

INFLUENCE OF INSTITUTIONAL FACTORS ON STUDENTS PERFORMANCE  
AT KENYA CERTIFICATE OF SECONDARY EDUCATION IN PUBLIC  
SECONDARY SCHOOLS IN MBOONI EAST SUB COUNTY, KENYA.

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A Research Project Submitted in Partial Fulfillment of the Requirements for the Award  
of the Degree of Master of Education in Educational Planning,

University of Nairobi

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### **DECLARATION**

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

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## **DEDICATION**

I wish to dedicate this work to my wife Beatrice Mbithe and our children Mutungwa and Kyalo.

## **ACKNOWLEDGEMENT**

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## **ABBREVIATIONS AND ACRONYMS**

ASAL	Arid and Semi-Arid Lands
BOM	Board of Management
FDSE	Free Day secondary Education
IIASA	International Institute for Applied Systems Analysis
KCSE	Kenya Certificate of Secondary Education
KCPE	Kenya Certificate of Primary Education
MOEST	Ministry of Education, Science and Technology
PPPs	Public-Private Partnerships
SSA	Sub-Saharan Africa
UNESCO	United Nations Educational Scientific and Cultural Organization
UNICEF	United Nations International Children Educational Fund
USA	United States of America
UN	United Nations

## ABSTRACT

*The study was on institutional factors influencing students' performance in Kenya Certificate of Secondary education (KCSE) in mixed public secondary schools in Mbooni East Sub County Makueni County, Kenya. Students' performance in KCSE has been influenced by various factors which include inadequate teachers, inadequate teaching and learning resources, inadequate physical facilities and students' characteristics. The study was guided by the following objectives; to access the extent to which teachers' characteristics, students' characteristics, adequacy of physical resources and adequacy of teaching and learning resources influence students' performance. The study was premised on Human capital theory developed by Adam Smith in the 18th century and John Stuart Mill in the 19th. which holds that the well-being of a society is a function of the knowledge and skills of individuals. The study used descriptive survey design because it administered questionnaires and observation check list to collect data. The targeted population was 35 mixed secondary schools consisting of 35 principals, 35 director of studies and 1823 form three students. Simple random sampling was used to select 11(30%) mixed schools out of 35 mixed schools, 11 principals and 11 directors of studies were purposively selected. There were about 1823 form three students in the 35 mixed secondary schools where 88(5%) were randomly selected comprising of four boys and four girls to participate in the study. The study used Statistical Package for Social Sciences (SPSS) IBM version 20 to analyze data. The analyzed data was then presented through tabular representation of frequency tables, pie charts and bar graphs. The major findings shows that most schools in the study locale had inadequate trained teachers as revealed by 90.9% of the principals and directors of studies. Majority (72.8%) of the students revealed that physical resources were inadequate while (80.5%) of the students indicated that teaching and learning resources were inadequate, with most public mixed secondary schools lacking the critical human and instructional resources thereby leading to poor performance in KCSE which hindered students' transition to tertiary and University collages. The study made recommendations that should be put in place in order to improve students' performance in the sub county that, the devolved government should provide adequate teaching and learning resources, employ more teachers to reduce teacher to student ratio and carry out resource rationalization assessment in different categories of schools to ensure equitable distribution of relevant and adequate infrastructure.*

## **CHAPTER ONE**

### **INTRODUCTION.**

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

Education forms the basis upon which economic, social and political development of any nation is founded. Investment in education can help to foster economic growth, enhance productivity, contribute to national and social development, and reduce social inequality (World Bank, 1998). UNESCO (2005), argues that the level of a country's education is one of the key indicators of its level of development. It helps any society shape and model individuals to function well in their environment. One of the indicators of quality of education being provided is cognitive achievement of learners which can be measured using a standardized examination at the completion of a formal schooling cycle (UNESCO, 2005).

Kenya recognizes that the education and training of all Kenyans is fundamental to the success of the Vision 2030 (Ministry of state for planning national development and vision 2030, 2010). Secondary education equips citizens with understanding and knowledge that enables them to make informed choices about their lives and those facing Kenyan society. Secondary level of education should therefore prepare students to make informed decisions on career choice to provide knowledge and the skills that will be required to steer Kenyans to the economic and social goals of Vision 2030.

To achieve these the internal efficiency in educational institutions must be improved. Adediwura and Tayo (2007) points out that, internal efficiency is designated by test and examination scores or marks assigned by the subject teachers. Performance of students in any academic task has always been of special interest to all educational stakeholders. Schools are commonly evaluated using students' achievement data (Heck, 2009).

High academic performance in the education sector reflects the attainment of educational goals, objectives, policies and projections, and therefore educational planners cannot be disassociated from the school's academic results. It would be logical to use standardized students' assessments results as the basis for judging the utilization of educational resources (inputs), their transformation process (teaching and learning) to produce quality output (student) that meet the set standards and expectation of the society.

One of the main challenges countries around the world face is to equip their young people with quality education to be able to cope with the dynamic labour market requirements, social-economic, industrial, technological and political development. Globally, in the Human Rights Charter education is recognized as a basic human right.

Developed countries like USA and Japan have a large pool of highly skilled human capital. In this countries, Secondary school education is fundamental ingredient for

creating economic development. In the United States it has been more important than increased capital in accounting for worker productivity and US economic growth (Smith, 2003). The Global Competitiveness Report, (2013-2014) pointed out that, the competitive economy attained by developed countries like Norway, Canada, Denmark, Australia, Belgium, Estonia, Finland, German, Netherlands and Switzerland has been attributed to excellent educational system as well as a strong commitment to advancing technological readiness.

According to the 2005 and 2012 Education for All (EFA) Global Monitoring Report, the quality of education remains very poor in most Sub –Saharan African Countries, including Kenya .Performance of pupils in basic education in absolute terms is low and internal efficiency of education at secondary level requires policy interventions. (Republic of Kenya, 2012).

Kenya's Vision 2030 identifies life-long training and education as critical elements in the creation of a globally competitive and adaptive human resource base. In the contemporary world, improvements in student's academic performance are recognized as the foremost objective of school reforms and restructuring efforts (Orodho, 2013, 2014). In Kenya, the major yardstick used to measure educational output is performance in examinations. This output, however, is achieved after the various inputs into educational process undergo educational production process. (Kombo, 2004).

The launch of subsidized secondary education in 2008, increased the demand for education in Mbooni East Sub County leading to the establishment and registration of new secondary schools. The number of mixed public secondary schools which presented candidates for KCSE increased from 17 in 2009 to 35 in 2014. This registered 105.9% increase. The schools being a community initiative, have not fully developed their physical infrastructure, human resources and other educational resources critical for good performance in KCSE.

In the 2014 KCSE results, only 18 mixed public schools, out thirty five which sat the examinations, scored a mean score of 4.0 and above. The rest, seventeen mixed public secondary schools, scored below this mean (KCSE Results Analysis, 2014). This performance has lowered the Sub County mean score making it to perform below other neighbouring Sub Counties.

**Table 1.1 KCSE performance for two sub counties 2010-2014**

Sub county	2010	2011	2012	2013	2014
Makueni	5.76	6.05	5.98	5.87	5.94
Mbooni East	4.39	5.10	5.17	4.35	4.56

**Source; DEOs office Mbooni East Sub County.**

The rapid establishment of schools in the sub county which required more educational resources, crucial to quality educational outcome has prompted this study. The study was to investigate the institutional factors affecting the students' performance in KCSE in mixed public secondary schools.

## **1.2 Statement of the problem**

Education policies and philosophies in Kenya provide a useful background and perspective in understanding the current state and problems that are being experienced in the education sector in the country (Njeru & Orodho, 2003; Orodho, 2014). In the contemporary world, improvements in student's quality achievements are recognized as the foremost objective of school reforms and restructuring efforts (Orodho, 2013, 2014). The government's effort to expand educational opportunities has been reflected in the establishment of new secondary schools to improve access through increasing transition rates resulting from the launch of free primary education FPE in 2003.

The newly established secondary schools are yet to establish adequate infrastructure necessary for the provision of quality education. Despite government measures like subsidizing secondary education to boost access, equity, participation and performance, performance in mixed public secondary schools in Mbooni East Sub-county has been persistently low. (Mbooni East sub county office, 2015). This below average performance could partly be due to institutional factors which determine the

school environment. With persistent low academic performance in the sub county, there was need to investigate why performance in KCSE has remained low. The study, was to investigate the extent to which institutional factors have contributed to low performance as evidenced by student's results in KCSE examinations.

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

The purpose of the study was to investigate the influence of institutional factors on student's performance in KCSE in mixed public secondary schools in Mbooni East Sub County.

### **1.4 Research objectives.**

The study was guided by the following objectives;

- i. To establish the extent to which teachers' characteristics influenced students' performance in KCSE in mixed public secondary schools in Mbooni East Sub-County.
- ii. To assess the extent to which students' characteristics influenced performance in KCSE in mixed public secondary schools.
- iii To determine the extent to which physical resources influenced students' performance in KCSE in mixed public secondary schools.
- iv. To establish the extent to which teaching and learning resources influenced students' performance in KCSE in mixed public secondary schools.

### **1.5 Research questions**

The study was guided by the following research questions.

- i. To what extent did teachers' characteristics influenced students' performance in KCSE in mixed public secondary schools?
- ii. To what extent did students' characteristics influenced performance in KCSE in mixed public secondary schools?
- iii. To what extent did physical resources influenced students' performance in KCSE in mixed public secondary schools?
- iv. To what extent did teaching and learning resources influenced students' performance in KCSE in mixed public secondary schools?

### **1.6 Significance of the study.**

This information may be useful in the formulation of policies and the improvement of the already set policies, towards the improvement of the performance and the betterment of the Kenyan education system at large. The study may be useful to the county government of Makueni, educational planners, policy makers, and educational managers to utilize the scarce educational resources and device measures that could improve performance in KCSE.

The ministry of education can use the findings of the study to address the shortage of trained teachers in the newly established mixed secondary schools which are the

majority in the Sub County. Also, it will add to the body of knowledge of secondary education planning and education change management besides filling gaps in research which could prompt other researchers to do similar studies in other regions or levels of education.

### **1.7 Limitations of the study**

Some administrators were not willing to release their students' KCSE performance readily. Therefore the researcher assured them of anonymity and confidentiality. Some teachers were not ready to disclose the academic qualification. The researcher assured them of coding the information. In this study the researcher was not able to control the respondent's attitudes towards responding to the questionnaires. But the researcher asked them to be truthful when responding to the research instruments. In addition, the study was not possible to adequately measure the factors influencing students' performance in Kenya Certificate of Secondary Education, because there were factors that influenced students' performance which were beyond the scope of the study.

### **1.8 Delimitation of the study**

The study focused on 35 mixed public secondary schools out of 45 secondary schools in Mbooni East Sub County because they have been posting low mean scores in KCSE over the years. The study considered the views of the principals, directors of studies and form three students. The generalization made in this study only applies to Mbooni East Sub County and can be replicated in other Sub counties with similar

characteristics. The study under normal circumstances would have been carried out in the entire republic. The study confined itself to only the institutional factors influencing performance in KCSE.

### **1.9 Basic assumption of the study**

The study was carried out on the basis of the following assumptions:

- i. That all the respondents would give genuine, truthful, and honest responses to the questionnaires.
- ii. The data obtained from the respondents was accurate and formed the basis of the findings of this study.

### **1.10 Definition of significant terms**

**Institutional factors** refer to physical resources, teachers' characteristics, teaching and learning resources used by schools produce quality grades in KCSE.

**Internal Efficiency** refers to ability of a school system to utilize the available educational resources to improve students' performance in KCSE

**Management** refers to the process of directing the school through planning, organizing, coordination and controlling of its material and human resources towards the achievement of predetermined educational objectives

**Performance** refers to academic achievement in a school as measured by the mean mark or grade attained in KCSE, which is a national examination for completion of secondary education in Kenya.

**Principal** refers to the administrator of a school appointed by the Teachers’

Service Commission in accordance with Education Act Cap 211.

**Physical facilities** refer to classrooms, laboratories, libraries, furniture, water supply and latrines.

### **1.11. Organization of the study**

The study has been organized into five chapters. Chapter one covers introduction, comprises of background to the study, statement of the problem, purpose of the study, objectives of the study, research questions, significance of the study, limitations of the study, delimitations of the study, basic assumptions of the study, definition of key terms in the study and organization of the study. Chapter two consists of literature review, consists of introduction, teachers’ characteristics and students’ performance in KCSE, students’ characteristics and performance in KCSE, effects of physical resources on students’ performance and effects of teaching and learning resources on students’ performance in KCSE. Lastly the theoretical framework and the conceptual framework of the study in presented.

Chapter three deals with research methodology under; introduction, research design, target population, sample size, and sampling procedure, research instruments validity of instruments, reliability of instruments, data collection procedure, data analysis and ethical considerations. Chapter four presents data analysis, presentation and discussion. It covers; introduction, questionnaire return rate, demographic information

of principals, demographic information of director of studies, demographic information of form three students, adequacy of trained teachers and students' performance in KCSE, students' characteristics and performance in KCSE, physical resources and students' performance in KCSE and teaching and learning resources and students' performance. Chapter five presents summary, conclusions, recommendations and suggestions.

## **CHAPTER TWO**

### **RELATED LITERATURE REVIEWED**

#### **2.1 Introduction**

This chapter presents a review of literature related to the study. It consists of introduction, the concept of institutional factors influencing students' performance, teachers' characteristics and students' performance in KCSE, students' characteristics and performance in KCSE, physical resources and students' performance in KCSE, teaching and learning resources and students' performance in KCSE, summary of related literature reviewed, theoretical framework and conceptual framework.

#### **2.2 The concept of institutional factors influencing students' performance.**

There has been a growing concern in the performance of secondary schools in Kenya. The poor performance of students is a concern for all stakeholders. Poor performance in most secondary schools has been attributed to a number of factors which range from institutional factors, student related factors and government related factors, status of teaching force, availability and adequacy of physical resources, efficiency in utilization of the specified teaching period, student performance in key subjects, instructional materials crucial to students' learning (RoK,2007).

Adeogun, (2001) and Orodho, (2013), point out that the poor academic results in education are related to the teaching and learning resources allocated to it. This indicates that the extent to which a school attains her objectives is directly proportional

to the teaching and learning resources available in the school. UNICEF (2000), learning can occur anywhere, but the positive learning outcomes sought by educational systems happen in quality learning environments.

### **2.3 Teachers' characteristics and students' performance in KCSE**

Human resource as a factor of production is affected by adequacy and quality as reflected by level of training and level of motivation (Juma, 2011). According to behavioral scientists, effective worker performance requires motivation ability and reward system that encourages quality work (Ivancerich, 1994). Performance of teachers as reflected by level of training and teaching experience will determine the quality of grades attained in an examination (Harbison, 1964).

According to Okumbe (2007), teachers are the most important resource that any country has because an efficient human capital development depends on the quality and effectiveness of teachers. Odhiambo (2010), contends that there is a growing demand from the Kenyan government and the public for teacher accountability in students' performance. Schools are commonly evaluated using students and teachers cannot be disassociated from the schools they teach and academic results of the students. Teachers celebrate and are rewarded when their schools and subjects are highly ranked.

Researches has shown that Educators qualifications has serious implications for the quality of the education they provide (Fenech, 2006). Well trained teachers are expected to hold their jobs longer, to be able to engage in more responsive, positive and consistent interaction with students, and to positively influence students' performance. Musili, A.M. (2015), point out that teacher's professional experience influence students' performance in KCSE. This shows that experienced teachers are more satisfied when they have challenging opportunities at work and are better placed to handle them and commit their time to teaching their students for improved performance. This study sought to evaluate the adequacy of well trained and experienced teachers and their influence on students' performance in KCSE in mixed public secondary schools in Mbooni East Sub County.

#### **2.4 Students' characteristics and performance in KCSE.**

A study carried out by Lynn, (2014), on influence of Kenya vision 2030's Education policy on quality Education in public secondary school indicated that, good performance depends on students' intelligence quotient and hard work since some students perform above average in schools where resources are scarce. It has been documented that many interacting factors may cause the poor performance of students in KCSE. Students characteristics such as students age, student career choice, gender, study times and class attendance being among the factors. (Ogwen, P.O.2014) In another study by Al-Hilawani and Sartawi (1997), it was also found that good study skills and habits are fundamental for student's academic performance.

Moore, (2006) on his study on how student's attitudes about class attendance relate to their performance in introductory science classes indicated that class attendance enhances learning, on average; students who attended most classes made the highest grades, despite the fact that they received no points for coming to class.

### **2.5 Physical resources and students' performance in KCSE.**

Keriga (2009), states that as Free Day Secondary Education (FDSE) was introduced in 2008, quality was compromised in the education sector in terms of overstretched physical facilities, overcrowding in schools especially those in urban slums. Parents and community member feel they do not have to contribute financially to the running of school facilities now that Free Day Secondary Education has been introduced. These challenges have a bearing on the quality of education for learners and the community as a whole. In this regard, for the education sector to produce quality output, the input and processes have to be of quality.

Physical resources in terms of adequacy and quality have been noted to have a great impact on performance of students in the examination (Husen, Saha, & Noonan, 1978). According to UNICEF (2000), learning can occur anywhere, but the positive learning outcomes sought by educational systems happen in quality learning environments. Quality learning environment includes quality school facilities, the presence of adequate instructional materials and textbooks, working conditions for students and

teachers, and the ability of teachers to undertake certain instructional approaches, on-site availability of lavatories and a clean water supply, classroom maintenance, space and furniture availability and lastly class size (UNICEF, 2000).

UNICEF (2000), factors like availability of lavatories, clean water supply and physical resources such as laboratories have an impact on provision of quality education (Pscharapolous & Woodhall, 1985). Mbooni East Sub-county, in Makueni County is one of the dry areas where clean water supply is a challenge. Mostly, Donkeys are used to supply water to schools and the shopping centers which implies the scarcity of this essential commodity in the region. This study proposes to investigate the influence of inadequate clean water supply and other physical resources on the students' performance in KCSE in mixed public secondary schools in Mbooni East Sub-County.

## **2.6 Teaching / learning resources and students' performance in KCSE.**

The education policy in the Kenya vision 2030 emphasizes on providing globally competitive quality education, training and research to her citizens for national development and enhanced individual wellbeing. Therefore, education is viewed as a vessel to achieve the overall goal of the vision 2030 that aims to transform Kenya in to a middle income rapidly industrializing country that offers a high quality life to all its citizens in a safe and secure environment (Republic of Kenya, 2007).

According to United Nations Children's Fund (2000), quality education includes an environment that provides adequate resources and facilities, among others. In other words teaching and learning resources are contributors of quality education. The quality of schooling depends, as Donald (1981) asserts, to a great extent on management of teaching and learning resources. He observes that the head of the school has the responsibility of mobilizing and ensuring the effective delivery of curriculum using all available resources - human, physical, material and financial. An educational resource therefore is used to make learning interesting and effective. Teaching and learning resources are selected to meet the requirements of instruction rather than the instruction being tailored to suit the peculiarities of a teaching aid (Kiruhi, Githua & Mboroki, 2009).

Studies carried out by UNICEF (2000) noted the effect of teaching and learning resources on students' achievement. The first study was carried out in India where 59 schools were sampled, among these, only forty nine had buildings and of these, twenty five had a toilet, twenty had electricity, ten had a school library and four had a television. In this research, the quality the quality of the learning environment was strongly correlated with pupils' achievement in Hindi and mathematics. The second study was carried out in Latin America which included 50,000 students in grades three and four. It concluded that children whose schools lacked classroom materials and had

an inadequate library were significantly more likely to show lower test scores and higher grade repetition than those whose schools were well equipped. Therefore, to achieve the quality education, teaching and learning resources have to be adequate.

Performance of schools at national examinations can be termed as an indicator of quality education (Adams, 1993). For a school to deliver quality education, Aremu and Sokan (2003) suggest the following characteristics: effective learning materials, a well- maintained learning environment, teaching methodologies designed to encourage independent thinking, motivated and well-trained teachers.

This findings are supported by Mayama (2012) who points out that learning resources are necessary because students tend to learn better and are therefore less dependent to the teacher and also make the learning more participatory and active. It is upon this basis that the study proposes to investigate the effect of teaching and learning resources on students' academic performance in Mbooni East Sub County.

## **2.7 Summary of related literature reviewed**

From the literature reviewed it is clear that there are institutional factors affecting students' performance in KCSE in public secondary schools. Several studies have been conducted in this area. Various studies done on influence of institutional factors on students' performance attest to the fact that school environment that is not conducive for learning may lead to under performance (Chimombe, 2011).

United Nations Educational, Scientific and Cultural Organizations (2008) argues that the success of teaching and learning is likely to be strongly influenced by the resources made available to support the process and the direct ways in which these resources are managed. This implies that schools without adequate teachers, adequate textbooks or learning materials will not be able to produce students with quality grades. A qualified teacher is one who is capable of helping their students learn, and have a deep mastery of both their subject matter and pedagogy (UNICEF, 2000). These studies did not include all institutional factors like the adequacy of clean water supply is a critical issue in Makueni County.

Many Sub-Saharan Countries are miles to go before they achieve provision of quality education (Education International, 2009). The literature confirms that different institutional factors influences students' performance in various countries and regions. The studies give a base in carrying out studies in various regions because of the varying conditions of the areas.

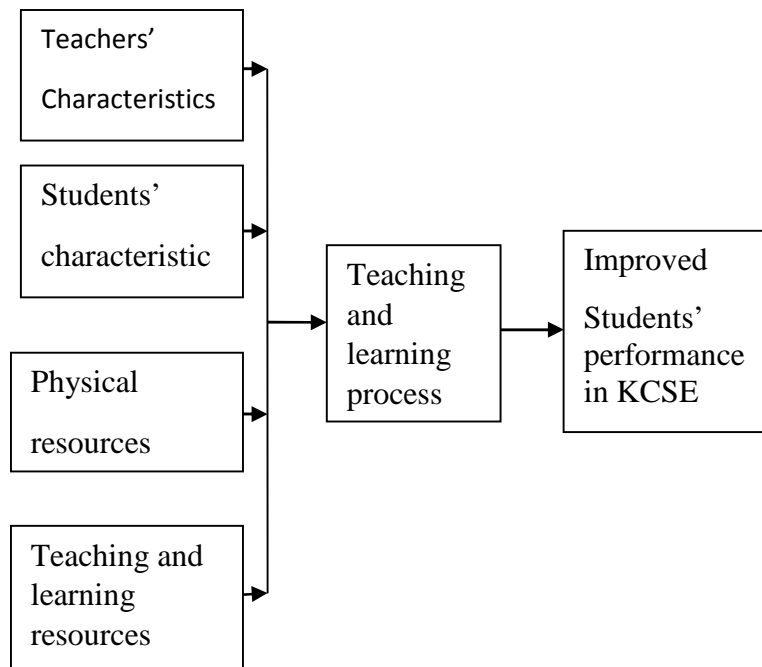
## **2.8 Theoretical framework.**

The study was based on human capital development theory. Human capital theory holds that the well-being of a society is a function of the knowledge and skills of individuals. The theory predicts that increased knowledge and skill will yield improved economic outcomes for both individuals and societies. Sweetland (1996)

traces the origins of human capital theory to the work of Adam Smith in the 18th century and John Stuart Mill in the 19<sup>th</sup>. Education is a key element of human capital theory because it is viewed as the primary means of developing knowledge and skill. Some evidence exists to indicate that educational performance, in the form of grades achieved or literacy indicators, have an effect on economic returns independent of attainment. The greatest impact of achievement lies not directly on economic returns but on access to higher levels of education.

In particular, grades achieved in secondary level of schooling are the key determinant of admission to universities and colleges where, arguably, the greatest individual economic benefits can be acquired. Investigating the determinants of students' performance is thus key to understanding the relationship of education to human capital development. More specifically, this study focuses on human capital theory as a conventional model of educational resources as input and students' performance in KCSE as outcome, it examine education resource allocations as inputs with educational attainment and achievement as outcomes. The applicability of the theory in the study can be seen in the fact that all the theoretical concepts inputs, process and output/outcomes, have a bearing students' performance. Using the theory, the study sought to investigate the factors that affect the desired output in mixed public secondary schools.

## 2.9 Conceptual framework



**Figure 2.1 Relationship between institutional factors and students performance**

The conceptual framework relates independent variables to dependent variable. It considers variables that are of great influence to students' performance in Kenya Certificate of Secondary Education which are teachers' characteristics, students' characteristics, physical facilities, and teaching and learning resources. Students' performance in KCSE is the dependent variable. The output is influenced by how educational inputs interact through the teaching and learning process. Kombo, (2004), point out that if the interaction is healthy, then the output (performance) should be good.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This section presents methodology used in the study. It is presented under; research design, target population, sample size and sampling procedure, research instruments, validity of research instruments, reliability of research instruments, data collection procedures, data analysis techniques and ethical considerations.

#### **3.2 Research design**

This study employed a descriptive survey research design. This design was considered appropriate because it is capable of facilitating collection of data that describes specific characteristics of phenomena in order to determining the status of a population with respect to one or more variables. (Mugenda and Mugenda, 1999). This type of design usually seeks to find answers to the questions generated from the statement of the problem.

Using this design the researcher attempted to find answers to questions by analyzing the variables that relate to the institutional factors influencing students' performance in secondary schools in Mbooni East Sub County. The study fits within the provisions of descriptive survey research design because the researcher collected data and reported the way things are without manipulating any variables.

### 3.3 Target population

The study targeted the 35 mixed public secondary schools in Mbooni East Sub County. For this study, the target population consists of 35 principals, and 35 Directors of Studies (DOS). The study also targeted 1823 form 3 students in the 35 mixed public secondary schools since they were considered to have been in the school system long enough to understand the institutional factors affecting their performance. The study targeted schools that have been presenting candidates for KCSE examination up to 2014. The total target population was 1893. (DEO Mbooni East Sub-County.)

### 3.4 Sample size and sampling procedure

Sampling as defined by Orodho (2004) is the process of selecting a subset of cases in order to draw conclusions about the entire set. The study used the 30 percent of the population. According to Mugenda and Mugenda (2003) a sample of between 10 and 30 percent is adequate for a population of below 1000. 5 % was used to sample the students since the population was large. (Kombo, 2006).

**Table 3.1 Sampling frame**

Category of respondent	population	sample	%
Principals	35	11	30
Director of studies	35	11	30
Form three students	1823	88	5
Total	1893	110	

The principals were purposively selected because they are charged with responsibility of the institution management function. Director of studies were also purposively selected due to central role they play as academic coordinators and principal's advisor on academic issues and they are versed with information on factors within the school that influence students' performance in KCSE. The researcher sampled 8 students from each school which consists of 4 boys and 4 girls who were randomly selected using simple random sampling technique.

### **3.5 Research instruments**

The main tools of data collection for this study were questionnaires, document analysis and observation check lists. The researcher designed questionnaires for principals, director of studies and students. The questionnaire were used for data collection because it offers considerable advantages in the administration, presents an even stimulus potentially to large numbers of people simultaneously and provides the investigation with an easy accumulation of data. Gay (1992) maintains that questionnaires give respondents freedom to express their views or opinion.

The questionnaire for principals comprises of six sections. Section one collected data on the background information of principals. Each of the other five sections collected information related to institutional factors influencing students' performance in mixed public secondary schools in relation to teacher' characteristics, students' characteristics, physical facilities, adequacy of clean water supply and teaching and of

learning resources. The questionnaire comprised of both close-ended and open-ended items.

The questionnaire for director of studies comprises of five sections: Section one collected data on the background information of teachers. Each of the other four sections collected information related to the institutional factors affecting students' performance in KCSE, in relation to teachers' characteristics, students' characteristics, adequacy of physical facilities, adequacy of teaching and learning resources, and adequacy of clean water supply.

Direct observation was used to capture the state of physical facilities, teaching and learning resources in the schools. This enabled the researcher to verify information captured through questionnaires. Document analysis was used to capture information on students' performance in KCSE schools. This was important for information provided through such documents is verifiable in nature.

### **3.6 Validity of the instruments**

Validity is the degree to which the empirical measure or several measures of the concept, accurately measure the concept. It is the degree to which results obtained from the analysis of the data actually represent the phenomena under study (Mugenda & Mugenda, 2003). According to Borg and Gall (1989) content validity of an instrument is improved through expert judgment.

The researcher sought assistance from his supervisors for help to enhance content validity of the instruments. Their corrections were incorporated. The instruments were further piloted in two schools from the sub county which were not included in the study. Items found to be ambiguous or not necessary were discarded and others were restructured to gather the right information as per the study objectives.

### 3.7 Reliability of the instrument

Mugenda & Mugenda (2003) define reliability as a measure of the degree to which a research instrument yields consistent results. Test-retest reliability method was used to establish the coefficient of internal consistency of the research instruments. This method involves giving the same test to the same respondents on two separate occasions. The scores on the two occasions was then correlated using the Pearson's Product Moment Correlation Coefficient. Where,

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

Key:

xy- sum of cross products of scores of each variable

$x^2$ -sum of squared deviation in x

$y^2$ - sum of squared deviation in y (Kombo & Tirop, 2006)

Mugenda & Mugenda (1999), a coefficient of 0.70 or more, shows that there is high reliability of the instruments. For this study, a coefficient of 0.842 was obtained and was considered acceptable.

x	y	$x^2$	xy	$y^2$
8	7	64	56	49
6	5	36	30	25
8	8	64	64	64
8	7	64	56	49
5	5	25	25	25
9	9	81	81	81
8	7	64	56	49
8	7	64	56	49
8	8	64	64	64
7	8	49	56	64
75	71	575	544	519
$r_{xy} = \frac{10 \ 544 - 75 \times 71}{\sqrt{10 \ 575 - 75^2} \sqrt{10 \ 519 - 71^2}}$				

$$r_{xy} = 0.842$$

### 3.8 Data collection procedure

The researcher first sought for a permit from National Commission for Science, Technology and Innovation (NACOSTI) which is charged with responsibility of issuing the permits for research in Kenya. The researcher then proceeded to seek further clearance from Sub-County Education Officer. Thereafter the researcher wrote letters to the principals to be allowed to do the study. The selected schools were visited to book appointments on when to visit the schools. Questionnaires administered were

collected on the same day. Document analysis and observation schedule were conducted on the same day the questionnaires were being administered.

### **3.9 Data analysis techniques**

The study used Statistical Package for Social Sciences (SPSS) IBM version 20 to analyze data. This was done by first cleaning, coding, entering and then analyzing. The data was analyzed both qualitatively and quantitatively. Quantitative data was edited to eliminate inconsistencies, summarized and coded for easy classification in order to facilitate tabulation and interpretation. Descriptive statistics was used in describing the sample data in such a way as to portray the typical respondent and to reveal the general response pattern. Qualitative data analysis was done by describing the distribution of single variables. The relationships and links between the independent and dependent variables was discussed and logical conclusions made. The analyzed data was then presented through tabular representation of frequency tables for each variable, percentages and means.

### **3.10 Ethical considerations**

The following ethical consideration were adhered to; The researcher ensured equitable selection of subjects, the researcher obtained informed consent from any subjects who participated in the study and ensured that all subjects participated voluntarily,

respondents were made to understand the nature of the study and confidentiality and anonymity of respondents was maintained.

## CHAPTER FOUR

### DATA ANALYSIS, PRESENTATION AND DISCUSSION

#### 4.1 introduction

This chapter covers; introduction, questionnaire return rate, demographic information of principals, demographic information of directors of studies, demographic information of form three students, adequacy of trained teachers and students' performance, students' characteristics and their influence on students' performance, physical resources and students' performance and lastly, teaching and learning resources and students' performance.

#### 4.2 Questionnaire return rate

Questionnaire return rate is the proportion of the questionnaires returned after they have been issued to the respondents (Baruch, 1999). Table 4.1 shows the questionnaire return rate for the study.

**Table 4.1 Questionnaire return rate**

<b>Category of Respondent</b>	<b>questionnaires issued</b>	<b>questionnaires returned</b>	<b>percentage (%) return rate</b>
Principals	11	11	100
Director of studies	11	11	100
Form three students	88	88	100
Total	110	110	100

All the respondents filled and returned the questionnaires on the same day they were administered. The return rates were above 80% and hence deemed adequate for data analysis. Baruch (1999), states that a response rate of above 80% is adequate for social sciences studies.

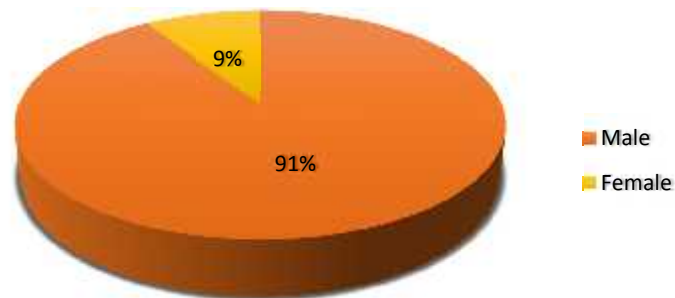
### **4.3 Demographic information of respondents**

This section presents the demographic information of the respondents. It included general profile of the study's respondents with regards to gender, age, professional qualification, duration for principals. Demographic information on form three students included gender and length of stay in the current school. It was necessary to get the demographic information of the respondents so that the study samples the experiences respondents who understand the real situation in their schools regarding institutional factors influencing students' performance at Kenya Certificate of Secondary Education.

#### **4.3.1 Demographic information of principals**

The demographic information of principals was based on gender, age, duration they had served as principals and highest academic qualification. The study sought to find out the gender of the principals and to establish the same, the researcher asked principals to indicate their gender and the results are as shown in figure 4.1

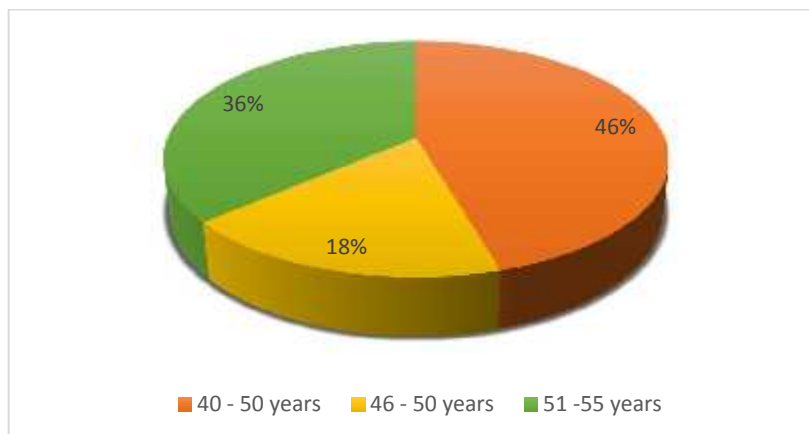
**Fig 4.1 Distribution of principals by gender**



The results in Figure 4.1 revealed that majority 10 (91 %) of the principals were male. This shows there was more male principals than female principals in the mixed public schools in the Sub County.

To establish the age of the principals, the researcher asked them to indicate their age and the results are shown in figure 4.2

**Figure 4.2 Distribution of principals by age**



The data in Figure 4.2 shows that the majority (54%) of the principal are above 45 years and therefore are able to address the institutional factors influencing students' performance in their schools. From this it can be deduced that majority of the respondents were mature enough and an indication that they had worked for long enough. This made them suitable to understand the institutional factors that affect the students' performance in Mbooni East Sub County.

The study sought to establish the length of service of the principals as principals. The asked them to indicate the number of years thy have served as principals and their responses are as shown in Table 4.2

**Table 4.2 Principals' service as school principals**

<b>Years</b>	<b>frequency</b> <b>f</b>	<b>percentage</b> <b>%</b>
1 – 5 years	5	45.5
6 – 10 years	3	27.3
11 and above years	3	27.3
<b>Total</b>	<b>11</b>	<b>100</b>

Table 4.2 shows that the majority of principals (54.6%) had been principals for considerable number of years and hence were in a position to promote the utilization of scarce educational resources and opportunities to improve internal efficiency.

To establish the principals' duration of stay in their current schools, the researcher posed an item to establish the same and the results are shown in table 4.3.

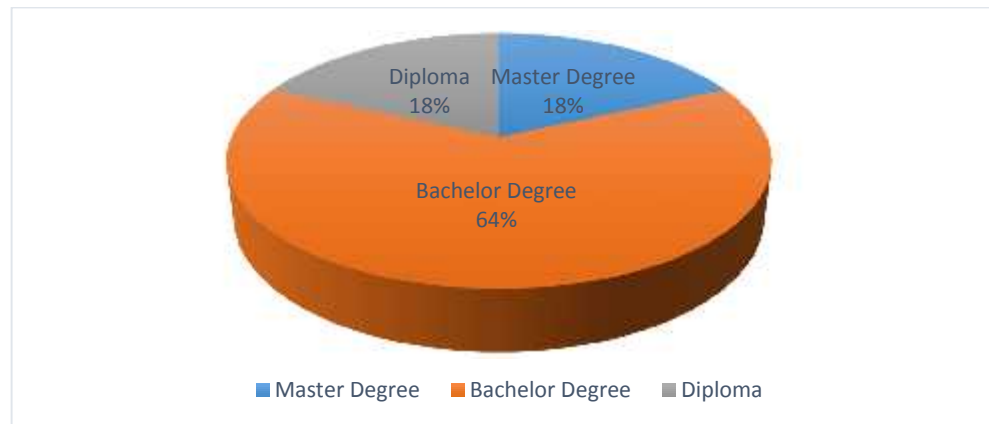
**Table 4.3 Principals' duration as principals in the current school**

<b>Years</b>	<b>frequency</b>	<b>percentage</b>
	<b>f</b>	<b>%</b>
1 – 5 years	8	72.7
6 – 10 years	2	18.2
Above 10 years	1	9.1
<b>Total</b>	<b>11</b>	<b>100</b>

The results in Table 4.3 shows eight (72.7%) of principals had served as principals in the current school for between 1 and 5 years. This shows that the principals had been in current school for considerable number of years and hence were in a position to understand the effects of institutional factors on students' performance in KCSE in public mixed secondary schools.

The research also sought to find out the level of education of the principals. The researcher asked them to indicate their level of education and the results are shown in figure 4.3.

**Fig 4.3 Distribution of principals by their level of education**



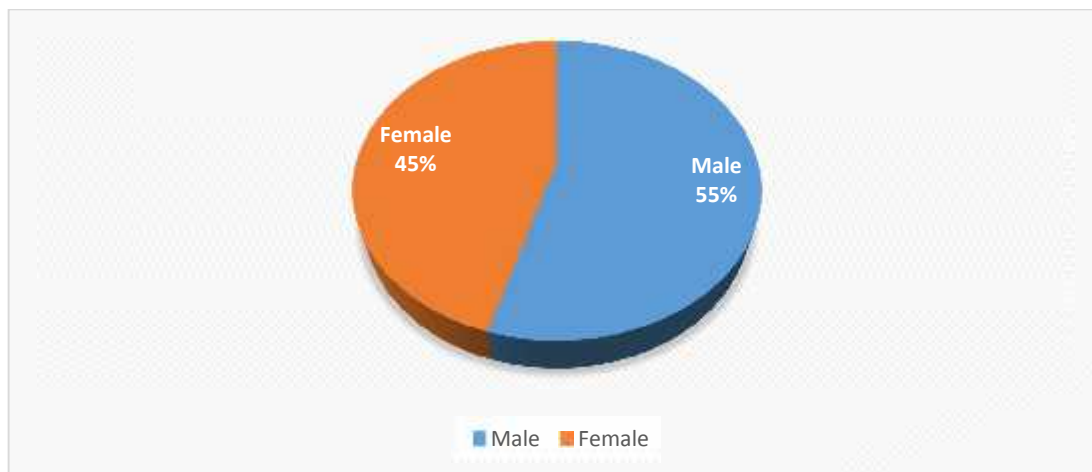
The findings in Figure 4.3 shows that (64%) of the principals had Bachelor's Degrees while (18%) had Masters Degrees, the same number had Diploma in education. This implies that principals had required education qualification and hence were in a position to understand the institutional factors affecting students' performance in KCSE and promote the utilization of the scarce educational resources to meet the demand for education. Provision of quality education requires adequate skills especially for the management of scarce educational resources. Principals who play the management function need various skills in order to cope with the demands of their management and teaching tasks. Such skills can be attained through formal training

#### **4.3.2 Demographic information of director of studies**

The demographic information of director of studies was based on gender, age, duration they had served as teachers and highest qualification.

To establish the gender of the director of studies, the researcher asked them to indicate their gender and the results are as shown in figure 4.4

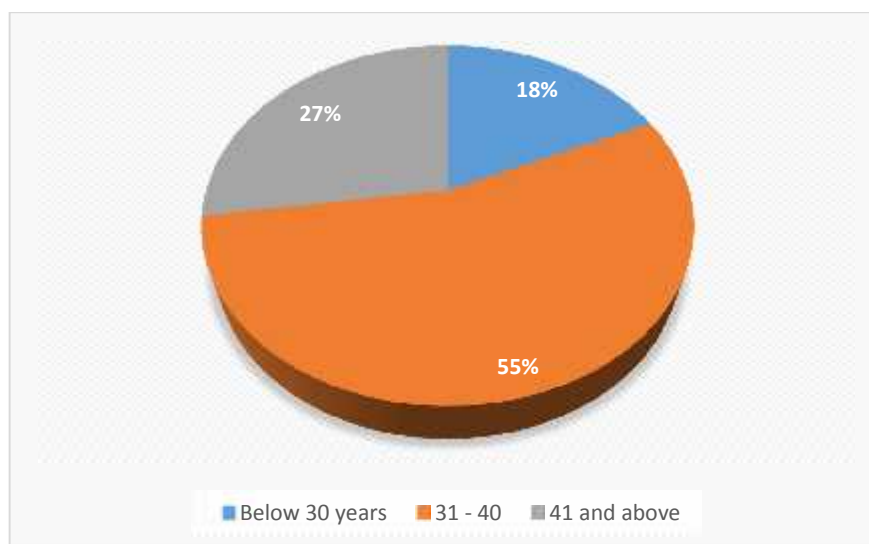
**Fig 4.4 Distribution of directors of studies by gender**



The results in Figure 4.4 revealed that (55%) of director of studies were male. This shows that there were more male director of studies than female. As indicated by the results, this implies that the sampled schools had almost balanced the number of male to female directors of studies. This balance could create an opportunity to address the issues facing both the boy and girl child in the sub county and improve their performance in KCSE.

When the researcher sought to establish the age of the director of studies, they were asked to indicate their age and the results are shown in figure 4.5.

**Figure 4.5 Distribution of director of studies by age**



The data in Figure 4.5 shows that six (55%) of director of studies were aged between 31 and 40 years, three (27%) were 41 and above years while two (18%) were below 30 years. This implies that the teaching fraternity in the secondary schools are mature enough to handle their teaching professionally. This might be supporting the performance of the students at KCSE.

To establish length of service of the directors of studies, the researcher asked them to indicate the duration they had been teachers. They responded as shown in table 4.4

**Table 4.4 Directors of studies duration of service**

<b>Years</b>	<b>frequency</b> <b>f</b>	<b>percentage</b> <b>%</b>
1 – 5years	5	45.5
6 – 10 years	2	18.2
11- 15 years	2	18.2
16 – 20 years	1	9.1
Above 20 years	1	9.1
<b>Total</b>	<b>11</b>	<b>100</b>

The results on Table 4.4 shows that (55.5%) of director of studies had served as teachers for more than 5 years. This shows that director of studies had been teachers for considerable number of years and hence were in a position to understand the institutional factors affecting students' performance in KCSE in mixed public secondary schools.

The study also sought to establish the length of stay of the directors of studies in their current school. The researcher posed an item to them to indicate the duration they had been teachers in current school and their responses are shown in table 4.5.

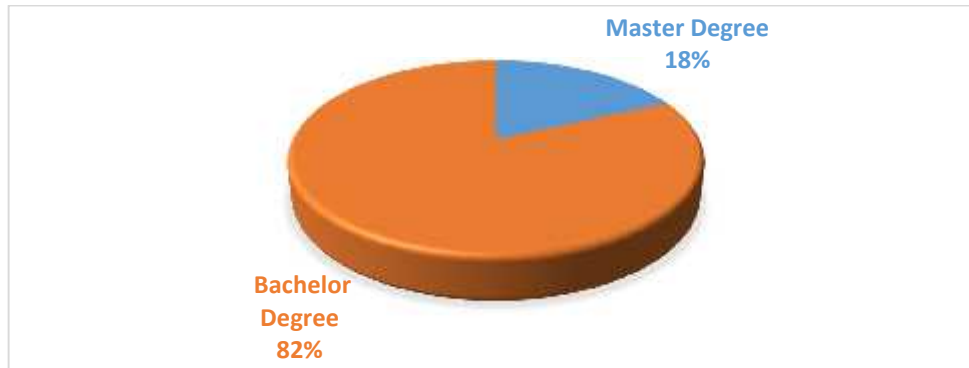
**Table 4.5. Presents director of studies duration in the current school**

Years	frequency	percentage
	f	%
1 – 5 years	9	81.8
6 – 10 years	1	9.1
11 – 15 years	1	9.1
Total	11	100

The findings on Table 4.5 shows that nine (81.8%) of the directors of studies had been in the current school for between 1 and 5 years. This shows that directors of studies had been in current school for considerable number of years and hence were in a position to understand the effects of institutional factors on students' performance in KCSE in public mixed secondary schools.

The research also sought to find out the level of education of the directors of studies and the results are as shown in figure 4.6

**Figure 4.6 Distribution of director of studies by level of education**

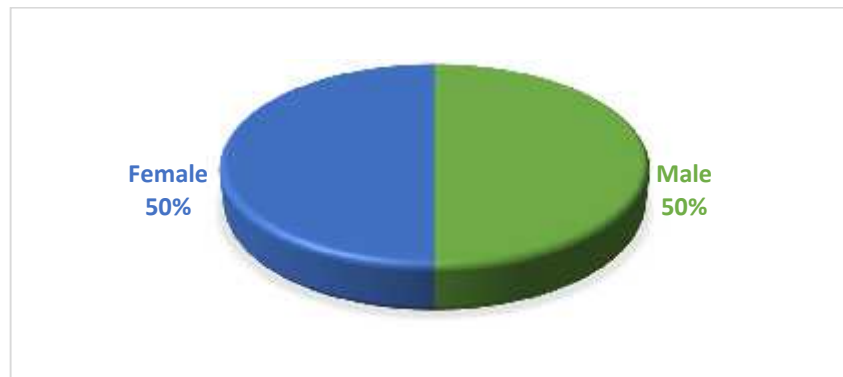


The results in Figure 4.6 shows that (82%) of director of studies had Bachelor's Degree in education while (18%) of them had Master of education degree. This implies that directors of studies had acquired high level of education qualification and therefore were in a position to understand the effects of institutional factors on students' performance in public mixed secondary schools.

#### **4.3.3 Demographic information of form three students**

The demographic information of form three students was based on gender and the length of stay in the current school. The study sought to establish the gender of form three students who participated in the study and their responses are as shown in Figure 4.7

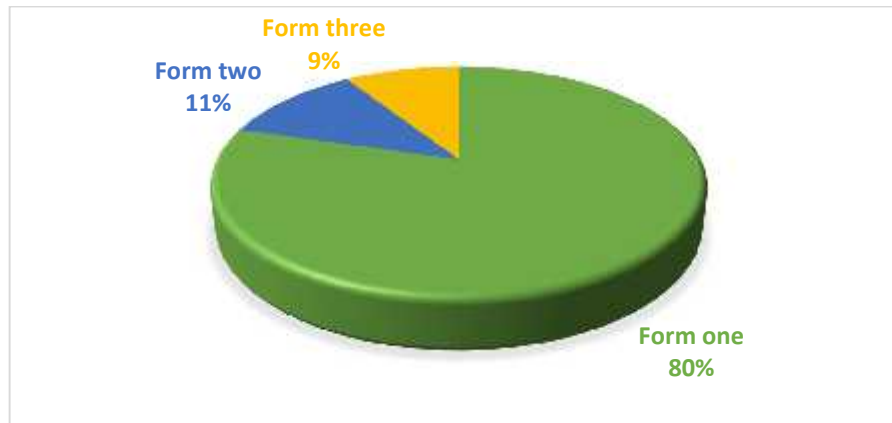
**Figure 4.7 Distribution of students by gender**



The results in Figure 4.7 shows that there was an even number of male and female form three students who participated in the study, 50% males and 50% females. This was attributed to the sampling technique employed which gave equal opportunity to either gender to participate in the study. This implies that the findings were generalizable to outline the institutional factors influencing performance in KCSE on either gender.

The research sought to find out whether the form three students who participated in the study started their secondary level of schooling in form one in the current school. The results are as shown in figure 4.8

**Figure 4.8 Distribution of form three students by level of enrolment**



The data in Figure 4.8 shows that majority (80%) of form three students who participated in the study were admitted in form one. This implies that, majority of the form three students who participated in the study had stayed in the current school long enough and were in a position to understand the effects of institutional factors on students' performance in KCSE in public mixed secondary schools.

#### **4.4 Adequacy of trained teachers and students performance in KCSE**

One of the objectives of this study was to establish whether adequacy of trained teachers influence students' performance in KCSE in public mixed secondary schools. The researcher posed items to principals, directors of studies and form three students to establish the same. The respondent were asked to indicate whether adequacy of trained teachers influence students' performance in KCSE and the results are as tabulated in table 4.6

**Table 4.6 Responses on adequacy of trained teachers and performance**

Category of respondent	Yes		No	
	f	%	f	%
Principals	11	100	–	–
Directors of studies	11	100	–	–
Students	56	63.6	32	36.4

The results on Table 4.6 shows that all (100%) of principals and directors of studies indicated that adequacy of trained teachers influences students' performances in KCSE. The majority of students (63.6%) indicated that there is link between students' performance and the adequacy of trained teachers, while (36.4%) of the students indicated that the adequacy of trained teachers does not influence students' performance in KCSE.

#### **4.4.1 Principals' responses on adequacy of trained teachers**

The study sought to find out whether the schools had adequate trained teacher. To access the adequacy of trained teachers the principals to rate their response with the given scale and their responses are as shown in table 4.7

**Table 4.7 Principals' response on adequacy of trained teachers**

Statement	SA		A		SD		D	
	f	%	f	%	f	%	f	%
The school has adequate teachers	–	–	–	–	10	90.9	1	9.1
Teachers attend upgrading courses	1	9.1	8	72.7	–	–	2	18.2
Teachers are motivated to assist weak students	1	9.1	5	45.5	2	18.2	3	27.3

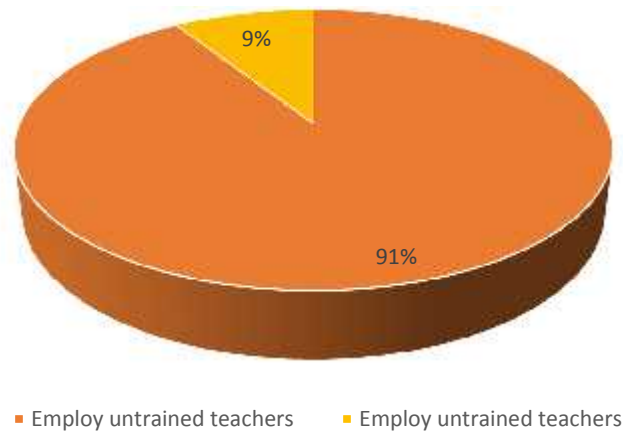
Table 4.7 shows that ten (90.9 %) of principals indicated that their schools had no adequate teachers, majority (72.7%) indicated that the available teachers attend upgrading courses to sharpen theirs. Asked whether teachers are motivated to assist the weak students, majority (45.5%) of principals indicated that teacher are motivated to assist the late achievers. Asked whether the school had adequate trained teachers in all departments, majority (63.6%) of principals indicated that there were no enough teachers in all departments. This indicated that inadequate trained teachers was a major obstacle to the students' performance in KCSE.

#### **4.4.2 Principals' responses on employment of untrained teachers**

To establish how the principals cope with the shortage of teachers in their school, a majority indicated that, they share the workload to the available teachers. The study

sought to establish whether all the teacher employed by the BOM were fully trained. The researcher asked the principals to indicate whether they have untrained or teachers under training in their schools and the findings are as shown in figure 4.9.

**Figure 4.9 Principals responses on employment of teacher by BOM**



The findings in Figure 4.9 shows that majority (91%) indicated they had untrained teachers who are employed by the board of management. On further discussion, a majority of the principals indicated that, most of the untrained teachers are form four graduates who are university qualifiers while the ones under training are university students in long vacation. This implies that, the rate of teacher turnover is too high and leads to student learning gaps once teacher trainees go and as the school finds a suitable replacement. According to Okumbe (2007), teachers are the most important resource that any country has because an efficient human capital development depends on the quality and effectiveness of teachers.

#### 4.4.3 Director of studies response on adequacy of trained teachers

The researcher asked the directors of studies to rate the adequacy of trained teacher in their schools as the responses are as shown in table 4.8

**Table 4.8 Director of studies response on adequacy of trained teachers**

Statement	SA		A		D		SD	
	f	%	f	%	f	%	f	%
Teachers are adequate	–	–	–	–	10	90.9	1	9.1
Teachers attend Upgrading courses	1	9.1	8	72.7	2	18.2	–	–
Teachers are motivated to assist weak students	1	9.1	5	45.5	3	27.3	2	18.2

The results on Table 4.8 shows that ten (90.9%) of director of studies indicated that teacher were inadequate in theirs schools, eight (72.5%) of directors of studies indicated that available teachers attend upgrading courses to sharpen their teaching skills and increase their productivity, while (45.5%) indicated that teachers are motivated to assist the weak students. This implies that inadequacy of teachers in this school has affected performance in these schools.

The researcher asked the students to rate the adequacy of trained teachers in their schools and their responses are as shown in table 4.9.

**Table 4.9 students' response on adequacy of trained teachers**

Statement	SA		A		D		SD	
	f	%	f	%	f	%	f	%
Teachers are adequate	8	9.1	6	6.8	43	48.9	31	35.2
Teachers attend upgrading courses	12	13.6	46	52.3	18	20.5	12	13.6
Teachers are motivated	23	26.1	29	33.0	26	29.6	10	11.4

The findings on Table 4.9 shows that (48.9%) of students indicated that the school had no adequate teachers, (52.3%) of the students indicated that teachers attend upgrading courses, while (33.0%) indicated that teachers are motivated to assist the late achievers. This implies that the students' performance in KCSE is highly affected by the acute shortage of trained teachers in public mixed secondary schools in the sub county.

#### **4.5 Student's characteristics influence on performance in KCSE**

The second objective of the study was to determine whether students' characteristics influence students' performance in KCSE in public mixed secondary schools. To establish how students' characteristics influence students' performance, the researcher posed items to the respondents that sought to establish the same and the findings are as shown in table 4.10

**Table 4.10 Responses on students' characteristics and performance in KCSE**

Respondent	Yes		No	
	f	%	f	%
Principals	11	100	0	0
Directors of studies	11	100	0	0
Form three students	76	86.4	12	13.6

Table 4.10 shows that (100%) of the principals and directors of studies indicated that, students' characteristics influence students' performance in KCSE while (86.4%) of the students indicated that students' characteristics influence performance in KCSE.

The researcher asked the principals, directors of studies and students whether students' entry behavior affects students' performance in KCSE. The responses are tabulated in table 4.11

**Table 4.11 Responses on influence of students' entry behavior on performance**

Respondent	SA		A		D		SD	
	f	%	f	%	f	%	f	%
Principals	2	18.2	8	72.7	1	9.1	-	-
Directors of studies	5	45.5	3	27.3	3	27.3	-	-
Form three students	8	9.1	3	3.4	25	28.4	52	59.1

The findings in Table 4.11 shows that ten (90.9%) of the principals indicated that students' entry marks for KCPE used as a screen for secondary placement is crucial

for high performance. Majority (72.8%) of directors of studies agreed that student performance in KCSE is to a large extent determined by their entry marks attained in KCPE. In a further discussion a majority of the directors of studies indicated that, most the students enrolled in their schools had performed below average in a KCPE which has led to persistent low performance over the years. This contradicted the students' response to the same item where majority (87.5%) of the students disagreed that performance in KCPE influences their performance in KCSE.

To establish the extent to which students' attitude on schooling influence performance the researcher asked the respondents whether students' attitude affects performance. Table 4.12 presents responses on the influence of students' attitude on schooling on performance in KCSE.

**Table 4.12 Responses on students' attitude on schooling and performance**

Respondent	SA		A		D		SD	
	f	%	f	%	f	%	f	%
Principals	1	9.1	10	90.9	-	-	-	-
Directors of studies	7	63.6	4	36.4	-	-	-	-
Form three students	40	45.5	39	44.3	3	3.4	6	6.8

The findings on Table 4.12 shows that (90.9%) of the principals agreed that, students' attitude on schooling influence their performance, while (9.1%) also strongly agreed. Majority (63.6%) of directors of studies strongly agreed that students' attitude on schooling influence their performance, while (36.4%) agreed. (45.5%) of the students

strongly agreed, while (44.3%) of them agreed that, students' performance is influenced by students' attitude on schooling. On further discussion, a majority of the principals and directors of studies highlighted that students' attitude on schooling is the core cause of high levels of absenteeism since most of the mixed public secondary schools were day schools. This has affected the students' participation leading to low continuous learning resulting to high levels of educational wastage.

#### **4.6 Physical resources and students' performance in KCSE**

To establish how physical resources influence students' performance in KCSE in public mixed secondary schools, the researcher posed items to the respondents that sought to establish the same. The researcher asked the respondents to indicate whether physical resources affect students' performance in KCSE. The responses are tabulated in table 4.13.

**Table 4.13 Responses on physical resources and their influence on performance**

<b>Category of respondent</b>	<b>Yes</b>		<b>No</b>	
	<b>f</b>	<b>%</b>	<b>f</b>	<b>%</b>
Principals	11	100	0	0
Directors of studies	10	90.9	1	9.1
Form three students	73	83.0	15	17.0

The results on Table 4.13 shows that all (100%) of the principals indicated that physical resources has an effect on students' performance, majority (90.9%) of directors of studies indicated that adequacy or inadequacy of physical resources has

an influence on how students' perform in their final examinations, while majority (83.0%) of the students had the same opinion as the principals and directors of studies. (17.0%) of the students indicated that physical resources has an effect in students' performance in KCSE.

To establish the adequacy of physical resources, the researcher posed items to the respondents establish whether the physical resources were adequate and operational. The table 4.14 shows the tabulation of principals' responses to the items.

**Table 4.14 Principals' responses on adequacy of physical facilities**

Statement	SA		A		D		SD	
	f	%	f	%	f	%	f	%
Equipped laboratory	3	27.3	3	27.3	2	18.2	3	27.3
Adequate classrooms	2	18.2	6	54.5	3	27.3	0	0
Adequate toilets	1	9.1	8	72.7	2	18.2	0	0
Adequate desks	2	18.2	8	72.7	1	9.1	0	0

The findings on Table 4.14 shows that three (27.3%) of the principals indicated that they had equipped laboratory, while the same number strongly disagreed that they had equipped and operational science laboratories in their schools, (54.5%) of the principals indicated that classrooms were adequate, (72.7%) indicated that the school had adequate toilets and the same number for adequacy of desks. Further confirmation on whether the facilities were adequate and operational, using the observation check

list, the researcher confirmed that, the science laboratories where spacious but lacked the necessary fittings and equipment. The adequacy of other physical facilities was justified by the fact that some schools had low enrolment rates.

The researcher asked directors of studies to rate the adequacy of physical resources and their responses are tabulated in table 4.15.

**Table 4.15 Directors of studies responses on adequacy of physical facilities**

Statement	SA		A		D		SD	
	f	%	f	%	f	%	f	%
Equipped laboratory	3	27.3	1	9.1	4	36.4	3	27.3
Adequate classrooms	0	0	8	72.7	2	18.2	1	9.1
Adequate toilets	2	18.2	6	54.5	2	18.2	1	9.1
Adequate desks	2	18.2	6	54.5	2	18.2	1	9.1

The results in Table 4.15 shows that majority (36.4%) of the directors of studies indicated that their schools had no well-equipped science laboratories, (72.7%) indicated that classrooms where adequate while (54.5%) indicated that toilets and desks were adequate. This implies that the students and teachers of science subjects face a challenge when preparing practical lessons which in return has affected students' performance in science subjects. Asked how they cope with the challenges, a majority of the directors of studies indicated that, they carry out their practical in classrooms where they transfer the required resources.

The asked the students to rate the adequacy of physical resources and the results are as shown in Table 4.16.

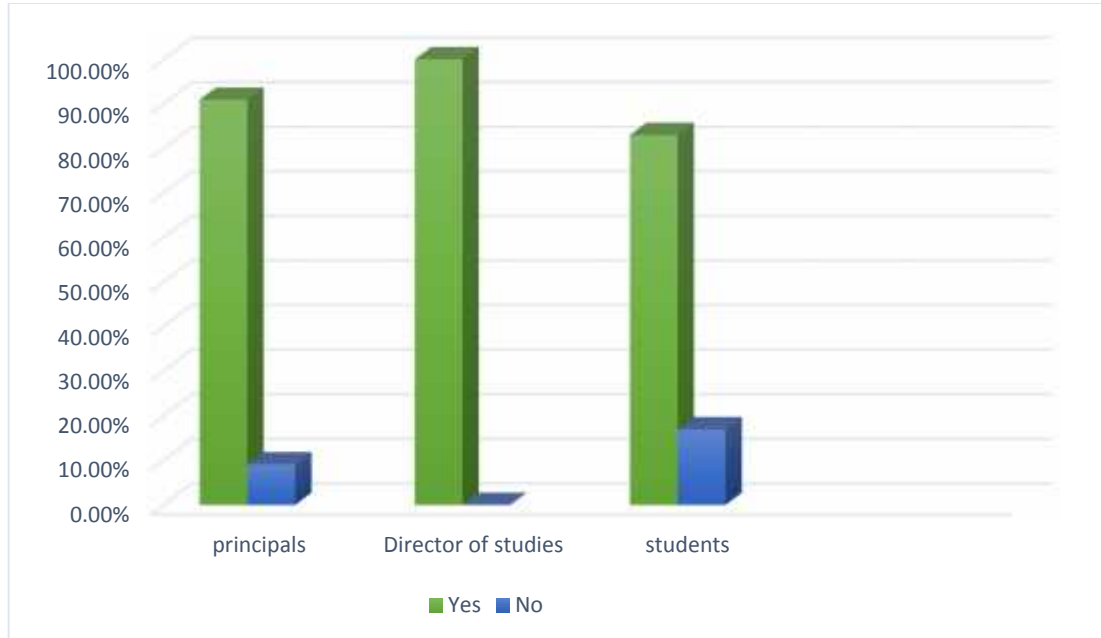
**Table 4.16 Students responses on adequacy of physical facilities**

Statement	SA		A		D		SD	
	f	%	f	%	f	%	f	%
Equipped laboratory	8	9.1	16	18.2	32	36.4	32	36.4
Adequate classrooms	11	12.5	39	44.3	12	13.6	26	29.5
Adequate toilets	9	10.2	33	37.5	29	32.9	17	19.3
Adequate desks	14	15.9	31	35.2	23	26.1	20	22.7

The findings in table 4.16 shows that (72.8%) of students disagreed that the school had specious and equipped laboratory, (56.9%) indicated that the school had adequate classrooms, while (52.2%) of the students indicated that the school had inadequate toilets. Fifty one (51.1%) indicated that the school had adequate desks. It was observed that the quality of these classrooms, desks and laboratories differed across the board. The inadequacy of these physical resource was considered as the key factor leading to students' low performance in KCSE in the sub county. It was revealed that, teacher carry out science practical and experiments in classrooms which are not well equipped with the necessary equipment.

The respondents were asked whether inadequacy of clean water affects students' performance and results are as shown in figure 4.10.

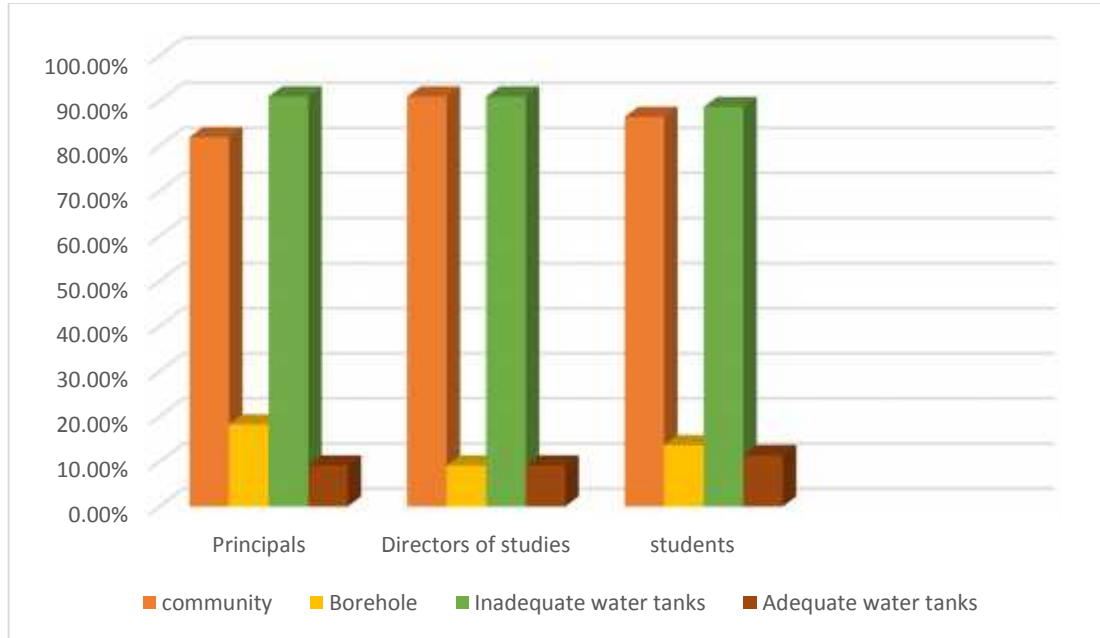
**Figure 4.10 Responses on clean water and influence in students' performance**



The findings in Figure 4.10 shows that majority (90.9%) of the principals indicated that inadequacy of clean water supply has an influence on students' performance, (100%) of the directors of studies and (83.0%) of the students indicated that water is essential and its inadequacy influences students' performance.

The study sought to find out the source clean water used in the schools. To establish the source, the researcher asked the respondent to indicate the source and the results are as shown in Figure 4.11.

**Figure 4.11 Source of water and adequacy of water tanks**



The findings in Figure 4.11 shows that (82%) of the principals indicated that water is supplied by community members at a fee. (91%) of directors of studies and (86%) of the students had the same response. Physical resources in terms of adequacy and quality have been noted to have a great impact on performance of students in the examination (Husen, Saha, & Noonan, 1978).

When the respondents were asked whether the school had adequate water harvesting tanks during the rainy season, (91%) of the principals indicated that water tanks were inadequate, as the same number of directors of studies, while (89%) of the students indicated that the water tanks were inadequate. This implies that the schools had no

capacity to harvest enough water during the rainy seasons to cut the cost of buying water throughout the year.

#### **4.7 Teaching and learning resources and students' performance**

To establish how adequacy of teaching and learning resources influence students' performance in KCSE, the researcher posed items to the respondents that sought to establish the same. The researcher asked them whether in their own opinion adequacy of teaching and learning resources influences students' performance and the findings are as shown in table 4.17.

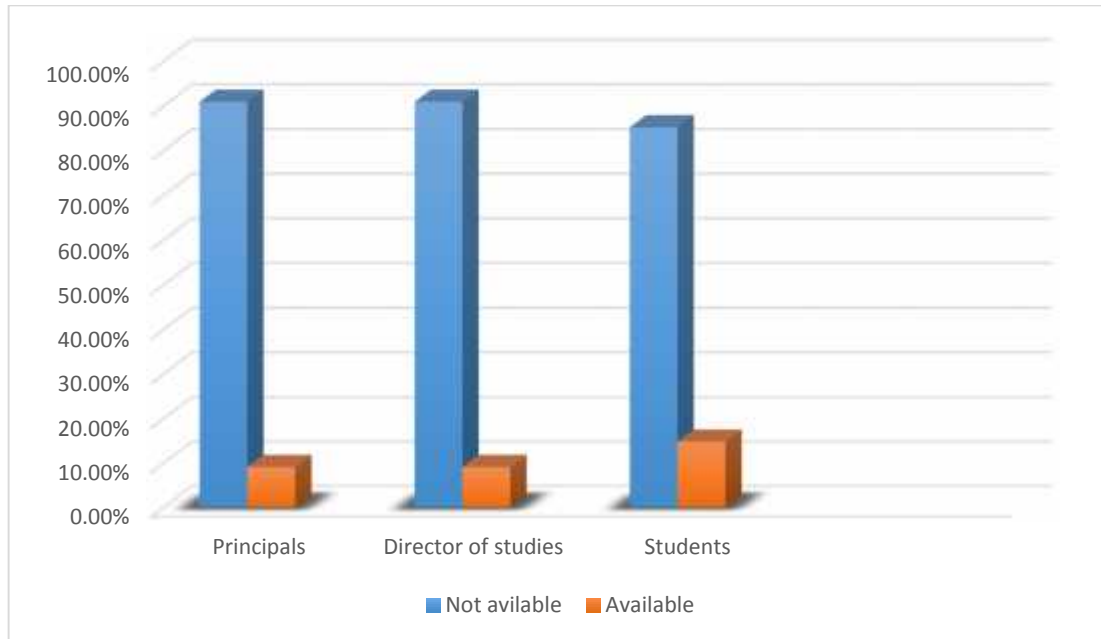
**Table 4.17 Respondents' responses on influence of teaching and learning resources**

Category of respondent	Yes		No	
	f	%	f	%
Principals	11	100	-	-
Directors of studies	11	100	-	-
Form three students	77	87.5	11	12.5

The results in Table 4.17 showed that all (100%) of the principals and the same number of directors of studies indicated that adequacy of teaching and learning resources has an influence on students' performance, while (87.5%) of the students had the same opinion as the principals and directors of studies.

When the researcher asked the respondents whether the school had a well-equipped library the responses are as shown in figure 4.12.

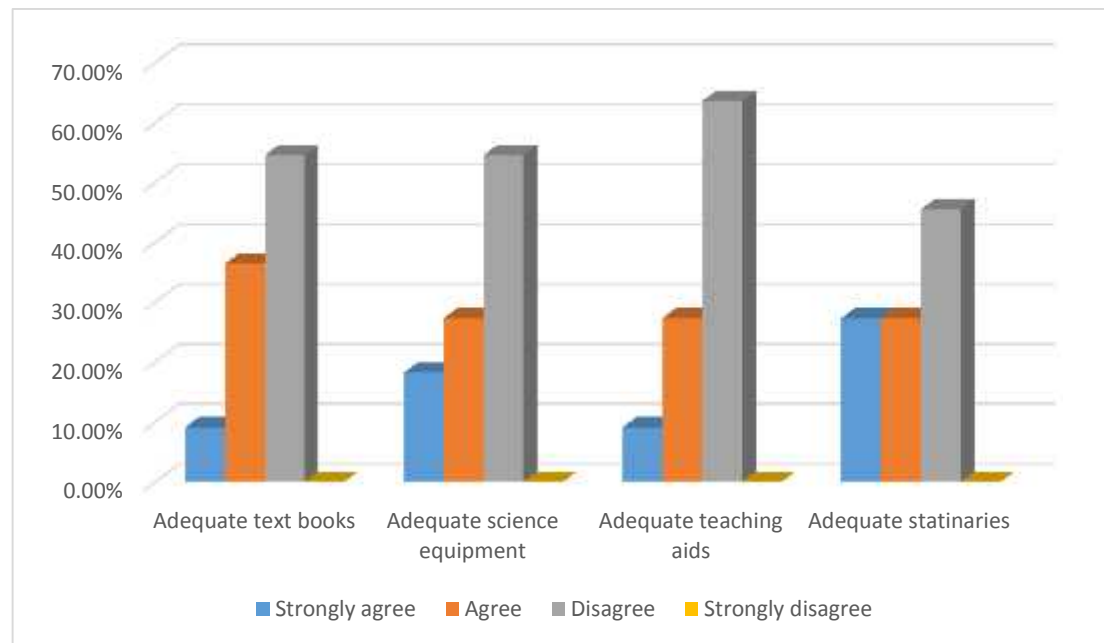
**Figure 4.12. Respondents' responses on availability of equipped library.**



The findings in Figure 4.12 shows that (91%) of the principals indicated that the schools had no library, (91%) of directors of studies indicated that the school had no libraries but books are kept in some stores, while (85%) of the students indicated that there was no library in their schools. This implies that apart from the copies issued by the subjects teachers to the students, students have no access to other learning resources which leads to low levels of creation of knowledge.

To find out whether the school had adequate teaching and learning resources the asked the principals to rate the adequacy of teaching and learning resources and the results are as shown in Figure 4.13.

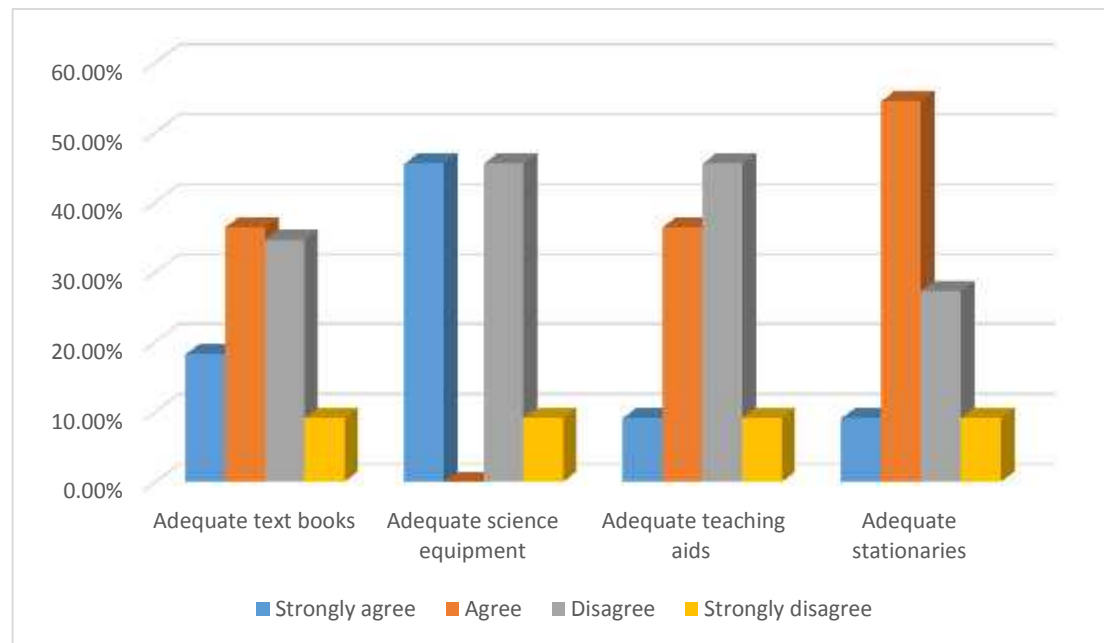
**Figure 4.13 Principals' responses on adequacy of teaching and learning resources**



The data in Figure 4.13 shows that (55%) of the principals indicated that the schools had no adequate textbook for all subjects, the same number of principals indicated that they had inadequate science laboratory equipment, (64%) indicated that teaching aids were inadequate, while (46%) indicated that they could not provide adequate stationaries throughout the year. This implies that the inadequacy of these educational resources which are crucial to determine levels of educational attainment, would lead undesirable educational outputs at the end of the four year course.

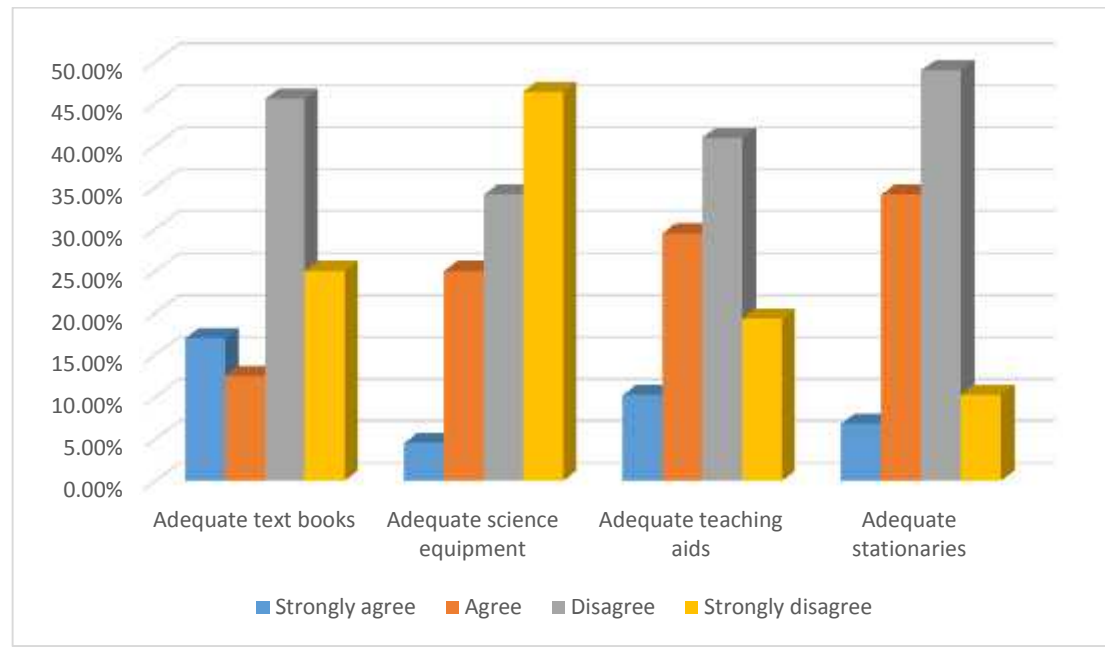
The researcher asked the directors of studies to rate the adequacy of teaching and learning resources and their responses are shown in Figure 4.14.

**Figure. 4.14 Directors of studies responses on adequacy of teaching and learning resources**



The findings in Figure 4.14 most (55%) of directors of studies indicated that the textbooks were inadequate, the same number for the director who indicated that the school could not provide adequate science laboratory facilities, and teaching aids. (64%) of the directors of studies indicated that the stationaries were adequate. This implies that the funds provided for acquisition of teaching and learning inputs are inadequate or the internal efficiency is low.

When students were asked to rate the adequacy of teaching and learning resources, their responses are as shown in Figure 4.15



**Figure 4.15 Students' responses on adequacy of teaching and learning resources**

The finding in Figure 4.15 shows that (46%) of the students indicated that the textbooks were not adequate, (46%) of the students indicated that science laboratory equipment were inadequate, (41%) indicated that the school had inadequate teaching aids, while (49%) indicated that the school could not provide adequate stationaries throughout the year. This implies that there is high Student Textbook Ratio (STR) which could be the cause of low performance in KCSE over the years. The inadequacy of these teaching and learning inputs as indicated by the students, negatively influences their performance. Generally, to address the issue of inadequate educational inputs in the

sub county, proper planning, mobilization and utilization of scarce educational resources is paramount.

## **CHAPTER FIVE**

### **SUMMARY, CONCLUTION AND RECOMMENDATIONS**

#### **5.1 introduction**

This chapter comprises of introduction, summary of the study, conclusions, recommendations and suggestion for further study.

#### **5.2 summary of the study**

The study was to investigate the influence of institutional factors on students' performance in public mixed secondary schools in Mbooni East Sub County, Makueni County, Kenya. The researcher singled out four institutional factors influencing students' performance at Kenya Certificate of Secondary Education.

The study was guided by four research objectives, namely:

To determine the extent to which teachers' characteristics influenced students' performance in KCSE in mixed public secondary schools, to establish the extent to which students' characteristics influenced performance in KCSE in public mixed secondary schools, to examine the extent to which physical resources influenced students' performance in KCSE in mixed public secondary schools and to access the extent to which teaching and learning resources influenced students' performance in mixed public secondary schools.

The study employed descriptive survey design. The study targeted 35 mixed public secondary schools in Mbooni East Sub County. For this study, the target population consists of 35 principals, and 35 Directors of Studies (DOS). And 1823 form 3 students in the 35 mixed public secondary schools. The study targeted schools that have been presenting candidates for KCSE examination up to 2014. The total target population was 1893. The sample for the study comprised of 11 principals, 11 directors of studies and 88 students. Data was collected by use of questionnaires and observation check list was used to confirm the physical existence of physical facilities. Pre-testing was done to gauge the clarity and relevance of instrument items. The instruments were also validated and tested for reliability.

The study used Statistical Package for Social Sciences (SPSS) IBM version 20 to analyze data. The data was analyzed both qualitatively and quantitatively. Quantitative data was edited to eliminate inconsistencies, summarized and coded for easy classification in order to facilitate tabulation and interpretation. Descriptive statistics was used in describing the sample data in such a way as to portray the typical respondent and to reveal the general response pattern. Qualitative data analysis was done by describing the distribution of single variables. The analyzed data was then presented through tabular representation of frequency tables, pie charts and bar graphs.

Findings on the influence of teachers' characteristics on students' performance in KCSE revealed that ten (90.9 %) of principals indicated that their schools had no

adequate teachers, (63.6%) of principals indicated that there were untrained teachers in some departments. Out of the sampled schools, the principals revealed that out of 105 teachers in their schools, 64(61%) of them were under TSC employment while 41(39%) were under BOM employment, among them form four graduates and university students. Majority (90.9%) of director of studies indicated that teachers were inadequate in theirs schools, while 48.9 percent of students indicated that the school had no adequate trained teachers. This indicated that inadequacy of trained teachers was a major obstacle to the students' performance in KCSE.

Findings on students' characteristics influence on students' performance revealed that, students' entry behavior and attitude towards schooling influence performance as revealed by most (72.7%) of the principals, (63.6%) of directors of studies and (89.8 %) of the form three students. It was revealed that, a majority of the students don't attend classes regularly and as result some drop out of school since most of them are day students.

Findings on the extent to which physical resources influence students' performance in KCSE in mixed public secondary schools revealed that, most (90.9%) of the principals indicated that inadequacy of clean water supply has an effect on students' performance, (100%) of the directors of studies and (83.0%) of the students indicated that water is essential and its inadequacy influences students' performance. It was

further revealed that, schools had no permanent source of clean water supply as revealed by most (81.8%) of the principals who indicated that water is supplied by community members at a fee. (90.9%) of directors of studies and (86.4%) of the students had the same response. This shows that financial resource which could be used to purchase other essential educational resources are used to buy water which has become a priority over the years.

Results on how teaching and learning resources influences students' performance in KCSE, revealed that textbooks, science lab equipment, and teaching aids were not adequate in their schools as revealed by (63.6%) of the principals, and the same number of directors of studies. (80.5%) of the students revealed that, the teaching and learning resources were inadequate which implies that learning resource were scarce. The study also revealed that a majority of the schools had no libraries as revealed by majority (100%) of the principals, (90.9%) of the directors of studies, and (85.2%) of the students. The scarcity of these educational resources affects educational outputs as revealed by the respondents. This implies that, if schools are provided with adequate teaching and learning resources there will be an improvement in performance. Majority of the principals argued that when teaching and learning resources are available, adequate and relevant, they may employ different teaching methodologies which encourage independent thinking.

### **5.3 Conclusion**

The following conclusions were drawn from the research questions and the findings of the study. The study established that educational resources in public mixed secondary schools are inadequate.

From the findings it was noted that the schools had inadequate trained teacher to the extent of employing form four graduates and university teacher trainees on long vacation. This compromised the teachers' teaching pedagogy.

The study established that the students' entry behavior and attitude in schooling has an influence on their performance. It was noted that students' negative attitude on schooling is major cause to high levels absenteeism leading to low retention rates hence low performance in KCSE.

From the findings it was noted that physical facilities were stretched too thin, in that, there was a deficiency in school resources and utilities. It was noted that out of the 11 sampled schools, only 2(18.2%) of them had piped water.

A majority of the schools had inadequate teaching and learning resources. Lack of teaching and learning resources may cause a decline in the quality of education. This has posed a challenge to the teachers and the students and affected the teaching and learning process resulting to low levels of students' performance and hence high educational wastage.

#### **5.4 Recommendations**

Based on the findings of the study it is recommended that teaching and learning resources should be distributed equitably across all schools in the Sub County to improve students' performance in public mixed secondary schools which accommodate majority of the late achievers, as stipulated in the education policy in Kenya vision 2030. Specifically, the following three recommendations are made:

- The Government of the Republic of Kenya, through the Ministry of Education should seek ways of ensuring that all public mixed secondary schools have adequate teaching and learning resources, especially qualified teachers to reduce teacher to student ratio.
- The Government of Kenya, through the Ministry of Education, should carry out resource rationalization assessment in different categories of schools to ensure equal and adequate distribution of educational resources.
- The devolved Government of Makueni County should raise the quality of education in newly established public mixed secondary through coming up with a permanent solution to the problem of inadequate clean water supply.

### **5.5 suggestion for further study**

The researcher suggests that;

1. Further study should be done on the influence of social-economic factors since this study only focused on the institutional factors.
2. A study on the effects of free day secondary education on academic performance of students in Mbooni East sub county and the rest of the country.
3. And lastly a study should be conducted on the strategies being employed by school managers to cope with the inadequate educational resources.

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## APPENDICES

### APPENDIX I

#### INTRODUCTION LETTER

Onesmus Ngulu Mutuku  
Department of Educational  
Administration and Planning,  
University of Nairobi,  
P o box 92, Kikuyu.

5 / 5 /2015

The principal,

Dear Sir/ Madam,

#### **REF: PARTICIPATION IN RESEARCH**

I am Ngulu Onesmus Mutuku a Masters student at the University of Nairobi. I am conducting a research to investigate “**influence of institutional factors on students’ performance at KCSE in mixed public secondary schools in Mbooni East Sub County, Kenya**”. I request you to provide answers to the attached questionnaire as honestly and precisely as possible. Information obtained will be purely for academic purpose to this research and the identity of the respondents will be treated as strictly confidential. Thank you for your cooperation and assistance.

Yours faithfully,

Onesmus Ngulu.

## **APPENDIX II:**

### **PRINCIPALS' QUESTIONNAIRE.**

#### **Introduction.**

The questionnaire is designed to help investigate the **institutional factors affecting students' performance KCSE in mixed public Secondary schools in Mbooni East Sub County**. You are requested to provide answers to these questions as honestly and precisely as possible. Responses to these questions will be treated as confidential. Please tick [ ] where appropriate or fill in the required information on the spaces provided.

#### **Part A: Background information**

1. What is your gender?

Male [ ] Female [ ]

2. Indicate your age bracket.

Below 40 years [ ] 41 - 50 years [ ] 51 - 60 year [ ]

3. What is your professional qualification? PhD [ ] M.Ed. [ ] B.Ed. [ ]

Dip/Ed [ ]

b) For how long have you been a principal?

1 – 5 years [ ] 11 – 15 years [ ] 6 – 10 years [ ] 16 and above [ ]

4. How long have served as a principal in this school?

Below 1 year [ ] 1– 5 years [ ] 6– 10 years [ ] 11years and above [ ]

#### **Part B: Effect of teachers' characteristics on students' performance in KCSE**

5. Do you think teacher characteristics influence the students' performance?

Yes [ ] No [ ]

If yes explain.....

6. How many teachers are there in your school?

(i) TSC employed teachers Male .....Female .....

(ii) BOM employed teachers Male.....Female.....

7. Do you have some teachers who have not yet completed their training but they are continuing? Yes [ ] No [ ]

8. The table below shows effect of adequacy of trained teachers on students' performance in KCSE statements, tick by rating using the scale: 1-**Strongly agree (SA)**, 2-**Agree (A)**, 3- **Disagree (D)**, 4- **Strongly disagree (SD)**

	Statement	SA	A	D	SD
a)	The school has enough teachers for all subjects.				
b)	All teachers attend upgrading courses like workshops				
c)	Teachers are motivated to assist individual students				

(b) If the school has no enough teachers how do you cope with the shortage?

i) Combine classes [ ]

ii) Share the load to the available teachers [ ]

iii) Use of volunteer teacher [ ]

iv). Left untaught [ ]

Others (specify).....

### **Part C: Effect of students characteristics on performance in KCSE**

9. a) Do you think the student's characteristics influence performance?

Yes [ ] No [ ]

If yes explain.....

10. The table below shows to what extend do the students personal attributes affect academic performance. Tick by rating using the scale: 1-Strongly agree (SA), 2-Agree (A), 3-Disagree (D), 4- Strongly disagree (SD)

	STATEMENT	SA	A	D	SD
a)	The student's KCPE marks affects performance in KCSE				
b)	The student's attitude on schooling affects performance				

**Part D: Influence of physical resources on students' performance.**

11. The table below shows to the influence of physical resources on students 'performance IN KCSE, tick by rating using the scale. 1-Strongly agree (SA), 2-Agree (A), 3-Disagree (D), 4- Strongly disagree (SD)

	STATEMENT	SA	A	D	SD
a)	The school has a spacious and equipped laboratory				
b)	There are adequate classrooms for all lessons				
c)	The school has adequate toilets/latrines				
d)	The school has adequate desks for the students				

12. In your opinion, does inadequacy of clean water supply influence students' performance?

Yes [ ] No [ ]

13. The table below shows the various sources of clean water, tick by rating using the scale. 1-Strongly (SA), 2-Agree (A), 4-Disagree (D), 5- Strongly disagree (SD)

	Statement	SA	A	D	SD
a)	The school has borehole/well				
b)	There is piped water by the ministry of water				
c)	Water is supplied by the community at a fee				
d)	The school has adequate water harvesting tanks				

**Part E: The influence of teaching and learning resources on students' performance in KCSE.**

14. a) Do you think the adequacy of teaching and learning resources influence the students' academic achievement?

Yes    ☐                      No    ☐

b) If yes, does the school have a well-equipped library with approved and up to date teaching and learning resources?

Yes    ☐                      No    ☐

15. The table below shows to the influence of teaching and learning resources on students' performance, tick by rating using the scale. (1-Strongly (SA), 2-Agree (A), 3-Disagree (D), 4- Strongly disagree (SD))

	STATEMENT	SA	A	D	SD
a)	The school has adequate text books for all subjects				
b)	The school has adequate science lab. Equipment				
c)	The school has adequate teaching aids				
d)	The school can provide adequate stationary				

Thank you.

## APPENDIX III

### QUESTIONNAIRE FOR THE DIRECTOR OF STUDIES

#### Introduction

This questionnaire is designed for the purpose of studying the “**institutional factors influencing students’ performance in KCSE in secondary schools in Mbooni East Sub-County**”. The information provided will be treated with confidentiality and is only for academic purposes. Please fill this questionnaire by putting a tick  $\sqrt{\quad}$  to indicate the correct answer or by filling in the required information in the spaces provided.

#### Part A: Background information

1. Indicate your gender Male ☐ Female ☐
2. Indicate your age bracket.  
Below 30 years ☐ 31-40 years ☐ above 40 years ☐
3. What is your level of education? Doctorate ☐ Master Degree ☐  
BE D ☐ Diploma ☐ Teacher trainees ☐ Untrained teacher ☐
4. How long have you served as a teacher? Below 1 year ☐ 1 – 5 years ☐  
6 - 10 years ☐ 11 - 15 years ☐ 16-20 years ☐ above 20 years ☐
5. How long have served as teacher in this school? Below 1 year ☐  
1 - 5 years ☐ 6-10 years ☐ 11- 15 years ☐ 16- 20 years ☐  
above 20 years ☐

#### Part B: Effects of teacher characteristics on students’ performance in KCSE.

6. Do you think teachers’ characteristics affect the students’ performance?

Yes [ ] No [ ]

7. The table below shows effect of teachers' characteristics on students' academic performance statements, tick by rating using the scale. 1-Strongly agree (SA), 2-Agree (A), 3-Disagree (D), 4- Strongly disagree (SD)

	Statement	SA	A	D	SD
a)	The school has adequate teachers to handle the students.				
b)	All teachers attend upgrading courses like workshops				
c)	Teachers are motivated to assist individual students				

**Part C: Effect of student's characteristics on performance in KCSE**

8. Do you think the student's characteristics influence performance?

Yes [ ] No [ ]

9. The table below shows to what extend do the students personal attributes affect academic performance. Tick by rating using the scale. 1-Strongly agree (SA), 2-Agree (A), 3-Disagree (D), 4- Strongly disagree (SD)

	STATEMENT	SA	A	D	SD
a)	The student's KCPE marks affects performance in KCSE				
b)	The students attitude on schooling affects performance				
c)	The study methods affect performance				

**Part D: Influence of physical resources on students' performance.**

10. In your opinion, do physical resources influence the students' performance?

Yes [ ] No [ ]

11. The table below shows to the influence of physical resources on students' academic achievement, tick by rating using the scale. 1-Strongly agree (SA), 2-Agree (A), 3-Disagree (D), 4- Strongly disagree (SD)

	Statement	SA	A	D	SD
a)	The school has spacious and equipped laboratory				
b)	There are adequate classrooms				
c)	The school has adequate toilets/latrines				
d)	The school has adequate desks for the students				

12. In your opinion, does inadequacy of clean water supply influence students' performance? Yes ☐ No ☐

13. The table below shows the various sources of clean water, tick by rating using the scale. (1-Strongly (SA), 2-Agree (A), 3-Disagree (D), 4-Strongly disagree (SD)

	Statement	SA	A	D	SD
a)	The school has borehole/well				
b)	There is piped water by the ministry of water				
c)	Water is supplied by the community at a fee				
d)	The school has adequate water harvesting tanks				

**Part E: Influence of teaching and learning resources on students' performance.**

14. (a). Do you think the adequacy of teaching and learning resources influence the students' performance in KCSE? Yes ☐ No ☐

(b).If yes, does the school have a well-equipped library with approved and up to date teaching and learning resources? Yes ☐ No ☐

15. The table below shows to the influence of teaching and learning resources on students' academic achievement, tick by rating using the scale. (1-Strongly (SA), 2-Agree (A), 3-Disagree (D), 4- Strongly disagree (SD)

	Statement	SA	A	D	SD
a)	The school has adequate text books for all subjects				
b)	The school has adequate science lab. Equipment				
c)	The school has adequate teaching aids				
d)	The school can provide adequate stationeries				

Thank you.

## **APPENDIX: IV**

### **QUESTIONNAIRE FOR FORM THREE STUDENTS.**

#### **Introduction**

This questionnaire is designed for the purpose of studying the “**influence of institutional factors on students’ performance at KCSE in mixed public secondary schools in Mbooni East Sub County**”. The information provided will be treated with confidentiality and is only for academic purposes. Please fill this questionnaire as accurately as possible by putting a tick to indicate the correct answer

#### **Part A: background information**

1. What is your gender?

Male        ☐        Female        ☐

2. Did you start from form one in this school?

Yes        ☐        No        ☐

If not, in which class did you join the school?

Form two   ☐        Form three ☐

#### **Part B: effect teachers’ characteristics on students’ performance.**

3. Do you think teachers’ characteristics affect the students’ performance in KCSE?

Yes        ☐        No        ☐

4. The table below shows effect of teachers’ characteristics on students’ performance in KCSE statements, tick by rating using the scale. 1-Strongly agree (SA), 2-Agree (A), 3-Disagree (D), 4- Strongly disagree (SD)

	Statement	SA	A	D	SD
a)	There are enough teachers to handle the students.				
b)	All teachers attend upgrading courses like workshops.				
c)	Teachers are motivated to assist individual students.				

**Part C: effect of student's characteristics on performance in KCSE.**

5. Do you think the student's characteristics (gender, attitude, and intellectual quotient) influence performance?

Yes            ☐            No            ☐

6. The table below shows to what extent do the students personal attributes affect academic performance. Tick and rate them using the scale: 1-Strongly agree (SA), 2-Agree (A), 3-Disagree (D), 5- Strongly disagree (SD)

	STATEMENT	SA	A	D	SD
a)	The student's KCPE marks affects performance in KCSE				
b)	The students attitude on schooling affects performance				
c)	The study methods affect performance				

**Part D: The effect of physical resources on students' performance.**

7. In your opinion, do physical resources influence the students 'performance in KCSE? Yes    ☐            No    ☐

8. The table below shows to the influence of physical resources on students' performance .Tick by rating using the scale. 1-Strongly agree (SA), 2-Agree (A), 3-Disagree (D), 4- Strongly disagree (SD)

	Statement	SA	A	D	SD
a)	The school has well equipped laboratory				
b)	There are adequate classrooms				
c)	The school has adequate toilets/latrines				
d)	The has adequate desks for the students				

9. In your opinion, does inadequacy of clean water supply influence students' academic achievement?      Yes      [   ]      No      [   ]

10 The table below shows the various sources of clean water, tick by rating using the scale: 1-Strongly (SA), 2-Agree (A), 3 -Disagree (D), 4- Strongly disagree (SD)

	Statement	SA	A	D	SD
a)	The school has borehole/well				
b)	There is piped water by the ministry of water				
c)	Water is supplied by the community at a fee				
d)	The school has adequate water harvesting tanks				

**Part E: The influence of teaching and learning resources on students' performance.**

11. (a). Do you think the adequacy of teaching and learning resources influence the students' academic achievement?

Yes   [   ]      No   [   ]

(b). If yes, does the school have a well-equipped library with approved and up to date teaching and learning resources?

Yes   [   ]      No   [   ]

12. The table below shows to the influence of teaching and learning resources on students' performance. Tick and rate them using the scale. 1-Strongly (SA), 2-Agree (A), 3-Disagree (D), 4- Strongly disagree (SD)

	Statement	SA	A	D	SD
a)	The school has adequate text books for all subjects				
b)	The school has adequate science lab. Equipment				
c)	The school has adequate teaching aids				
d)	The school can provide adequate stationeries				

Thank you.

**APPENDIX: V**

**OBSERVATION CHECK LIST**

	<b>Resource</b>	<b>Available</b>	<b>Not available</b>	<b>Adequate</b>	<b>Inadequate</b>
1	Water tanks				
2	Laboratories				
3	Library				
4	Class rooms				
5	Toilets				
6	Furniture				

**APPENDIX VI:**  
**RESEARCH AUTHORIZATION FROM COUNTY DRECTOR OF**  
**EDUCATION**  
**REPUBLIC OF KENYA**

Tel: 044-33318  
FAX: @gmail.com  
Email: cdemakueni@gmail.com  
When replying please quote



County Director of  
Education Office,  
P.O. Box 41,  
**MAKUENI.**

**MINISTRY OF EDUCATION**

**MKN/C/ED/5/33 VOL 1/66**

**2/06/2015**

**Ngulu Onesmus Mutuku**  
**University of Nairobi**  
**P.O Box 30197-01000**  
**Nairobi**

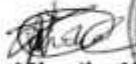
**TO WHOM IT MAY CONCERN**


**RE: RESEARCH AUTHORIZATION- NGULU ONESMUS MUTUKU**

This is to confirm to you that **Ngulu Onesmus Mutuku** a student of **University of Nairobi** has been authorized to conduct out a research as per letter dated 22/05/2015 ref. no **NACOSTI/P/15/3032/5917** on "**Effects of institutional factors on Student's performance in KCSE in Public Mixed Secondary Schools in Mbooni East Sub County- Makueni County,**" for the period ending **31<sup>st</sup> August 2015.**

You are however expected to ensure that you conduct the exercise professionally.

Kindly give him all the assistance required.

  
Mbawika V.N.  
for County Director of Education  
**Makueni.**



ISO 9001:2008 CERTIFIED



**APPENDIX: VII**  
**RESEARCH AUTHORIZATION FROM COUNTY COMMISSIONER.**



**THE PRESIDENCY**  
**MINISTRY OF INTERIOR AND COORDINATION OF NATIONAL**  
**GOVERNMENT**

Telegram:  
Telephone:  
Fax:  
Email: [makuenicc@yahoo.com](mailto:makuenicc@yahoo.com)

COUNTY COMMISSIONER  
MAKUENI COUNTY  
P.O. Box 1-90300  
MAKUENI

Ref: MKN/CC/ADM.6/1 VOL1/68

Date 2<sup>nd</sup> June 2015

The Deputy County Commissioner  
**MBOONI EAST SUB COUNTY**

**RE: RESEARCH AUTHORISATION**

This is to confirm that Mr. Ngulu Onesmus Mutuku has been authorized to carry out research on *"Effects of institutional factors on student's performance in KCSE in public mixed secondary schools in Mbooni East Sub County"* for a period ending 31<sup>st</sup> August 2015.

Please accord the researcher the necessary assistance for the success of his work.

H. M. NDWILI  
FOR COUNTY COMMISSIONER  
**MAKUENI**

C.C.  
Ngulu Onesmus Mutuku

**APPENDIX VIII**  
**RESEARCH AUTHORIZATION FROM NACOSTI**



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

Telephone: +254-20-2213471,  
2241349, 310571, 2219420  
Fax: +254-20-318245, 318249  
Email: [secretary@nacosti.go.ke](mailto:secretary@nacosti.go.ke)  
Website: [www.nacosti.go.ke](http://www.nacosti.go.ke)  
When replying please quote

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

Ref: No.

Date: **22<sup>nd</sup> May, 2015**

**NACOSTI/P/15/3032/5917**

Ngulu Onesmus Mutuku  
University of Nairobi  
P.O Box 30197-00100  
**NAIROBI.**

**RE: RESEARCH AUTHORIZATION**

Following your application for authority to carry out research on *"Effects of institutional factors on student's performance in KCSE in public mixed secondary schools in Mbooni East Sub County, Kenya,"* I am pleased to inform you that you have been authorized to undertake research in **Makueni County** for a period ending **31<sup>st</sup> August, 2015.**

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

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

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


Copy to:


The County Commissioner  
Makueni County.

The County Director of Education  
Makueni County.



## APPENDIX IX RESEARCH CLEARANCE PERMIT

<p><b>THIS IS TO CERTIFY THAT:</b>  <b>MR. NGULU ONESMUS MUTUKU</b>  <b>of UNIVERSITY OF NAIROBI, 0-90300</b>  <b>WOTE, has been permitted to conduct</b>  <b>research in Makueni County</b></p> <p><b>on the topic: EFFECTS OF</b>  <b>INSTITUTIONAL FACTORS ON STUDENT'S</b>  <b>PERFORMANCE IN KCSE IN PUBLIC</b>  <b>MIXED SECONDARY SCHOOLS IN</b>  <b>MBOONI EAST SUB COUNTY, KENYA.</b></p> <p><b>for the period ending:</b>  <b>31st August, 2015</b></p> <p><i>[Signature]</i>  <b>Applicant's</b>  <b>Signature</b></p>	<p><b>Permit No : NACOSTI/P/15/3032/5917</b>  <b>Date Of Issue : 22nd May, 2015</b>  <b>Fee Received :Ksh 1,000</b></p> <div style="text-align: center;">  </div> <p><i>[Signature]</i>  <b>Director General</b>  <b>National Commission for Science,</b>  <b>Technology &amp; Innovation</b></p>
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<p><b>CONDITIONS</b></p> <ol style="list-style-type: none"> <li><b>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</b></li> <li><b>Government Officers will not be interviewed without prior appointment.</b></li> <li><b>No questionnaire will be used unless it has been approved.</b></li> <li><b>Excavation, filming and collection of biological specimens are subject to further permission from the relevant Government Ministries.</b></li> <li><b>You are required to submit at least two(2) hard copies and one(1) soft copy of your final report.</b></li> <li><b>The Government of Kenya reserves the right to modify the conditions of this permit including its cancellation without notice.</b></li> </ol>	<div style="text-align: center;">  <p><b>REPUBLIC OF KENYA</b></p>  <p><b>NACOSTI</b></p> <p><b>National Commission for Science,</b>  <b>Technology and Innovation</b></p> <p><b>RESEARCH CLEARANCE</b>  <b>PERMIT</b></p> <p><b>Serial No. A</b> <span style="color: red; font-size: 1.5em;"><b>5159</b></span></p> <p><b>CONDITIONS: see back page</b></p> </div>
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