 32        |
| <b>CHAPTER FIVE .....</b>  | <b>44</b> |
| <b>SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS .....</b>   | <b>44</b> |
| 5.1 Introduction .....   | 44        |
| 5.2 Summary of findings.....   | 44        |
| 5.3 Conclusions .....  | 45        |
| 5.4 Recommendations.....   | 45        |
| 5.5 Suggestions for Further Research.....  | 46        |
| <b>REFERENCES.....</b>   | <b>47</b> |
| <b>APPENDICES:.....</b>  | <b>53</b> |
| APPENDIX 1: LETTER OF INTRODUCTION .....   | 53        |
| APPENDIX 2: HEADTEACHERS AND TEACHERS QUESTIONNAIRE.....   | 54        |
| APPENDIX 3: RESEARCH AUTHORIZATION .....   | 57        |
| APPENDIX 4 : RESEARCH PERMIT.....  | 58        |

## LIST OF FIGURES

|   |    |
|---|----|
| Figure 1: Relationship between Selected School-based Factors and students' performance in KCSE..... | 19 |
| Figure 2: Gender of the respondents .....   | 25 |

## LIST OF TABLES

|  |    |
|--|----|
| Table 1 Masaba North Sub-County MSS in KCSE in Nyamira County (2008-2010) .....                        | 5  |
| Table 2 SamplingMatrix.....  | 22 |
| Table 3 Age groups of the respondents.....   | 26 |
| Table 4 Number of schools taught by the respondents since employment .....                             | 27 |
| Table 5 No of years served by the respondents in the present school .....                              | 27 |
| Table 6 Academic qualifications of the respondents .....   | 29 |
| Table 7 Number of years taught by the respondents.....   | 30 |
| Table 8 Number of subjects taught by the respondent's .....  | 31 |
| Table 9 Number of workshops attended by the respondent's .....   | 31 |
| Table 10 Relationship between school facilities and students' performance in KCSE .....                | 33 |
| Table 11 Relationship between teaching resources and performance of students in KCSE... ..             | 36 |
| Table 12 Relationship between the Principals' supervisory roles and students' performance in KCSE..... | 38 |
| Table 13 Correlation between teacher qualifications and students' performance.....                     | 40 |
| Table 14 Correlation between School facilities and students' performance .....                         | 41 |
| Table 15 Correlation between Principals' supervisory role and students' performance .....              | 42 |

## **ABBREVIATIONS AND ACRONYMS**

|              |  |
|--------------|--|
| <b>BOM</b>   | Board of Management                          |
| <b>EFA</b>   | Education for All                            |
| <b>FDSE</b>  | Free Day Secondary Education                 |
| <b>FPE</b>   | Free Primary Education                       |
| <b>KCSE</b>  | Kenya Certificate of Secondary Education     |
| <b>MDGS</b>  | Millennium Development Goals                 |
| <b>MOEST</b> | Ministry of Education Science and Technology |
| <b>SPSS</b>  | Statistical Package for Social Science       |
| <b>UBE</b>   | Universal Basic Education                    |
| <b>UN</b>    | United Nations                               |
| <b>WEF</b>   | World Education Forum                        |

## **CHAPTER ONE**

### **INTRODUCTION**

#### **1.1 Background to the study**

According to Global Action for Children (GAC, 2005), education is a globally recognized basic human right thus it is a form of investment that contributes to the development of both individuals and the society. It is believed that the basis for any development must begin with the development of human resources. Formal education remains the main avenue for social-economic, political, technological development and social mobilization in any society (World Bank, 2009). Performance in examinations has an invaluable contribution to the area of human resource development of any nation (UNESCO, 2008; World Bank, 2009). The main goal of education is to prepare individuals for the job market by transmitting knowledge, skills, attitudes and cultural norms of the adult world to the younger (Ellis, 2006).

According to UNESCO (2008), 90 million children in the world had not accessed adequate education by 2006. The 2008 UNESCO and UNICEF reports addressed three interrelated rights that must be addressed in order to provide EFA. These rights include the right to access quality education and respect within the education environment. The report noted that the barriers to be removed in the provision of EFA include: funding by parents (cost sharing), inadequate and unqualified teachers, inadequate physical facilities, resources and lack of effective supervision. A study by Aikens, Nikki and Barbarin (2008), found that school conditions contribute more to the social, economic difference in learning rates than family characteristics. Schools in low social-economic status communities suffer from high levels of unemployment and migration of the best-qualified teachers. Studies that have been carried out in the developed countries indicate that initial academic skills are correlated with the home environment, where low literacy and chronic stress negatively affect a student's pre-academic skills. The school systems in low social-economic communities are often under-resourced, negatively affecting students' academic performance (Aikens, Nikki L.; Barbarin, 2008). Inadequate educational facilities and resources greatly affect students' academic performance. However, improving school systems and earlier intervention programs through supervision channels may help to reduce these risk factors hence increase students' academic achievements. To achieve this, developed countries have incorporated the use of electronic

media in their educational systems. The use of computers, for example, has helped to reduce the inadequacy of qualified teachers in the UK. In the United States; some States have adopted the use of electronic educational systems (gadgets) where students only access tutorials from their homes. This system is meant to make education more adaptive and home friendly thus removing environmental barriers (Gimbert, Bol & Wallace, 2007).

UNESCO (2014), while focusing on education performance among Asian countries, found that education performance was still low in Indonesia and Philippines. This research attributed this to resource provision and education management. The research revealed that though governments had done a lot to provide physical facilities, still there was a lack of resources and qualified teachers. Stanley (2014) held the same views but added that student's discipline was yet another challenge to performance. However, Ghailani and Khan (2004), singled out teacher qualification and school culture as a core determinant of performance. They then recommended an adoption of an all-inclusive model to enhance the effectiveness of secondary school program in Indonesia.

According to Matthew (2013) and Anyaogu (2015), education performance in Nigeria is not anything better. They asserted that graduates of the education system could neither usefully live in society nor move to higher institutions of higher learning without parental aid. Carnoy (2005) report on education for all recommended that decisiveness has to be taken to monitor learning to ensure all achieve the projected learning outcomes. Kaur (2012) found that environment was the major determinant of students' performance. However, he failed to single out the various components of the school environment.

World Bank (2009), education report for african nations shows that performance in Tanzania and Uganda were wanting. Although much has been done on enrolments and accessibility, material provision is still a challenge to many developing countries. This trend is clearly indicated in the Kenyan context. This is because although enrolment has impressively improved over the years, quality and performance of education have been compromised. In the 1979-1983 government development plans, the Kenyan government aimed at enhancing the quality and performance of secondary education through the provision of qualified teachers and other suitable resources. This was important for Kenya especially as she recently unveiled a vision of making the country a medium economy by the year 2030. This can only be achieved through educational performance. According to the Ministry of Education Science and Technology (MOEST, 2005) master plan, secondary school education is

extremely crucial in achieving this dream. At the end of the secondary education cycle, students sit for secondary education Examination (KCSE) which is administered by the Kenya National Examinations Council (KNEC) to all students who have enrolled and completed four years of secondary education. KNEC was created by an act of parliament in 1983 and mandated to administer examinations to both primary and post primary institutions, award certificates and rank students, schools and Sub- Counties. The ranking then is subjected to public scrutiny for evaluation and judgment based on it every year.

The annual surveys that have been carried out by the Kenya National Examination Council and Ministry of Education Directorate of Quality Assurance and Standards Office division, on secondary schools which performed well in KCSE in the past four years; shows that out of the top 50 high performing schools in the country, not even one had come from Masaba North Sub-County ([www.knec.ac.ke](http://www.knec.ac.ke), 2011). A similar analysis conducted by the Sub-County Education Officer Masaba North Sub- County also concurred with this report (SCDEO, Masaba North Sub-County, 2011). Despite the government providing schools with the necessary resources, materials, and qualified teachers to Masaba North Sub-County her performance in KCSE has not been impressive ([www.knec.ac.ke](http://www.knec.ac.ke), 2011).

Since independence in 1963, various efforts have been made to improve quantitatively and qualitatively all levels of formal schooling in Kenya. This is evidenced by the quantitative expansion of educational facilities to make primary education more readily available to all children of school-going age, the establishment of more secondary schools, and the revision of the curriculum (Mcgowen, 2007). Secondary schools in Kenya fall into two categories; government funded and private. Government funded schools are categorized into national, Extra-County, County and Sub-County schools. Private organizations or individuals run private schools. Private secondary schools in Kenya are high-cost schools offering students an alternative system of education with better or more luxurious facilities compared to public schools. They are often favored for prestige. Most private schools in Kenya offer the British system of education which includes “O-levels “and “A-levels”. Very few offers the American system of education and a good number of them offer the Kenya system (Gikungu, Karanja, & Thinguri, 2014).

After taking the primary school leaving exam and successfully passing, government funded schools select students in order of scores. Students with the highest scores gain admission into national schools while those with average performance are selected into Extra County, County and Sub-County schools. Students who fail examinations either repeat the final school year or pursue technical training opportunities. Some students also drop out of school by choice due to poor performance (Gikungu et al., 2014).

Under the current system of education, students attend secondary school for four years before sitting for KCSE at the end of the fourth year. The first class or year of secondary school is known as form one and the final year is form four. At the end of the fourth year, from October to November students sit for the Kenya Certificate of Secondary Education examination (K.C.S.E). In 2008, the government introduced plans to offer free Secondary education to all Kenyans (Gikungu et al., 2014).

It should also be noted that success in educational institutions is measured by the performance of students in external examinations. These examinations if used properly improve the quality of teaching. This gives the reason when KCSE results have released the feedback is sent to schools through a report indicating not only on how students have performed but also on what teachers and students should do to improve on future examinations. The FPE and consequently, FDSE has only addressed the issue of levies, failing to raise issues of infrastructural provision, staffing among others (Waita, Mulei, Mutune & Kalai, 2015).

According to performance reports available at the County Education Office, secondary schools in Masaba North Sub-County have been performing poorly in KCSE (DEOs, 2011). The 2011 KCSE results depict this because no school from Nyamira County was ranked top among the leading 20 schools nationally. The county has six Sub-Counties among those in thirty lower Sub-Counties (Kisii Central, Gucha South, Gucha, Manga, Nyamira and Masaba North in that order). Table 1 shows the performance of Masaba North Sub-County on a more or less the same constant performance level which shows improvements over the years. In addition the performance of all public secondary schools has wanted as per the school mean standard scores.



**Table 1****Masaba North Sub-County MSS in KCSE in Nyamira County (2008-2010)**

| <i>County</i>  | <i>Sub-County</i> | <i>2008</i> | <i>2009</i> | <i>2010</i> |
|----------------|-------------------|-------------|-------------|-------------|
| <b>Nyamira</b> | Manga             | 4.387       | 4.653       | 4.978       |
| <b>County</b>  | Nyamira           | 3.832       | 3.702       | 4.464       |
|                | Masaba North      | 3.909       | 3.368       | 4.089       |

**Source: County Director of Education (Nyamira)**

From Table 1 Masaba North Sub-County results in KCSE shows a fluctuation in performance over the years despite the effort by the government to allocate adequate resources to all schools in the Sub-County. This calls for the need to study some selected school-based factors that contribute to students' academic performance in KCSE in the area of study.

A study conducted by Wanjiku (2013), only looked into the influence of academic staffing, physical facilities and enrollment of primary school pupils' academic achievements but little is known on how these factors relate to the academic performance of students in secondary schools. It is this background that this study sought to find out whether there is a relationship between school facilities, teacher qualifications and principals' supervisory roles on student performance in KCSE in Masaba North Sub-County.

## **1.2 Statement of the Problem**

The rapid increase in enrolment in Kenya's public schools due to Free Primary Education (FPE) and Free Day Secondary Education (FDSE) has triggered widespread concern over its implications on learners' academic performance in national examinations. There is concern that the available classrooms and teachers are unlikely to cater for a large number of pupils currently in public primary schools. Since the introduction of FDSE, students' poor academic achievement has emerged as an issue of concern among parents and other stakeholders in education. According to Masaba North Sub-County Director of Education, enrollment in secondary schools increased from 5966 to 8185 by the year 2015 with no corresponding increase in academic staffing and physical facilities in Nyamira County where Masaba North is found. The Sub-County's academic performance has been wanting over the years, with Nyamira County taking position 40s out of 47 counties in KCSE examination. This owes to the fact that when institutions are not keen on instructional provision and supervision, this

provides avenues for low performance in final examinations. A number of factors have been thought to contribute to this state of affairs. Until now, no study has been carried out on the selected school-based factors focusing on performance in KCSE in Masaba North Sub-County. This study, therefore, sought to establish the relationship between the selected school-based factors, namely: adequacy of teaching/ learning resources, teacher qualification, and principals' supervisory practices and how they relate to academic performance in public secondary schools in Masaba North Sub-County, Kenya.

### **1.3 Purpose of the study**

The purpose of this study was to establish the relationship between the selected school-based factors influence on Kenya Certificate of Secondary Education performance in Masaba North Sub-County. The selected school-based factors that were examined included; teacher qualification, school facilities, and principals' supervisory practices.

### **1.4 Objectives of the study**

The specific objectives of the study were to:

- i. To examine if there is a relationship between teacher qualification and students' performance in K.C.S.E. in Masaba North Sub- County.
- ii. To determine if there is a relationship between school facilities and students' performance in K.C.S.E in Masaba North Sub-County.
- iii. To determine if there is a relationship between principals' supervisory practices and school performance in KCSE in Masaba North Sub- County.

### **1.5 Hypotheses of the study**

The following research hypotheses guided the study:

**H0<sub>1</sub>:** There is no statistically significant relationship between teacher qualifications and students' performance in at K.C.S.E. in Masaba North Sub-County.

**H0<sub>2</sub>:** There is no statistically significant relationship between school facilities and students' performance in K.C.S.E in Masaba North Sub- County.

**H0<sub>3</sub>:** There is no statistically significant relationship between principals' supervisory practices and students' performance in K.C.S.E in Masaba North Sub- County.

## **1.6 Significance of the study**

The research findings are to assist teachers to further their professional growth and improve on their instructional approaches in preparing students for K.C.S.E. The Board of Managements (BOMs) would find the findings helpful as the use of its recommendations will effectively change school management.

The study is of great value to already serving principals as well as the aspiring school managers in making a value judgment about instructions and performance, for example by understanding the interactive role of the instructional processes and approaches within the school system. The findings may help the principals to formulate clear supervisory policies for their schools. The Ministry of Education (MOE) may use the findings to formulate teacher education program for principals.

## **1.7 Scope of study**

The research was aimed at examining the relationship between selected school-based factors and students' performance of Kenya Certificate of Secondary Education in Masaba North Sub-County. The study focused on the adequacy of teaching/learning resources, teacher qualification, and principals' supervisory practices. The respondents of the study included all the 24 principals and 48 teachers of Masaba North Sub-County secondary schools.

## **1.8 Limitations of the study**

- i. Most schools due to frequent transfer of students did not keep accurate records of their students' enrolment and therefore the available records were used.
- ii. The researcher could not control the attitudes of the respondents as they responded to the instruments and this might have led to biases.

## **1.9 Delimitations**

The following were the delimitations of the study: First, the records that were available in the school at the time of the study were used and taken as a true reflection of teaching activities in Masaba North District. Secondly, the researcher tried to encourage the respondents to be as objective as possible.

## **1.10 Assumptions of the study**

- i. The study assumed that the respondents gave honest responses to all items in the questionnaire.
- ii. That education managers provide the necessary support to teachers for effective implementation teaching.

### **1.11 Operational Definition of Terms**

**Academic performance:** This is a measure of the degree of success attained in performing specific tasks in a subject or an area of the study after a teaching/learning experience. In this study, the measure was in the form of score attained by students in KCSE. It was also the same as students' academic achievement.

**Academic/Professional Qualification:** Educational attainment/standards and training achieved by teachers.

**Factors** - Circumstances or variables which influence the anticipated results either positively or negatively.

**Academic achievement:** This is a measure of the degree of success attained in performing specific tasks in a subject or an area of the study after a teaching/learning experience. In this study, the measure was in the form of score attained by students in KCSE. It was also the same as students' academic performance.

**Resources-**Equipment, materials, personnel, places that can be used to enhance teaching/ learning e.g. books, atlases instructional materials

**School-based Factors-** Factors that are within the school and that the school system has direct control over them. They included academic staff, school facilities, and Principals' supervisory roles.

**School facilities-** These are the facilities which facilitate teaching/ learning to take place. They include physical facilities and teaching/ learning resources. In this study, they included text books, charts, and maps

**The quality of education:** This is defined regarding teaching-learning process and what schools are doing with their resources in order to create the best possible learning conditions. This was determined by the school's performance in KCSE.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This section examines literature related to the study. The review is discussed under; performance indicators in secondary schools, the concepts of school-based factors such as teachers' qualifications, school facilities, principals' supervisory roles, theoretical framework and lastly gives the conceptual framework.

#### **2.2 Performance Indicators in Schools**

There has been a wide range of studies by various scholars focusing on performance indicators in schools. Harriet (2007), did a study on analysis of factor influencing learning achievement in Public Secondary Schools in Uganda and established school performance is influenced by head teachers' characteristics such as; qualification, age, in-service training, and experience. The study further revealed that good supervision strategy and administration styles were other significant factors influencing learning achievements' in Kenya Certificate of Secondary of Education (KCSE) examination. When thinking about the quality of education, it is useful to distinguish between educational outcomes and the processes leading to them. People who seek particular, defined outcomes may rate quality in those terms, ranking schools according to the extent to which their graduates meet 'absolute' criteria concerning, for example, academic achievement, sporting prowess, musical success, or pupil behavior and values. The standard of comparison would be in some sense fixed, and separate from the values, wishes, and opinions of the learners themselves. Focusing on absolute output characteristics of education programs does not preclude a 'value-added' approach that takes differences in ability into account (Carnoy, 2005).

According to Nzoka and Orodho (2014), Schools that can perform well have managed to do so through the following interventions: First, the teaching methods employed should be planned based on the science of participatory learning and encourage the spirit of inquiry among learners. This results in more learning, reasoning, and self-confidence. This is indicated by outstanding performance in the national examinations. The performing schools have also realized that the existing student assessment system is inadequate to increase the competence and gauge the different degrees of excellence achieved by students. It is important to analyze the value-added progress on performance including change in behavior and attitude.

Facilitating intra-school and inter-school teacher experience sharing activities or sessions enable teachers to adapt best practices practiced by other innovative teachers. In other words teachers of performing schools practice teamwork. There is overall development of the school in term of participation of co- curricular activities, academic counseling and monitoring of character development in order to encourage creative thinking in students (Munda & Odebero, 2014).

The school administration should ensure that there is physical infrastructural growth and all round development. They should further ensure that there is a productive use of the available facilities.

### **2.3 The Concept of School-based Factors and Performance**

Performance is a multi-dimensional process. Therefore no one aspect can justify its attainability. Different scholars have identified different factors that contribute to low examination performance of schools. To the secondary school teachers, the KCSE result performance indicates about the validity of their qualification as teachers and the quality of their practice. To the management focuses on the head teacher's efficiency and effectiveness on the part of his supervisory task (management strategies) (Pope, Green, Johnson, & Mitchell, 2009).

According to MOEST (2005), KCSE as a standardized test in the objective measure that gives every solid student picture of achievement and an equal opportunity for advancement. Performance, therefore, can be looked into, factoring in the various ingredients that come into play to make it a success. This study is to find out a few of the school-based factors to find out their influence on students' performance in KCSE in public schools.

#### **2.3.1. Relationship between Teachers' Qualifications and Student Performance**

The teacher is an integral aspect of the teaching and learning process and performance of a school. Therefore all the teachers' characteristics and their quality contribute to student performance. The National Committee of Education Objectives and Policies (1976) observed that all the qualitative attributes of teachers are of paramount importance in determining the quality of education on which intellectual development of a child is based (Ndolo & Simatwa, 2016).

Kitaka (2003), in a study on factors that influence performance in KCSE in private individual secondary schools in Nakuru noted that professional qualification of teachers is deemed important in improving the quality of teaching techniques (skills). These sentiments were echoed by Mobegi, Ondigi and Oburu (2010), who noted that a trained and a qualified teacher is an asset to the school and teachers. Mbwika (2011), on his part noted that it was not only the professional qualification of the teacher that matters but also the academic qualification.

Mobegi et al., (2010), further stated that “credentials of teachers both in pre-service education attainment and the type of professional training given may be a major determinant of the quality of Kenyan schools.” However, in their studies, they failed to justify whether it is the only qualification of teachers that was instrumental in students’ performance or whether other factors came into play. Their recommendations were that further studies be conducted to justify or confirm their findings.

The quality of teachers is assumed to be correlated to their age and experience Marzano (2006), while testing the detrimental theory of aging stated that abilities deteriorate and speed of performance as chronological age increases. The justification of this finding was that the older workers earned more were less absent had few accidents and had fewer turnover rates than young workers. However, in contrast to this view, Kilemi Mwiria (Daily Nation, Feb 15, 2003) stated that no education reforms are likely to succeed without the ownership of teachers. Teachers therefore at all levels of education system need to be respected, adequately remunerated, be professionally trained and be in their stations for a considerable period preferably four years. Afolakemi and Oloyede (2016), observed that qualified and experienced teachers find it easy to formulate formative assessment tests especially class-based assessments (CBA) that result in improved students’ learning and performance in National Examination (KCSE). However, the observation failed to state the level of qualification most preferably, the number of years, experience, and whether the type and the category of the schools also matter in influencing the teachers’ performance.

A significant finding from examining experienced and novice teachers by Sallis (2002), revealed that more qualified and experienced teachers are more sensitive to public examinations and thus were more likely to hook into their main strategy of guidance and use test oriented materials in presenting candidates for KCSE and the strategy he / she has

advocated to withstand the washback effects of examination results feedback. Teacher experience is yet another parameter of teacher quality. Moradeyo and Babatunde (2014), argue that student learning is heavily influenced by teachers' effectiveness and their years of experience. Further, they observe that in experienced teachers (those with less than three years of experience) are typically less effective than more senior teachers and that the benefit of experience appears to level off after about five years, especially in con-collegial work settings. The same view is echoed by Yara and Wanjohi (2011), who say that veteran teacher in settings that emphasize continual learning and collaboration to improve their performance. The teacher being the implementer of change at the classroom level need to be kept abreast with new teaching pedagogy through regular in- service courses. Munda and Odebero (2014), observe that in the Kenyan education system, the term in-service education has at various times been referred to as refresher courses, orientation courses, updating courses and similar terms have been used. They conclude that in-service training is a lifelong process in which the teacher is constantly learning and adopting the new challenges of the job. Research clearly shows that teachers' expertise is a most significant school-based influence on student learning.

School improvement always calls for enhancing the knowledge, skills, and dispositions of teachers. Whatever course of action a school adopts, success usually hinges on providing support and resources for teachers to strengthen existing expertise or to learn new practices. Kamau(2010), in a study on the impact of the pre-school program on mathematics performance in the lower primary school of Makuyu zone of Murang'a Sub-County noted that less teaching experience of teachers was a factor working against children's performance. However, in this study, he failed to state what should be done to address the problem. Trained and qualified teachers are well skilled in using and manipulating the learning resource / materials as well as navigating them in stimulating learning process thus resulting in better academic performance. The teacher's attained academic and professional qualification are therefore a prerequisite for ensuring the teachers competence qualification for student's better performance(Awino, 2014).

According to Wakarindi (2013), teachers qualification often create clusters among teaching and students thus influencing their performance both in classrooms deliberation and national examsthat makes some teachers feel more qualified and experienced than others thus the duration a teacher stays in a school may be a profound effect on performance.



### **2.3.2. Role of School Facilities in better learner Performance**

The development and maintenance of school facilities in educational institutions by communities, parents and sponsors should continue to be encouraged. This is because the lack of such facilities interferes with learning process (Muricho & Koskey, 2013). The evidence from research in other parts of the world points to the great importance of school facilities would be seen to account for the difference in achievement. The school facilities include both the physical and the teaching/ learning resources. Physical resources include classrooms, administrative block, libraries, laboratories, workshops, playgrounds, assembly halls, and kitchen, toilets and staff quarters.

Also, Sallis (2002), indicated that an educational program could not be effectively implemented using only policy guidelines even if teachers are trained and committed without adequate and appropriate physical facilities such as classrooms, toilets and playing grounds. MOEST (2005), explains the importance of ensuring that there are adequate and appropriate facilities for teaching-learning so that educational programmes could be implemented effectively. According to Kithokoo (2011), schools that lack adequate classrooms, for instance, hold their lessons outside or under trees. During bad weather, such lessons are postponed or are never held altogether. This interferes with syllabus coverage and students from such schools do not perform well in examinations.

Schools are characterized by variety in the size and quality of buildings. Some schools share classrooms and science laboratories, which are too small for current classes of forty and above students. On the other hand, new schools have teaching rooms which are too small because they were not built to specifications. Moreover, most school buildings and other facilities are poorly maintained. Such facilities hamper the teaching and learning the process and eventually affect student performance in examinations (Rivkin, Hanushek, & Kain, 2005). Albert, Alice, Osman, and Benard (2015), looked at the optimal utilization of educational resources in schools in Kisumu Sub-County. The study revealed that only a few schools in the Sub-County had above five laboratory rooms (19.35%). Since no school can provide adequate teaching services without the use of laboratories, she concluded that lack of laboratory facilities was a major contribution to the poor performance of some schools in KCSE, because candidates could not answer questions in practical science subjects. The generalization of an education innovation is accompanied by the need for new resources

which should be available for a sufficiently long time so that the innovation becomes part of the daily life of educational establishment.

Kithokoo (2011), found out that lack of library facilities was one of the most serious problems standing in the way of achieving high education standards in learning institutions whereas Ayoo (2002), carried out a study on the effects of school physical facilities on academic performance and established that availability of facilities had a direct link with performance of learners in examination. This concurs with many research finding which has shown that the success of any educational endeavor rests on the availability of physical facility on the school building. Writing on its importance, Yara and Wanjohi (2011) noted that the availability of the school building and other plans contribute to good academic performance as they enhance effective teaching-learning activities. He further states that well-stated school buildings aesthetic conditions, playground, latrines, etc. usually contributes to achieving high educational attainment by the students.

It is assumed that the use of teaching-learning resources leads to better performance in examinations. A study by Kitaka (2003), revealed that lack of suitable teaching aids and facilities made private owned secondary schools in Nakuru pathetic. This led to poor performance in national examinations. Jidamva (2012), in a study on qualitative implementation in school expansion stated that school compounds frequently lack space for recreational use and for teaching practical and technical subjects. This indeed led to poor performance in science subjects.

Arong and Ogbadu (2010), reported a lack of teachers' supervision as being the cause of poor performance in Nigeria. He further noted that the differences in school facilities such as the library, textbook, laboratories, dormitories, visual aids, and electricity, water and playgrounds seemed to account for differences in performance. He further asserted that the presence or absence of facilities distinguished high or low performing schools.

In a similar study to establish the effects of material input carried out by the population Council of Kenya and the ministry of education revealed that single secondary schools were better equipped than mixed schools.

Mbwika (2011), in an analysis of factors contributing to students' poor performance in KCSE in revealed that lack of facilities and resources compromised supervision control and contributed to 71% of poor performance in KCSE. The study also revealed that only 51.2% of principals checked teachers' professional records once a term. The study also revealed that the majority of teachers were qualified thus attributing poor performance to teachers' negligence contradicting views held by Tuitoek, Yambo and Akinyi (2015) who had observed that teachers' qualification then had an influence on students' performance in western province Kenya.

### **2.3.3. Influence of principals' supervisory role on performance**

Supervision has been defined as the attempt through a second party intervention to ascertain, maintain and improve the quality of work done (Muchiru, 2008). Thus in a school situation, all the activities that are undertaken by the principal to help teachers maintain and improve their effectiveness in the classroom characterize instructional supervision. The role of the principal in instructional supervision is, therefore, indispensable.

Egwu (2015), cited principals' role as an effort to improve instruction by reorganization of personnel in education. He cited that the art of team teaching for improved performance as lying more in the spirit of co-operative planning, close unit unstrained communication, and sincere sharing. The principal should, therefore, initiate cooperative sharing and planning as principle supervisory tool for enhanced performance. A study by Hannum and Park, (n.d.), determined that there was a positive correlation between the presence of reading materials at home and performance in rural China. The above studies by Grantham et al. and Hinnun and Park were extended by a research of Jagero (2011), in Kisumu Sub-County that substantiated the finding that lack of reading materials at home was a major factor affecting the performance of day secondary students.

According to Ayoo (2002), argued that factors affecting the academic performance of students in public secondary schools in Maseno Division were both within and outside the school environments. These were learning resources, teachers, management of homework, parents' participation in school activities, and students' involvement in home chores. Mbeche (2012) explored factors affecting student performance of aural skills at KCSE in Nairobi secondary schools. The study revealed that lack of proper teacher training, lack of adequate resources and regular training lead to poor aural performance.

Mwangi (2007) noted that most principals in secondary schools did not have objectives and mission targets to guide their schools. His study revealed that 80% of all the principals interviewed had not attended any lesson thus were not aware of what was going on in their classes but only waited for final KCSE results. This resulted in their schools posting low results. Thus it is imperative that principals should teach in class so as to boost their level of curriculum supervision.

Ainley (1996) observed that effective supervision was a basic prerequisite for stability and improvement of academic performance. In the management of education in Kenya, at primary school level School Management Committees (SMCs) and Parents Teachers Association (PTAs) are responsible for their respective schools while secondary schools, middle-level colleges and TIVET (Technical, Industrial, Vocational and Entrepreneurship Training) institutions are managed by Boards of Management (BOMs) and universities by councils. These bodies are responsible for the management of both human and other resources so as to facilitate smooth operations, infrastructure, development and the provision of teaching and learning materials (Sessional Paper No. 1 2005: 63). In some countries, these bodies are known as School Governing Bodies. In the Kenyan case management of secondary schools by Boards of Managements (BOMs) came into place after independence following are commendation by the Kenya Education Commission report of Ominde. This aimed at giving each school its personality and decentralization of authority for effectiveness. Education Act Cap. 211 and Sessional Paper No. 1 of 2005 state that the boards of governors have been given the role of managing human and other resources so as to facilitate smooth operations, infrastructural development and provision of teaching and learning materials (MOEST, 2005; Muchiru, 2008). In-sessional paper No. 6 of 1988, the government accepted the recommendations of the presidential working party on manpower training famously known as Kamunge report that Members of boards of governors and school committees be appointed from among persons who have qualities of commitment, competence, and experience which would enhance the management and development of educational institutions (MOEST, 2005).

According to Kindiki (2009), the BOM has a core function of the implementation of curriculum in Kenya. He casts doubts on quality management capabilities, training levels and effectiveness of secondary school boards of governors in providing leadership and good

governance in the implementation of the curriculum. In addition, he casts doubts on the effectiveness of the boards of governors in contexts of political interference. Mbugua, Muthaa and Nkonke (2012), explored the school-based factors that affect students' performance in Mathematics in secondary schools, socio-cultural factors that affect them and their personal factors that affect performance in Mathematics, and established the strategies that can be adopted to improve performance in Mathematics. The results of the study indicate that factors contributing to poor performance include understaffing, inadequate teaching/learning materials, lack of motivation and poor attitudes by both teachers and students, retrogressive practices. They suggested that improving on these factors and sensitization of the local community to discard practices which prohibit student's effective participation in learning mathematics could improve performance in Mathematics.

Appointments of members of the boards of governors in Kenya as in other parts of the world such as in the United Kingdom is obvious with some purposely elected as a channel for varied interests and hence such boards lack power and important interests bypass it. The secondary school boards of governors in Kenya have not been exposed to adequate management training. Also, the majority of them lack adequate supervisory competencies to utilize available information for management purposes. As such many secondary school, principals lack the capacities to oversee and account for the utilization of resources under them (Kindiki, 2009).

The inquiry of Koech report (The Republic of Kenya, 1999) pointed out that management of educational institutions in Kenya was found to be weak because most of the boards of governors lacked quality management capabilities. The schools BOM could, therefore, be the reason why the schools may not be able to reap maximum benefits from the practice of benchmarking. Kindiki (2009), also found out that BOM chairpersons of secondary schools are not providing the necessary leadership that would promote the TQM practices necessary for the school's continuous improvement.

Rulinda, Role and Makewa (2013), examined students' perception on academic performance using five-factor ratings namely, principal's instructional leadership, school climate, school facilities, teachers' effectiveness and family support. The results of the study showed that the principals did not seem to involve students in the matters of decision making. However,

students were satisfied with the kind of climate schools provided and the support they were getting from their families.

#### **2.4 Theoretical Framework**

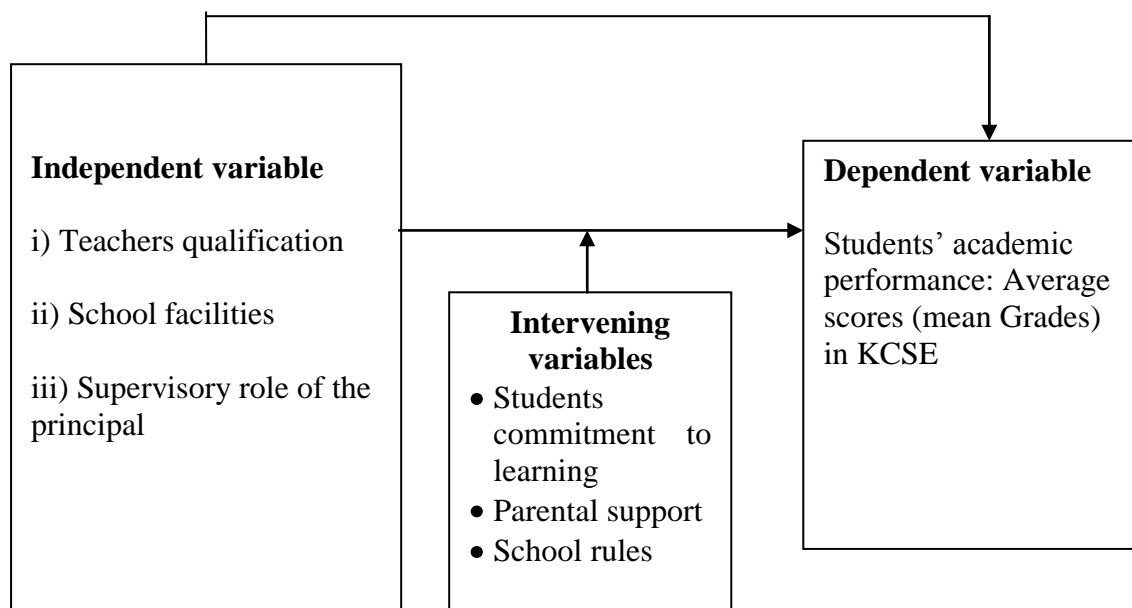
The study adopted the input-output model of schooling commonly known as the Educational Production Function (EPF). The EPF is derived from the general production function that is used to explain the relationship between outputs and inputs of a firm. The production theory advances that a school is seen as a firm that which receives inputs (students, resources, and teachers) and transformed them to educational outputs through a process. It had been used by some authorities such as Todd and Wolpin (2003), in an attempt to measure the contribution of various factors of educational output. The production function theory measures output (student achievement) by standardized achievement test scores as seen in KCSE. The educational outcomes are a function of a variety of inputs that are injected into the education process, that is, education is a production process that uses financial, physical and human resources into the production of educated people (Todd & Wolpin, 2003).

However, such a function differs from a perfect economic production function in that education is extremely complex and many integrated variables affect the quantity and quality of the output (Perelman & Santin, 2001). Such variables may include social-economic and family influences as well as school inputs. This study, however, investigated the relationship between selected school factors on students' performance in KCSE. Many studies by various scholars involving economists have produced inconsistent results about the impact of school resources on student academic performance, leading to considerable controversy in policy discussions. Additionally, policy discussions about class size reduction have heightened academic study of the relationship between class size and achievement (Nambuya, 2013).

#### **2.5 Conceptual Framework**

The conceptual framework in this study attempts to establish the relationships between teachers' qualifications, principals' supervisory role, and school learning resources influence students' performance in Kenya Certificate of Secondary Education (KCSE) examinations as shown in Figure1. Mugenda and Mugenda (2003), define a conceptual framework as a hypothesized model of identified concepts under study and their inter-relationships. The study sought to find out the relationship between school-based factors and students' performance in KCSE in selected public secondary schools in Masaba North sub-county.

Students' performance in KCSE is affected by factors such as teacher factors, school facilities, and the principals' supervisory roles. Teacher factors include teacher adequacy, teacher qualification, and finally teacher experience. School facilities include adequacy of classrooms, well-equipped library, adequate chairs and lockers, textbooks, playing field and sports activities. The supervisory role of the principal includes supervision of schemes of work, discussion of academic matters in the school, regular school attendance and keeping teachers' records. From figure 1 it is clearly evident that there is some relationship between the independent variables and students' academic performance at KCSE. To realize the academic performance of students, students are admitted to schools based on their academic abilities from primary school level and teachers are posted according to their academic and professional qualifications. The available teaching/learning resources also determine the teaching and learning process and ultimately the students' academic performance at KCSE. It can also be observed the presence of the intervening variables also influence the dependent variable to some extent.



**Figure 1: Relationship between Selected School-based Factors and students' performance in KCSE**

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter presents the procedures that were used to conduct the study. Specifically, it focuses on the research design, target population, sample size and sampling procedures, research instruments, reliability, validity, data collection procedure and data analysis techniques.

#### **3.2 Research design**

The study adopted a descriptive research design. The descriptive survey is a method of collecting information by interviewing or administering a questionnaire to a sample of individuals (Burgess, 2001). Kothari (2004), points out that descriptive studies are not only restricted to fact findings but may often result in the formulation of important principles of knowledge and solution to significant problems. The main advantage of this type of design is that it enables the researcher to assess the situation within the study area at a given point in time (Kothari, 2004). The study, therefore, used the design to examine the relationship between school-based factors and students performance in public secondary schools in Masaba North sub-county. According to Kumar (2011), a descriptive study entails finding out who, what, where and how of a phenomenon which is under investigation in a given study. Thus, the researcher deemed the design appropriate for the study as it allowed for investigation on the relationship between school-based factors influencing performance in Masaba North Sub-County.

According to Mugenda and Mugenda (2003), descriptive survey determines and reports the way things are without manipulation. Best and Kahn (1998), assert that descriptive survey involves a clearly defined problem and definite objectives, questions and development of generalization principles and theories that have universal validity. Descriptive survey design, therefore, describes respondents' characteristics such as opinions, abilities, attitudes, beliefs, and knowledge. This study aimed at capturing respondents' opinions, attitudes and knowledge based on school-based factors influencing performance in Masaba North sub-county.



### **3.3 Location of the study**

The study was carried out in Masaba North sub-county in Kenya. According to Nyamira County Education Office Records (2011) Masaba North Sub-County has a total of 24 public secondary schools. Purposive sampling was used to select the sub-county since it was deemed to have the variables sought for in the study.

### **3.4 Target Population**

The target population is defined as all the members of a real or hypothetical set of people, events or objects to which a researcher wishes to generalize the results of the research study (Acheson, Keith & Gall, 2003). The target population for this study comprised all the 24 principals and 264 teachers in public secondary schools in Masaba North Sub-County of Nyamira County provided for by Sub-County Education Offices (Masaba). In order to obtain study respondents in the schools, the study targeted the principals and teachers of public secondary schools in Masaba North sub-county.

### **3.5 Sampling Procedures and Sample Size**

Best and Kahn (2010), defined a sample as a subject of the population which is a representative. Gay, Mills, and Airasian (2006), defined sampling as a process of selecting some individuals for the study in such a way that the individual represents the larger group from which they were selected. Best and Kahn (2010), further notes that the ideal sample should be large enough to serve as an adequate representation of the population about which the study intends to generalize the findings. According to Mugenda and Mugenda (2003), ten percent of the population can be used in sampling. The study used a sample of 24 principals, 24 Directors of Studies and 24 classroom teachers yielding a total of 72 respondents. The principals and Director of Studies were selected using purposive sampling techniques while simple random was used to select the classroom teachers. To achieve this, a list of all teachers in each school was drawn. Then each teacher was assigned a random number based on the school code (SC) and teacher identification number (TIN).

Following the list drawn, the researcher then wrote the teacher's identification number on bottle tops, placed them in a ballot box and thoroughly mixed them. Teachers were randomly selected into the sample from each school.

**Table 2**  
**Sampling Matrix**

| Category             | Target     | Sample size | Percentage |
|----------------------|------------|-------------|------------|
| Principals           | 24         | 24          | 100        |
| Directors of Studies | 24         | 24          | 100        |
| Teachers             | 240        | 24          | 10         |
| <b>Total</b>         | <b>264</b> | <b>72</b>   |            |

### 3.6 Instrumentation

In the selection of the instruments to be used in the study, the researcher ensured that the instruments chosen were suitable and appropriate by considering the literacy level of the targeted respondents and their availability. Thus a questionnaire was found appropriate.

Burgess (2001), defines a questionnaire as an instrument used to gather data, which allows a measurement for or against a particular view point. He emphasizes that a questionnaire can collect a large amount of information in a reasonably short space of time. Best and Kahn (2010), observe that questionnaires enable the person administering them to explain the purpose of the study and to give the meaning of the items that may not be clear. The study used a questionnaire to collect data from 24 principals, 24 DOS and 24 teachers in the 24 public secondary schools in the Sub-County. The instrument was chosen because the targeted population was considered literate enough to solicit required and reliable information. The questionnaire contained data on; the background information of the respondents, teacher qualification, school facilities, principals' supervisory role and school performance.

A Questionnaire was used in this study because it was more efficient in that it permitted collection of data from a large sample (Gay et al., 2006). The Questionnaire also allowed respondents to give objective responses to sensitive questions without fear of victimization (Mulusa, 1990). In this study, only questionnaire was used, principals' and teachers' questionnaire. The principal and teachers' questionnaire sought qualitative information on administrative elements and practices put in place in the schools.

### **3.7 Validity and Reliability**

#### **3.7.1. Validity**

Mugenda and Mugenda (2003), define validity as the accuracy and meaningfulness of inferences based on research findings. It is the ability of the instruments to measure what they are intended to measure. To ensure this, expert judgment of the items on the questionnaire was sought from both the supervisors and other specialists in the Faculty of Education and community studies, Egerton University. Through this process, the items on the questionnaire were thoroughly refined to a level they were deemed valid.

#### **3.7.2. Reliability**

Reliability is a measure of the degree to which a research instrument produces consistent results given repeated trials (Mugenda & Mugenda, 2003). In this study, the Cronbach's Alpha co-efficient was used to test reliability. A score of more than 0.7 was assumed to reflect acceptable reliability (Nunnally & Bernstein, 1994). The reliability coefficient from the piloted instruments was 0.86. Since this figure is above 0.7 which is considered as a minimum threshold, the questionnaire items were deemed to be reliable.

### **3.8 Datacollection procedures**

The administration of data collection instruments was done by the researcher both at the pilot and the main study. An introductory letter was obtained from Graduate School of Egerton University, which assisted in obtaining a research permit from the National Council for Science, Technology and Innovation (NACOSTI). A copy of the permit and an introductory letter was presented to the sub-county Education Officer Masaba North Sub-County. The researcher then administered the research instruments to the principals and teachers of the sampled schools. The principals and teachers were given at most five (5) days to complete the questionnaire items. All the respondents were assured of the confidentiality of their responses.

### **3.9 Data Analysis**

After data collection, the data was filtered to identify errors made by respondents in the questionnaire such as incomplete responses. In order to answer the research questions, the study processed the data using descriptive statistics such as frequencies, means, and percentages. Primary data was analyzed with the help of the Statistical Package for Social Sciences (SPSS) computer program (version 22.0). The results were presented using frequency tables and pie chart. The correlation was used to determine the direction of the

association between selected school factors and Examination performance. The coefficient of variation value greater than 0.5 indicated strong relationships between the variables while a value less than 0.5 indicated a weak relationship between the dependent and the independent variables.

The following linear equation model was used:

$$Y = \beta_0 + \beta_1x_1 + \beta_2x_2 + \beta_3x_3 + \varepsilon$$

Where: Y = KCSE performance

X<sub>1</sub> = Teacher Qualification

X<sub>2</sub> = School facilities

X<sub>3</sub> = Supervisory Role

$\beta_0$ =Intercept explaining the level of performance when no benchmarking technique is applied

$\beta_1, \dots, \beta_3$  =Co-efficient representing the contribution of the various types of factors.

$\varepsilon$  =Error term

## CHAPTER FOUR

### RESULTS AND DISCUSSIONS

#### 4.1 Introduction

This chapter presents the findings of the study from the data collected using the research questionnaires. The data presented includes the relationship between teacher qualifications, School facilities, Principals' supervisory practices and students' academic performance at Kenya Certificate of Secondary Education in Masaba North Sub-County in Nyamira County.

#### 4.2 Response rate

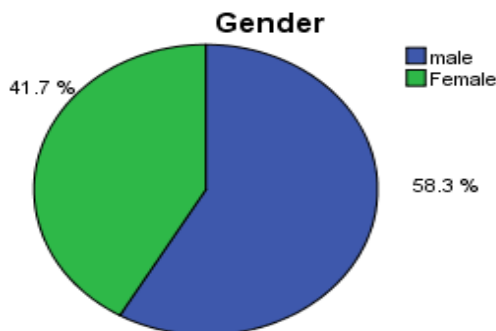
Out of the seventy-two (72) questionnaires administered to the 24 principals, 24 Director of Studies and 24 classroom teachers, Only fifty-eight (58) questionnaires were filled and returned. This represented an 80.6% response rate, which is considered satisfactory to make conclusions for the study. This is supported by Mugenda and Mugenda (2003), who argued that a 50% response rate is adequate, 60% good and above 70% rated very good. This implies that basing on this assertion, the response rate in this case of 80.6% is very good. Among the fifty-eight (58) returned questionnaires, 48 questionnaires were found to be valid, and the data of these 48 firms was used for statistical analysis in this study.

#### 4.3 Demographic Information

This study sought to get the demographic data such as the teachers' gender, age, the number of schools taught and the number of years that the respondent had been in the present school. This is to enable the researcher to assess gender parity of teachers in the schools in Masaba North Sub-County. The responses in this section were presented as follows:

##### 4.3.1 Gender of the Respondents

Figure 2 presents the distribution of the respondents by gender.



**Figure 2: Gender of the respondents**

From figure 2, the findings indicate that a considerable proportion (58.3%) of the respondents' were male while a relatively lower percentage (41.7%) of the respondents' was female.

### 4.3.2 Age of the Respondents

The research sought to find the age of their spondents. Table 3 shows the age distribution of those who participated in the study.

**Table 3**

**Age groups of the respondents**

| Teachers' Age | Frequency | Percent      |
|---------------|-----------|--------------|
| 18-25         | 3         | 6.3          |
| 26-30         | 16        | 33.3         |
| 36-40         | 16        | 33.3         |
| >40           | 13        | 27.1         |
| Total         | <b>48</b> | <b>100.0</b> |

**Source: Field data (2013)**

From the results in Table3, 6.3% of the respondents' indicated that they were between 18-25 years while 66.6% of the respondents were between 26-40 years. Similarly, 33.3% of the respondents' indicated that they were between 36-40 years a clear indication that they had enough teaching experience, and they were still energetic to work as teachers. (Bennell & Mukyanuzi, 2005), found that individual teacher characteristics could adversely impact on motivation levels. They added that age profile of teachers has become younger in many countries due to the rapid expansion of primary and, more recently, secondary school enrollments and higher rates of teacher attrition. Thus in this study, many of the teachers were relatively young and would thus work well. Age is a major factor in the teaching profession; it can either lead to fatigue or vibrant individuals. It can also lead to stability of the teachers and hence improve their performance in class. Teachers' age also may have been affected by the government's policy on teacher recruitment which is pegged on demand for the various subjects.

### 4.3.3 Number of schools taught since employment (Teacher stability in school)

The respondents were asked to indicate the number of schools that they had taught. Table 4 shows the number of schools taught by the respondents.

**Table 4****Number of schools taught by the respondents since employment**

| No. of schools taught in years. | Frequency | Percent |
|---------------------------------|-----------|---------|
| less than 6                     | 9         | 19.1    |
| More than 6                     | 39        | 80.9    |
| Total                           | 48        | 100.0   |

**Source; Research data (2013)**

From the results in Table 4, 19.1% of the respondents had taught less than six (6) schools. The majority of the respondents (80.9%) had taught more than six (6) schools. This is a clear indication that the teachers had a wide experience of teaching. However, one respondent did not indicate the number of schools he or she had taught. This implies that teachers had inculcated the culture in their schools hence improve the students' academic performance in KCSE. This also has been affected by the TSC policy of employment which requires that every newly recruited teacher has to work in the same station for not less than five (5) years before seeking a transfer.

**4.3.4 Number of years worked in the present school**

The study sought to determine the number of years that the respondent had served in the current school. Table 5 presents the results regarding the number of years that the respondents had served in their current school.

**Table 5****No of years served by the respondents in the present school**

| Teachers' experience | Frequency | Percent |
|----------------------|-----------|---------|
| $\leq 1$             | 5         | 10.4    |
| 2-4                  | 23        | 47.9    |
| 5-6                  | 12        | 25.0    |
| $\geq 7$             | 8         | 16.7    |
| Total                | 48        | 100.0   |

**Source: Research data (2013)**

From the results in Table 5, five (5) respondents had worked at their present school for less than one year. This represented 10.4% of those who were interviewed. Most of the respondents' (47.9%) indicated that they had served in their current school for a period ranging between 2 to 4 years. Table 5 further indicates that 25% of those who were interviewed had taught in their current school for a period ranging between 5 to 6 years. Furthermore, eight respondents' indicated that they had been in the present station for more than seven years. This can be attributed to the fact that the policy by TSC is that one must work in a particular station for more than five years before being transferred. This implies that there is the stability of the teachers in their stations.

#### **4.4 Teachers qualifications**

It has been proved that teachers have an important influence on students' academic performance. They play a crucial role in educational attainment because the teacher is ultimately responsible for translating policy into action and Principals based on practice during interaction with the students (Moradeyo & Babatunde, 2014). In their study, Jagero (2011), concluded that the most important factor influencing student learning is the teacher. Teachers stand in the interface of the transmission of knowledge, values, and skills in the learning process. If the teacher is ineffective, students under the teachers' tutelage will achieve inadequate progress academically. This is regardless of how similar or different the students regard individual potential in academic achievement.

In order to determine the teachers' qualifications, the respondents were asked to indicate their highest level of academic qualifications, the number of years that they had taught, the number of subjects that they teach and the number of workshops that they had attended.

##### **4.4.1 Academic qualification of teachers**

Table 6 presents the distribution of the respondents' academic qualifications. Their qualifications ranged from certificate, diploma, Bachelor's degree and Master's degree.



**Table 6****Academic qualifications of the respondents**

| Qualification | Frequency | Percent |
|---------------|-----------|---------|
| Certificate   | 1         | 2.1     |
| Diploma       | 9         | 18.8    |
| Bachelors     | 34        | 70.8    |
| Masters       | 4         | 8.3     |
| Total         | 48        | 100.0   |

**Source: Research data (2014)**

Table 6 indicates that one respondent had a certificate while 18.8% of those who were interviewed had attained a diploma. The majority of the respondents 34 (70.8%) had a bachelor's degree. From results in Table 6, four respondents' had attained a master's degree. This represented 8.3% of all the respondents' who were included in the sample. From the findings of the study, it can be said that teachers in public secondary schools in Masaba north Sub-County were qualified. Having taught for more than two years indicates that the teachers have gathered enough experience in dealing with students at this level and therefore can discharge their duties effectively. This implies that they have the minimum teacher qualification as set by the TSC Act 2012.

Various studies have examined the influence of teacher characteristics such as gender, educational qualifications and teaching experience on students' academic achievement with varied findings. Yara and Wanjohi (2011) and Moradeyo and Babatunde (2014), found that teachers' experience and educational qualifications were the prime predictors of students' academic achievement. However, the findings suggested that additional professional qualifications beyond first-degree do not necessarily lead to the improved competence of teaching at secondary school level. It is therefore not surprising that Rivkin et al., (2005) had concluded that there was no evidence that a masters' degree raises teacher effectiveness at secondary school level. Thus the results from Table 6, 70.8% of the teachers had a Bachelors degree implying that students should perform better in KCSE in Masaba north Sub-County.

**4.4.2 Number of years taught (teachers' experience)**

Table 7 shows the distribution regarding the number of years that the respondents had taught at secondary level.

**Table 7****Number of years taught by the respondents**

| <b>No. of years taught</b> | <b>Frequency</b> | <b>Percent</b> |
|----------------------------|------------------|----------------|
| ≤3 years                   | 6                | 12.5           |
| 4-7 years                  | 15               | 31.3           |
| 8-11 years                 | 5                | 10.4           |
| 11-14 years                | 11               | 22.9           |
| ≥ 15 years                 | 11               | 22.9           |
| Total                      | 48               | 100.0          |

**Source: Research data, 2013**

Table 7 shows that six respondents had taught for less than three years. This represented 12.5% of the total number of respondents' who were included in the study. Most of the respondents' (31.3%) indicated that they had taught for a period ranging between 4 and 7 years. Moreover, 10.4% of the respondents' had taught for a period ranging from 8 to 11 years. According to Table 7, the teaching experience of 22.9 % of the respondents ranged between 11 to 14 years. A total of 11 respondents had taught for more than 15 years, and this represented 22.9% of all the respondents' who were included in the study. This shows that most of the teachers have been teaching at secondary schools for a good number of years an indication that the teachers had gained a wealth of experience in teaching and handling secondary school subjects. This also means that there are relatively few experienced teachers who serve as mentors and provide professional support and leadership thus motivating students other young teachers to work. From this finding, it can be said that majority of teachers interviewed had taught for a long period, they may not be dissatisfied with their jobs due to stress but by other factors which were the interest of this study.

This finding is supported by Alarcon, Eschleman, and Bowling (2009), who argued that motivation increases with years of experience thus teachers with more experience tends to be more motivated and satisfied than the youth who are less experienced. They found that teachers' ratings of the academic assessment during their training related significantly to teachers' motivation based on prior learning and teaching experiences and teachers' motivations based on teaching as a fallback career. The researcher, therefore, considered the information given by the teachers to be reliable as it was given out of the experience. From the findings the teaching experience of the majority of the teachers was that they were relatively

young in the field hence had not gathered sufficient exposure in teaching/learning. This would also be attributed to the fact that teacher recruitment in Kenya was stopped for a while.

#### 4.4.3 Number of subjects taught

The study sought to determine the number of subjects taught by the respondents. Table 8 indicates the distribution regarding the number of subjects taught by thosewhowere included in the study.

**Table 8**

**Number of subjects taught by the respondent's**

| Subject taught | Frequency | Percent |
|----------------|-----------|---------|
| 1 subject      | 3         | 6.3     |
| Two subjects   | 45        | 93.8    |
| Total          | 48        | 100.0   |

**Source: Research data (2013)**

Table 8 shows that 3 respondents' taught only one subject. This represented 6.3% of all the respondents' who were included in the sample. Most of the respondents' (93.8%) indicated that they were teaching two subjects which are the recommendation by the ministry of education. This shows that the teachers had enough time to attend to their students and had time to do research in their teaching subjects. This implies that they would be able to master the subject content very well there by improve their performance in content delivery.

#### 4.4.4 Number of Workshops attended

Table 9 below shows the distribution in respect to the number of workshops that the respondents had attended.

**Table 9**

**Number of workshops attended by the respondent's**

| No. of workshops | Frequency | Percent |
|------------------|-----------|---------|
| 1-2              | 11        | 22.9    |
| 3-4              | 14        | 29.2    |
| 4-5              | 2         | 4.2     |
| 5-6              | 6         | 12.5    |
| ≥6               | 15        | 31.3    |
| Total            | 48        | 100.0   |

**Source: Research data (2013)**

From results in Table 9, 22.9% of the respondents had attended between 1 and 2 workshops. A total of 14 respondents had attended between 3 and 4 workshops. This represented 29.2% of all the respondents' who were included in the sample. Table 9 shows that 4.2 % of the respondents' had attended between 4 and 5 workshops while 12.5% of those who were interviewed had attended 5 to 6 workshops. The majority of the respondents' (15) had attended more than 6 workshops. This represented 31.3% of all the respondents' who were included in the study. The number of workshops attended is a clear indication of the exposure one gets through information sharing and updating one's skills which are so crucial in teaching and improving academic performance.

Lack of professional development for most of the teachers was occasioned by the inability of the school principals to sponsor their teachers for training because of the financial implications involved. The same sentiments were echoed by Yara and Wanjohi (2011), that academic qualification, professional qualification, refresher courses or training and teacher experience were the most important qualities of a teacher.

From the findings, the fact that a majority of teachers had attended a refresher course is welcome, a fact attested to by Tuitoek et al., (2015), who acknowledge that the demands of the teacher change considerably during his career. They further observe that given the continuous renovation and development of teaching knowledge and of the constant change taking place within the educational systems, it does not seem possible to equip the teacher trainee with all the knowledge and skills required for an entire professional life. After carrying a study in Kamau (2010), found that teacher expertise is the most significant school-based influence on student learning. School improvement always calls for enhancing the knowledge, skills, and dispositions of teachers and whatever course of action a school adopts, success usually hinges on providing support and resources for teachers to strengthen existing expertise or to learn new practices. It is worth noting that professional activities give teachers' confidence hence perfecting their teaching ability as it exposes one to modern trends in teaching methodology. It also assists the teacher to master the subject content as well as improve on pedagogy (Kamau, 2010).

#### 4.5 School Facilities

This section gives information on the respondents' opinion regarding the relationship between the nature and adequacy of their school facilities. The school facilities include; classrooms, library, lockers and chairs, playing ground. The respondents were supposed to respond as either strongly disagree, disagree, unsure, agree or strongly agree. Table 10 presents a distribution of the responses regarding the perceived state of school facilities.

**Table10**

**Relationship between school facilities and students' performance in KCSE**

| School facilities  | Strongly disagree | Disagree | Unsure | Agree | Strongly Agree |
|--|-------------------|----------|--------|-------|----------------|
| 1 There is a relationship between adequate classrooms and students' performance in KCSE            | 12.5%             | 33.3%    | 0      | 31.3% | 22.9%          |
| 2 Well maintained facilities relates to students' performance in KCSE                              | 14.6%             | 29.2%    | 0      | 47.9% | 8.3%           |
| 3 There is a relationship between a well-equipped library and students' performance in KCSE        | 10.4%             | 31.3%    | 10.4%  | 43.8% | 4.2%           |
| 4 Enough lockers and chairs for students relates to their performance in KCSE                      | 12.5%             | 47.9%    | 2.1%   | 27.1% | 10.4%          |
| 5 There is a relationship between a school's ample playing field and students' performance in KCSE | 22.9%             | 45.8%    | 0      | 20.8% | 10.4%          |
| 6 A variety of sports activities relates to students' performance in KCSE                          | 25.0%             | 43.8%    | 0      | 25.0% | 6.3%           |

**Source: Research data (2013)**

From the findings in Table 10, the majority of those who were interviewed (33.3%) disagreed with the notion that there is a relationship between adequate classrooms and students' performance in KCSE while 12.5% strongly disagree that there is a relationship between adequate classrooms and students' performance in KCSE. Nonetheless, 22.9% of the respondents strongly believed that there is a relationship between adequate classrooms and students' performance in KCSE while 31.3% of the respondents agree that there is a relationship between adequate classrooms and students' performance in KCSE. This implies that majority of the respondents 54.2% have the belief that there is a relationship between

adequate classrooms and students' performance in KCSE. Adequate classrooms would imply that students are not congested, and there is free movement within the classes.

Table 10 indicates that the majority of the respondents (47.9%) agreed to the fact that maintenance of facilities in their schools was highly valued and hence they believed that there is a relationship while 8.3% strongly agree. However, 14.6% of those who were interviewed strongly disagreed with 29.2% of the respondents disagreed with the idea that their schools highly valued the maintenance of facilities hence their relationship was low. This implies that 56.2% of the respondents had the opinion that there is a relationship between well-maintained facilities and students' performance. Maintenance of these facilities like textbooks, the laboratory and its equipment is quite paramount in ensuring that teaching/ learning is taking place.

Table 10 indicates that most of the respondents (43.8%) agreed that there is a relationship between a well-equipped library and students' performance in KCSE while 4.2 % of the respondents strongly agree that there is a relationship between a well-equipped library and students' performance in KCSE. However, 10.4% of the respondents strongly disagreed that there is a relationship between a well-equipped library and students' performance in KCSE while 31.3% of the respondents disagreed. It can be noted that 47.2% of the respondents had the notion that a well-equipped library has an influence on students' performance. A library with teaching and learning materials play a central role in students' performance. It is in books that knowledge is acquired.

Table 10 points out that the majority of the respondents (47.9%) disagreed with the fact that there enough lockers and chairs for students relate to their performance in KCSE while 12.5% strongly disagreed. On the other hand, 10.4% of the respondents strongly agreed that students in their school's provision of enough lockers and chairs relate to students' performance in KCSE while 27.1% agreed. This implies that where a student sits does not really matter a lot but what the student does in class matters.

The results in Table 10 show that the majority of the respondents (45.8%) disagreed with the statement that there is a relationship between a school's ample playing field and students' performance in KCSE while 22.9% strongly disagreed. On the other hand, 20.8% of the respondents agreed with the statement that there is a relationship between a school's ample

playing field and students' performance in KCSE while 10.4% strongly agreed. Similarly, the majority of those who were included in the study (43.8%) disagreed with the idea that their students had access to a variety of sports while 25.0% strongly disagreed. Nonetheless, 25.0% of the respondents agreed that their schools provided a range of sports to their students while 6.3% strongly disagreed. It thus emerged that most of the schools would be considered not conducive learning environments as they are lacking majority of the facilities required for learning. The availability of educational resources is very important in determining the academic achievement of students. Matthew (2013) argued that classroom learning environment led to poor examinations performance in most schools in Nigeria. Lack of facilities like chalkboard, the lack of desks and reading tables, absence of a ceiling, some roofing sheets not in place, windows, and doors removed among others, a situation which the researcher regards as hazardous to health living for the learners. Thus, failure of students can be attributed to lack of these physical facilities even in the Kenyan situation where enrolment has gone up due to FPE and FDSE.

The findings also agree with those of Musau and Abere (2015), who indicated that inadequate facilities could have a harmful effect on the quality of education. In addition, Likoko, Mutsotso, and Nasongo (2013), noted that learning experiences are fruitful when there are adequate quantity and quality of physical resources; and that unattractive school buildings, crowded classrooms, non-availability of playing ground and surroundings that have no aesthetic beauty can contribute to poor academic performance. This was also in agreement with the views of Black and William (1998), who observed that availability of classrooms, laboratories and libraries were symbols of high education quality. Etsey (2005) agreed with the above studies that schools with adequate school facilities perform better in examinations.

The same sentiments were echoed by Moradeyo and Babatunde (2014), who also identified poor and inadequate physical facilities, overcrowded classrooms among other factors which lead to poor academic achievements. According to Akiri and Ugborugbo (2008), facilities form one of the important factors that contribute to the academic achievement in the school system. They include the school buildings, accommodation, libraries, laboratories, furniture, recreational equipment, apparatus and other instructional materials. He went further to say that the availability, relevance, and adequacy of textbooks contribute to academic achievement. He, however, quickly added that unattractive school buildings and overcrowded classrooms among others contribute to poor academic attainment.

Wamulla (2013) identified a school library as an instructional resource which may significantly influence pupils' achievement after controlling for pupils family background. These can also be depicted from the respondents' responses. Albert et al., (2015), argued by saying that 'seeing is believing' as the effect of using laboratories in teaching and learning of science and other science-related disciplines as students tend to understand and recall what they see than what they were told. He further notes that a well-equipped library is a major facility which enhances good learning and achievement of high educational standards. He also reiterates that school libraries may not be effective if books there may not be up to date as its impact may only be meaningful if the library could be opened to the students always for a considerable length of time on a school day. This equally agrees with the findings of the study.

#### 4.5.1 Teaching Resources

The study sought to determine the view of the respondents regarding teaching resources in relation to students' academic performance at KCSE. Table 11 presents the results on the perceived nature of teaching resources.

**Table 11**

**Relationship between teaching resources and performance of students in KCSE**

| Teaching Resources                                   | Strongly disagree | Disagree | Unsure | Agree | Strongly Agree |
|--|-------------------|----------|--------|-------|----------------|
| 1 Teachers are provided with the relevant books      | 2.1%              | 18.8%    | 2.1%   | 45.8% | 31.3%          |
| 2 There are enough teachers                          | 14.6%             | 56.3%    | 0      | 25.0% | 4.2%           |
| 3 Teaching aids are available                        | 16.7%             | 35.4%    | 2.1%   | 41.7% | 4.2%           |
| 4 Teachers have access to the appropriate curriculum | 2.1%              | 14.6%    | 4.2%   | 64.6% | 14.6%          |
| 5 The school has the necessary and enough textbooks  | 8.3%              | 39.6%    | 8.3%   | 33.3% | 10.4%          |

**Source: Research Data (2013)**

Table 11 indicates that the majority of the respondents (45.8%) agreed with the fact that teachers were provided with the appropriate books. Furthermore, 31.3% of those were included in the study strongly agreed with the statement that teachers were provided with the relevant books. The study also indicates that 18.8% of the respondents strongly disagree with



the statement that teachers were provided with the relevant books while 2.1% strongly disagreed.

This implies that teachers were teaching as per the curriculum as set by the ministry of education. The relevant books assist the teachers in preparing the students in tackling examination questions and hence improve the academic performance in KCSE. Table 11 shows that the majority of the respondents 56.3% disagreed with the idea that their schools had enough teachers while 14.6% agree. Only 4.2% of the respondents strongly agreed that their schools were provided with enough teachers while 25.0% agree this implies that teacher shortage in Masaba North Sub-County is quite high. Data which is available from the DEO's office indicates that the Sub-County has a total teaching staff of 271 teachers comprising of 217 male and 54 female. This is also depicted nationally as teacher shortage stands at over seventy thousand as per the KNUT secretary general ([www.standardmedia.co.ke](http://www.standardmedia.co.ke), n.d).

Results from Table 11 indicate that most of the respondents (41.7%) agreed with the fact that teaching aids were available in their school. However, 35.4% of those who were included in the study disagreed with the statement that teaching aids were available in their school. The results in Table 11 show that the majority of the respondents (64.6%) agreed that teachers had access to the appropriate curriculum. However, 14.6% of those who were included in the sample disagreed with the notion that teachers had access to the appropriate curriculum.

Table 11 shows that 10.4 % of those who were included in the study strongly agreed with the fact that their schools had the necessary and enough textbooks. However, the majority of the respondents (39.6%) disagreed with the statement that there were enough and necessary textbooks in their school. However, 8.3% of those who were interviewed were not sure on whether their school had enough and necessary textbooks. Thus, from the findings as in Table 11 above it can be noted that the basic instructional resources were inadequate more especially textbooks and teachers. These results are similar to findings of Rivkin et al. (2005) and UNESCO (2008), which detailed that teaching/learning materials such as textbooks, teaching aids and stationery affect the academic performance of the learners.

The findings also were in agreement with Nthumo (2015), who asserted that learning is strengthened when there are enough reference materials such as textbooks, stationery, and teaching aids. Ayoo (2002) discovered a strong positive significant relationship between instructional resources and academic performance. He further indicated that effective teaching cannot take place within the classroom if basic instructional resources are not

adequate. Likoko et al., (2013), recommended that in order to provide quality education, availability of teaching/learning material and facilities are crucial. The implication of this result is that the provision of adequate teaching/learning resources can positively change teachers' attitude to the teaching making teaching and learning interesting not only meaningful but also exciting to the students and hence realization of quality education hence better performance in the national examination.

#### 4.6 Principal Supervisory Role

The respondents were required to indicate the relationship between the principals' supervisory role and students' academic performance. These roles included; supervision of teachers' schemes of work, the presence of the principal in school, attendance of all meetings by the principal, discussion of all academic matters by the principal and keeping of all records by the principal. Table 12 shows the distribution of the responses in regard to the supervisory role of the principal.

**Table 12**

**Relationship between the principals' supervisory roles and students' performance in KCSE**

|  | Strongly disagree | Disagree | Unsure | Agree | Strongly Agree |
|--|-------------------|----------|--------|-------|----------------|
| 1 There is a relationship between the Principals' supervision of the schemes of work and students' performance in KCSE | 14.6%             | 0        | 2.1%   | 54.2% | 29.2%          |
| 2 There is a relationship between the Principals' presence in school and students' performance in KCSE                 | 18.8%             | 20.8%    | 0      | 41.7% | 18.8%          |
| 3 The Principals' attendance at all meetings in the school relates to students' performance in KCSE                    | 18.8%             | 25.0%    | 4.2%   | 39.6% | 12.5%          |
| 4 Teachers records are kept in the Principal 's office   | 4.2%              | 22.9%    | 8.3%   | 45.8% | 18.8%          |
| 5 Principals' discussion on academic Matters at least twice a term improves students' performance in KCSE              | 2.1%              | 29.2%    | 6.3%   | 37.5% | 25.0%          |

**Source: Research Data (2013)**

From the results in Table 12 above, the majority of the respondents (54.2%) agreed with the fact that there is a relationship between the principals' supervision of the schemes of work and students' performance in KCSE. Moreover, 29.2% of the respondents strongly agreed that their principals exercised their role in regard to supervising the teachers' schemes of work. Nonetheless, 14.6% of those who were included in the study disagreed with the notion that the principal supervised the schemes of work. This implies that the principal needs to supervise the teachers' schemes of work. The schemes of work outlines how teachers are planning to teach, the teaching/learning resources required and the expected outcomes. This sets a benchmark in the internal supervision of the curriculum.

The results in Table 12 indicate that most of the respondents (41.7%) agreed with the statement that their principal was mostly in school, and this relates to performance. This is owed to the fact that the principal takes control of the school. However, 20.8% of the respondents disagreed with the notion that the principal was regularly in school. The majority of the respondents (39.6%) agreed that their school principal attended all the school meetings. Nonetheless, 25.0% of those who were included in the study disagreed with the view that the principal attended all the school meetings.

Table 12 shows that the majority of the respondents (45.8%) agreed with the fact that teachers records were kept in the principal's office. On the other hand, 22.9% of those who were included in the study disagreed with the idea that teachers records were kept in the principal's office. Furthermore, the results in Table 12 show that most of those who were interviewed (37.5 %) agreed that the principal discussed academic matters at least two times per term. In contrast, 29.2% of the respondents disagreed with the view that the principal discussed academic matters at least twice in a term.

#### **4.7 Correlation analysis on the relationship between teacher qualifications and students' performance**

To achieve the first hypothesis, a Pearson Product Moment correlation analysis was conducted to test whether there is no statistically significant relationship between teacher qualifications and students' performance in at K.C.S.E. in Masaba North Sub- County. All hypotheses were tested at 0.05 level of significance. Table 13 shows the results of correlation analysis.

**Table 13****Correlation between teacher qualifications and students' performance**

| Correlations            |                     | Teachersqualifi<br>cations | Performance |
|-------------------------|---------------------|----------------------------|-------------|
| Teachers qualifications | Pearson Correlation | 1                          | .420(**)    |
|                         | Sig. (2 tailed)     |                            | .000        |
| Performance             | Pearson Correlation |                            | 1           |
|                         | N                   |                            | 48          |

\*\* Correlation is significant at the 0.05 level (2-tailed).

**Source: Research Data (2013)**

From results in Table 13, there is a positive relationship between teacher qualifications and students performance ( $R=0.420$ ,  $P<0.05$ ). This Implies that a student taught by qualified teachers, will perform higher in KCSE. The results agrees with the work of The National Committee of Education Objectives and Policies (1976) that observed that all the qualitative attributes of teachers are of paramount importance in determining the quality of education on which intellectual development of a child is based. This finding is also supported by the work of Kitaka (2003) who did a study on factors that influence performance in KCSE in private individual secondary schools in Nakuru and noted that professional qualification of teachers is important in improving the quality of teaching techniques (skills). Thus, on the basis of this finding the null hypothesis is rejected at 5% level of significance.

This finding is in agreement with the work of Wanjiku (2013), who argued that it was not only the professional qualification of the teacher that matters in student performance but also the academic qualification. A significant finding from examining experienced and novice teachers by Yara and Wanjohi (2011), revealed that more qualified and experienced teachers are more sensitive to public examinations and thus were more likely to hook into their main strategy of guidance and use test oriented materials in presenting candidates for KCSE and the strategy he/she has advocated to withstand the washback effects of examination results feedback. Contrary to Moradeyo and Babatunde (2014), Yara and Wanjohi (2011), findings that teachers' experience and professional qualifications were the prime predictors of students' academic achievement, the study found that teachers' educational level and

teaching experience were not statistically significant in explaining students' academic achievement.

#### **4.8 Correlation analysis on the relationship between School facilities and students' performance**

The second hypothesis was to establish the relationship between school facilities and students' performance. Hypothesis two was set to test the truth of this objective using Pearson Product Moment Correlation. Table 14 shows the results of the Pearson's correlation analysis and a 2 tailed test on the relationship between school facilities and students' performance.

**Table 14**  
**Correlation between School facilities and students' performance**

| Correlations      |                     | School facilities | Performance |
|-------------------|---------------------|-------------------|-------------|
| School facilities | Pearson Correlation | 1                 | .569(**)    |
|                   | Sig. (2 tailed)     |                   | .001        |
| Performance       | Pearson Correlation |                   | 1           |
|                   | N                   |                   | 48          |

\*\* Correlation is significant at the 0.05 level (2-tailed).

**Source: Field Data (2013)**

From the results in Table 14 indicate that there is a positive and significant relationship between the two variables ( $r=0.569$ ,  $P<0.05$ ). Therefore, from this finding, the second null hypothesis is rejected at 5% level of significance. The conclusion drawn from this finding is that there is statistically significant relationship between school facilities and students performance in Masaba North Sub-County. This finding supports the work of Albert et al., (2015), who revealed that lack of suitable teaching aids and facilities made privately owned secondary schools in Nakuru pathetic hence difficult to achieve higher performance in academics. The finding also agrees with those of Tuitoek, Yambo, and Akinyi (2015) which established that differences in school facilities such as the library, textbook, laboratories, dormitories, visual aids, and electricity, water and playgrounds seemed to account for differences in performance in secondary schools in Kenya. He further asserted that the presence or absence of facilities distinguished high or low performing schools. Mbwika (2011), in an analysis of factors contributing to students' poor performance in KCSE revealed

that lack of facilities and resources compromised supervision control and contributed to 71% of poor performance in KCSE. The findings of Mbwika (2011) are in agreement with the study findings that indicate that school facilities and resources are key in influencing academic performance.

#### **4.9 Correlation analysis on the relationship between principals’ supervisory role and students’ performance**

The third hypothesis of the study sought to establish the relationship between principals’ supervisory role, and student performance in K.C.S.E. The hypothesis that was generated from this objective was stated as there is no statistically significant relationship between principals’ supervisory role and student performance at KCSE. Table 15 below shows the Pearson’s correlation analysis results and the nature of significance of the relationship between the two variables.

**Table 15**  
**Correlation between principals’ supervisory role and students’ performance**

| Correlations               |                     | Principals’<br>supervisory role | Performance |
|----------------------------|---------------------|---------------------------------|-------------|
| Principal supervisory role | Pearson Correlation | 1                               | .492        |
|                            | Sig. (2 tailed)     |                                 | .000        |
| Performance                | Pearson Correlation |                                 | 1           |
|                            | N                   |                                 | 48          |

\*\* Correlation is significant at the 0.05 level (2-tailed).

**Source: Research Data (2013).**

According to Table 15, there is a positive relationship between principals’ supervisory role and students’ performance. This is because the correlation coefficient value was 0.492 ( $r=0.492$ ,  $P<0.05$ ). This means that the relationship between principals’ supervisory role and students’ performance was statistically significant. Consequently, the third null hypothesis is rejected at 5% level of significance and the conclusion is that there is a statistically significant relationship between principals’ supervisory role and K.C.S.E performance in Masaba North Sub-County. According to Jagero (2011), in his study revealed that 80% of all the principals interviewed had not attended any lesson thus were not aware of what was going

on in their classes but only waited for final KCSE results. This resulted in their schools posting low results in the final examinations. This view is shared by Ainley (1996), who observed that effective supervision was a basic prerequisite for stability and improvement of academic performance in secondary schools. The two studies agree with the study findings that principals' supervision is very important in determining academic performance in schools.

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS**

#### **5.1 Introduction**

This chapter presents the summary of findings, conclusions, and recommendations derived from the findings of the study. The chapter also presents suggestions for further research which could improve academic performance in Masaba North Sub-County in Nyamira County.

#### **5.2 Summary of findings**

This study set out to establish the relationship between the selected school-based factors and students' performance in public secondary schools in KCSE in Masaba North Sub-County of Nyamira County. This section provides a summary of the main findings of the study. The following three objectives guided the study:

- i. To examine if there is a relationship between teacher qualification and students' performance in K.C.S.E.in Masaba North Sub-County;
- ii. To determine if there is a relationship between school facilities and student performance in K.C.S.E;
- iii. To determine if there is a relationship between principals' supervisory roles on school performance in KCSE.

The researcher selected three school-based factors influencing students' academic performance at Kenya Certificate of Secondary Education. The findings are summarized per objective as follows:

The first specific objective of the study was to examine if there is a relationship between teacher qualification and students' performance in K.C.S.E. It was hypothesized that there is no statistically significant relationship between teacher qualifications and students' performance in at K.C.S.E. in Masaba North Sub- County. The findings of the relationship between teacher qualification and students academic performance indicated that there is a positive relationship between teacher qualifications and students performance ( $r=0.420$ ,  $P<0.05$ ). The research findings disagree with the hypothesis that there is no statistically significant relationship between teacher qualifications and students' performance in at K.C.S.E.

The second specific objective of the study was to determine if there is a relationship between school facilities and students' performance in K.C.S.E.The findings of the relationship



between school facilities and students academic performance indicated that there is a positive relationship between school facilities and students performance ( $r=0.569$ ,  $P<0.05$ ).

The third specific objective of the study was to determine if there is a relationship between principals' supervisory role and students' performance in K.C.S.E. The findings of the relationship between principals' supervisory role and students academic performance indicated that there is a positive relationship between school facilities and students performance ( $r=0.492$ ,  $P<0.05$ ).

### **5.3 Conclusions**

The aim of the study was to determine the relationship between selected school-based factors and students' performance in K.C.S.E examination in Masaba North Sub-County. Based on the results of the data analysis and discussions; one can make the following conclusions.

First, there is clear evidence that teacher qualification has a significant positive relationship with students' KCSE academic performance at school. This means that increasing the qualifications of teachers' will have a positive impact on students' academic performance.

Second, the relationship between School facilities and students' KCSE academic performance at school is significant and positive. If school facilities are improved, the students are likely to perform better in KCSE.

Lastly, the relationship between principals' supervisory practices and students' KCSE academic performance at school is significant and positive. The supervisory role of the school principal is important in determining the students' performance in KCSE.

### **5.4 Recommendations**

Based on the study findings and the conclusions, the researcher recommendations: In a bid to utilize the powerful tool of principals' supervisory role in students, Teacher qualifications and school facilities, policy makers in the Ministry of Education, Science, and Technology (MoEST) should come up with policies on how the teachers qualifications are going to be encouraged so as to improve academic performance at KCSE. One way of encouraging teachers to develop themselves is through provision of study scholarships, extending study loan facilities to teachers. The policy makers should also reduce the burden of the principals being Supervisors and at the same time being classroom teachers by allowing them to teach a minimum workload if they must teach. The MoEST and Board of Management should look

for means to avail the required essential resources in the various schools. One method is using the former students who should be asked to plough back to the society. In this way, most schools will have the essential resources required to enable the students to improve their KCSE performance.

### **5.5 Suggestions for Further Research**

Further studies should be conducted to include other factors that influence academic performance like student attitudes, students' entry behavior, parental involvement, teacher expectations and the number of students enrolled.

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## APPENDICES:

### APPENDIX 1: LETTER OF INTRODUCTION

Egerton University  
Dept of Educational Curriculum and Instruction  
P. O. Box 536,  
Njoro

**Dear Sir/Madam,**

I'm a postgraduate student undertaking Master of Education course at Egerton University conducting a research as a requirement in partial fulfillment of the requirement of the degree course. The research will examine **the relationship between school-based factors and student performance in Kenya Certificate of Secondary Examinations in Masaba North Sub-County, Kenya.**

I therefore humbly request your participation in the questionnaire attached. Please answer all the questions in the parts of the questionnaire. Your identity will be treated with strict confidentiality. Your participation in this research will be highly appreciated.

Yours faithfully,

Duke Nyabate Nyamongo

**Mobile: 0726 660 379**

## APPENDIX 2: HEADTEACHERS AND TEACHERS QUESTIONNAIRE

(Kindly put a tick in the box of your choice)

1. Kindly indicate your gender?

Male

Female

2. What is your chronological age in years?

18-25

26-30

36-40

>40

3. How many schools have you taught?

Less than 6

More than 6

4. How long have you been in your present station in years?

Less than 1

2-4

5-6

7 and more

5. What is your academic qualification?

Masters

BED

Diploma

Certificate

Untrained Teacher

6. For how long have you been a teacher?

0-3

4-7

8-11 [ ]

11-14 [ ]

>15 [ ]

7. How many subjects can you teach?

[ 2 ]

[ 3 ]

[ 4 ]

8. How many workshops have you attended?

1-2 [ ]

3-4 [ ]

4-5 [ ]

5-6 [ ]

More than 6 [ ]

9. Use the following scale to indicate the extent to which you agree with the following statements: Key- Strongly Agree (5), Agree (4), Unsure (3), Disagree (2), and Strongly Disagree (1).

|   |  | 1 | 2 | 3 | 4 | 5 |
|---|--|---|---|---|---|---|
| 1 | There is a relationship between adequate classrooms and students' performance in KCSE            |   |   |   |   |   |
| 2 | Well maintained facilities relates to students' performance in KCSE                              |   |   |   |   |   |
| 3 | There is a relationship between a well-equipped library and students' performance in KCSE        |   |   |   |   |   |
| 4 | Enough lockers and chairs for students relates to their performance in KCSE                      |   |   |   |   |   |
| 5 | There is a relationship between a school's ample playing field and students' performance in KCSE |   |   |   |   |   |
| 6 | A variety of sports activities relates to students' performance in KCSE                          |   |   |   |   |   |

10. Use the following scale to indicate the extent to which you agree with the following statements: Key- Strongly Agree (5), Agree (4), Unsure (3), Disagree (2), and Strongly Disagree (1).

|   |  | 1 | 2 | 3 | 4 | 5 |
|---|--|---|---|---|---|---|
| 1 | Teachers are provided with the relevant books      |   |   |   |   |   |
| 2 | There are enough teachers                          |   |   |   |   |   |
| 3 | Teaching aids are available                        |   |   |   |   |   |
| 4 | Teachers have access to the appropriate curriculum |   |   |   |   |   |
| 5 | The school has the necessary and enough textbooks  |   |   |   |   |   |

11. Use the following scale to indicate the extent to which you agree with the following statements as they relate to performance in KCSE: Key- Strongly Agree (5), Agree (4), Unsure (3), Disagree (2), and Strongly Disagree (1).

|   |  | 1 | 2 | 3 | 4 | 5 |
|---|--|---|---|---|---|---|
| 1 | There is a relationship between the Principals' supervision of the schemes of work and students' performance in KCSE |   |   |   |   |   |
| 2 | There is a relationship between the Principals' presence in school and students' performance in KCSE                 |   |   |   |   |   |
| 3 | The Principals' attendance at all meetings in the school relates to students' performance in KCSE                    |   |   |   |   |   |
| 4 | Teachers records are kept in the Principal 's office   |   |   |   |   |   |
| 5 | Principals' discussion on academic Matters at least twice a term relates to students' performance in KCSE            |   |   |   |   |   |

END. Thank you for filling the questionnaire

## APPENDIX 3: RESEARCH AUTHORIZATION



### NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

Telephone: +254-20-2241349, 20-267 3550,  
0713 788 787, 0735 404 245  
Fax: +254-20-2213215

Email: [secretary@nacosti.go.ke](mailto:secretary@nacosti.go.ke)  
Website: [www.nacosti.go.ke](http://www.nacosti.go.ke)

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

Date:

When replying please quote

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

Our Ref: NCST/RCD/14/013/1594


Duke Nyabate Nyamongo  
Egerton University  
P.O.Box 536  
Egerton.

#### RE: RESEARCH AUTHORIZATION

Following your application dated 27<sup>th</sup> August, 2013 for authority to carry out research on "*Relationship between school based factors and students' performance in Kenya Certificate of Secondary Examination, in Masaba North District, Kenya,*" I am pleased to inform you that you have been authorized to undertake research in Kisii County for a period ending 31<sup>st</sup> December, 2013.

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

  
SAID HUSSEIN  
FOR: SECRETARY/CEO  
NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION

Copy to:

The County Commissioner  
The County Director of Education  
Kisii County.

*National Commission for Science, Technology and Innovation is ISO 2008: 9001 Certified*



# APPENDIX 4: RESEARCH PERMIT

## CONDITIONS

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



REPUBLIC OF KENYA



National Commission for Science, Technology and Innovation

## RESEARCH CLEARANCE PERMIT

Serial No. A 09203

CONDITIONS: see back page

PAGE 2

PAGE 3

Research Permit No. NCST/RCD/14/013/1594

THIS IS TO CERTIFY THAT:

Date of issue

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

Prof./Dr./Mr./Mrs./Miss/Institution

Fee received

KSH 1000

Duke Nyabate Nyamongo

of (Address) Egerton University

P.O.Box 538, Egerton.

has been permitted to conduct research in

Location

District

Kisii

County

On the topic: Relationship between School Based Factors and students' performance in Kenya Certificate of secondary Examination in Masaba North District, Kenya



*Duke Nyabate Nyamongo*

Applicant's Signature

*[Signature]*

For: Secretary National Commission for Science, Technology & Innovation

for a period ending: 31<sup>st</sup> December, 2013.