

**FACTORS AFFECTING STUDENTS' PERFORMANCE IN KENYA  
CERTIFICATE OF SECONDARY EXAMINATIONS: THE CASE OF  
MANDERA EAST DISTRICT**

**BY**

**MOTANYA OCHWANGI JARED**

UNIVERSITY OF NAIROBI  
KIKUYU LIBRARY  
P. O. Box 2100  
NAIROBI

**RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILMENT OF THE  
REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OF  
EDUCATION, SCHOOL OF EDUCATION, UNIVERSITY OF NAIROBI**

**AUGUST 2011**

## DECLARATION

### STUDENT'S DECLARATION

I declare that this project is my original work and has never been submitted for a degree in any other university or college for examination/academic purposes.

Signature:

.....Date: 18/08/2011.....

MOTANYA OCHWANGI JARED

E56/78632/2009

### SUPERVISOR'S DECLARATION

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

Signature: .....Date: 18/8/2011.....

PROFESSOR S. GUNGA

SENIOR LECTURER

UNIVERSITY OF NAIROBI

## DEDICATION

For my dear wife, Carolyne and our loving son, Edgar.

## ACKNOWLEDGEMENTS

I take this opportunity to give thanks to the Almighty God for seeing me through the completion of this project. I am also sincerely grateful to my beloved parents; Mr. and Mrs. Motanya Ochwang'i for their tireless efforts to see me to this end.

The work of carrying out this investigation needed adequate preparation and therefore called for collective responsibility of many personalities. The production of this research document has been made possible by invaluable support of many people. While it is not possible to name all of them, recognition has been given to a few. I am greatly indebted to my supervisor Professor S. Gunga for his professional guidance, advice and unlimited patience in reading through my drafts and suggesting workable alternatives, my profound appreciation to you.

The entire staff in the district cannot pass without my special acknowledgement for taking time off their busy schedule to provide me with all the information I needed in the course of the research. Without their immense cooperation I would not have reached this far.

I would also wish to extend my sincere gratitude to all the M.Ed students, staff, lecturers and the entire University of Nairobi fraternity for changing me from what I was to what I am.

I owe a great deal of gratitude to my loving wife for her unfailing moral support throughout my period of study and for understanding and appreciating the demand of the course in terms of time and resources.

Thank you all and May the Almighty God bless you abundantly.

## TABLE OF CONTENTS

DECLARATION.....	ii
DEDICATION.....	iii
ACKNOWLEDGEMENTS.....	iv
TABLE OF CONTENTS .....	v
LIST OF TABLES.....	x
LIST OF ABBREVIATIONS .....	xii
ABSTRACT .....	xiii
CHAPTER ONE.....	1
BACKGROUND TO THE STUDY.....	1
1.1 Introduction.....	1
1.2 Statement of the problem .....	8
1.3 The purpose of the Study .....	8
1.4 Objectives of the Study .....	9
1.5 Research Questions .....	9
1.6 Significance of the Study .....	10
1.7 Delimitation of the Study.....	10
1.8 Limitations of the Study.....	10
1.9 Definitions of operational Terms .....	11
1.10 Basic Assumptions.....	12
1.11 Organization of the Study .....	13
CHAPTER TWO .....	14
LITERATURE REVIEW .....	14
2.0 Introduction.....	14
2.1 The Students Related Factors.....	15

2.1.1 The students' self-concept.....	15
2.1.2 The students' personal characteristics.....	18
2.1.3 The students' language ability.....	18
2.2 School Related Factors .....	19
2.2.1 Teachers' Commitment and Experience .....	19
2.2.2 Teacher's Labelling Of Students.....	20
2.2.3 The use of Groups and Groupings.....	21
2.2.4 The Type School .....	22
2.2.5 Accessibility to Secondary Education.....	23
2.2.6 The Class Size .....	23
2.2.7 The Schools Physical Facilities.....	24
2.3 The Non-Schools Related Factors .....	25
2.3.1 The Social Stratification And The Family Social Economic Background.....	25
2.3.2 The Subculture of the Ethnic Community.....	27
2.3.3 Parental Level of Involvement in Education of the Child.....	28
2.3.4 Parental Level of Education .....	29
2.3.5 The Peer Group Factor .....	29
2.3.6 The Role of the Community.....	30
2.4 Conceptual Framework.....	31
CHAPTER THREE .....	33
RESEARCH METHODOLOGY .....	33
3.0 Introduction.....	33
3.1 Research Design.....	33
3.2 Target Population.....	34
3.3 The Sample Size and Sampling Procedure .....	35

3.4 Research Instruments .....	36
3.5 Pre-Testing of Research Instruments for Validity and Reliability.....	37
3.6 Data Collection Procedure .....	39
3.7 Data Analysis and Presentation Techniques .....	39
CHAPTER FOUR .....	40
DATA ANALYSIS AND PRESENTATION.....	40
4.0 Introduction.....	40
4.1 The Questionnaire Return –rate .....	40
4.2 Teacher characteristics and KCSE performance.....	41
4.2.1 Gender of Principals.....	41
4.2.2 Principals’ age.....	41
4.2.3 Gender of teachers.....	42
4.2.4 Academic qualifications of Principals and Teachers .....	43
4.2.5 Teaching experience of principals.....	44
4.2.6 Teaching experience of teachers .....	44
4.2.7 Teacher – student ratio .....	45
4.2.8 Principals’ response on subject allocation to teachers. ....	46
4.2.9 Teacher characteristics based on students’ opinions.....	47
4.3 Learners characteristics and KCSE performance. ....	49
4.3.1 Students’ gender .....	49
4.3.2 Range of marks scored in KCPE.....	50
4.3.3 Number of students’ per class .....	50
4.3.4 Parents/guardians occupation.....	51
4.3.5 Payment of school fees.....	52
4.3.6 Students’ behavior as perceived by principals .....	53

4.3.7 Students' behavior as perceived by teachers.....	55
4.4 Resources and KCSE Performance.....	56
4.4.1: Principals' take on resources.....	57
4.4.2 Teachers' response on adequacy of resources in their schools .....	60
4.4.3 Students' responses on adequacy of resources.....	64
4.5 Class size and students' performance in KCSE examination.....	65
4.6 Relationship between performance in KCSE examination and other variables under study.....	66
4.6.1 Relationship between KCSE performance and teacher characteristics.....	66
4.6.2 The relationship between KCSE performance and age of teacher.....	67
4.7 Opinion of teachers, principals and students' on performance in their schools.....	75
4.7.1 Principals' rating on performance in their schools.....	76
4.7.2 Teachers' rating on performance in their schools .....	76
4.7.3 Students rating on performance of their schools.....	77
4.7.4 Principals' suggestions on what could be done to improve performance in schools.....	77
4.7.5 Teachers opinion on factors that influence performance in their schools.....	78
4.7.6 Teachers suggestion on what could be done to improve performance .....	78
4.7.7 Factors cited by students as affecting KCSE performance in their schools.....	78
4.7.8 Students' suggestions on what could be do done to improve KCSE performance in their schools .....	79
4.7.9 Summary of the Research findings .....	79
CHAPTER FIVE .....	80
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS .....	80
5.0 Introduction.....	80
5.1 Summary of the findings.....	81



5.1.1 Personal data .....	81
5.1.2 Students' performance in KCSE in relation to teacher characteristics .....	82
5.1.3 Students performance in KCSE examination in relation to learner characteristics .....	82
5.1.4 Students' performance in KCSE in relation to availability of resources .....	82
5.1.5 Students' performance in KCSE examination in relation to class size .....	83
5.1.6 Problems affecting performance in KCSE examinations.....	83
5.2 Conclusions.....	83
5.3 Recommendations.....	84
5.4 Suggestion for Further Research.....	85
REFERENCES .....	86
APPENDICES .....	<b>Error! Bookmark not defined.</b>
Appendix I: Questionnaires .....	<b>Error! Bookmark not defined.</b>

## LIST OF TABLES

Table 1: The gender of the principals.....	41
Table 2: Age distribution for principals and teachers.....	42
Table 3: Gender of the teachers.....	43
Table 4: Academic qualifications of principals and teachers.....	43
Table 5: Teaching experience of Principals.....	44
Table 6: Teaching experience of teachers.....	45
Table 7: Average teacher – student ratio in schools.....	45
Table 8: Response on subject allocation for teachers.....	46
Table 9: Students’ responses on teachers’ characteristics in percentages.....	47
Table 10: students’ gender.....	49
Table 11: Range of marks scored in KCPE.....	50
Table 12: Number of students per class.....	51
Table 13: Parents/guardians occupation.....	51
Table 14: Payment of school fees.....	53
Table 15: How learning was affected due to non-payment of fees.....	53
Table 16: Students’ behavior as perceived by principals.....	54
Table 17: Learners’ characteristics as perceived by teachers in percentage.....	55
Table 18: Principals’ response to availability of resources in their schools in percentages.....	57
Table 19: Teachers’ responses on adequacy of facilities in percentages.....	61
Table 20: Students’ responses on adequacy of resources (in percentage).....	64
Table 21: Class sizes as indicated by the students.....	65
Table 22: Below shows the spread of teachers’ ages.....	67
Table 23: The chi-square test result.....	67

Table 24: Relationship between KCSE performance and academic qualification of teachers .....	68
Table 25: Chi square test result .....	68
Table 26: Relationship between KCSE performance and teaching experience of teachers .....	69
Table 27: Chi square test result .....	69
Table 28: Relationship between KCSE performance and the teachers' commitment to school work.....	70
Table 29: Chi square test result .....	71
Table 30: Relationship between students KCSE performance and students gender .....	72
Table 31: Chi square test result .....	72
Table 32: Relationship between KCSE performance and the student's entry marks to secondary school.....	73
Table 33: Chi square test result .....	73
Table 34: Relationship between KCSE performance and adequacy of resources.....	74
Table 35: Chi square test result .....	74
Table 36: Relationship between KCSE performance and class size. ....	75
Table 37: Chi square test result .....	75
Table 38: Principals' performance rating .....	76
Table 39: Teachers' rating.....	76
Table 40: Information given by the students on their performance rating. ....	77

UNIVERSITY OF UGANDA  
 KAMPALA LIBRARY  
 P. O. BOX 2011  
 KAMPALA

## LIST OF ABBREVIATIONS

BOG	-	Board of Governors
EAC	-	East African Community
EACE	-	East African Certificate Examinations
KCE	-	Advanced Certificate of Education
KACE	-	Kenya Advanced Certificate of Education
KCSE	-	Kenya Certificate of Secondary Education
KJSE	-	Kenya Junior Secondary Examinations
KNEC	-	Kenya National Examination Council
MOE	-	Ministry of Education
NTS	-	National Textbook Scheme
PTA	-	Parent Teacher association
UNICEF	-	United Nations children Fund

## ABSTRACT

The performance by candidates in KCSE examinations has been worrying over time. This is despite the heavy financial and material investment from the government, parents, teachers and other stakeholders put in place with the anticipation that the students will end up performing better. Poor performance leads to educational wastage through the repeaters and dropouts. This kind of performance endangers the student's chances for future jobs and placements as well as reducing the chances of meaningful participation in the general national development.

The purpose of this study was to investigate the factors affecting the students' performance in KCSE examinations in Mandera East District. The study was conducted through the ex-post design. The target population consisted of all form four students, teachers, head teachers, principals and school managers. Data was collected using the self administered questionnaires. Both descriptive and inferential statistics were used to answer the research questions and objectives in relation to the topic.

From the findings, it can be concluded that teachers and students' characteristics were very significant in influencing KCSE examinations' performance, the entry marks of the students into secondary school affect performance by the same students' in KCSE examinations, availability of resources by the school significantly affected performance in KCSE examination and class size does affect performance.

Based on the findings and conclusions of the study recommends those teachers' qualifications are significant in influencing a student's performance in KCSE examination; they ought to be provided with opportunities for more exposure through in-service training and workshop programmes. The schools should strive to provide adequate resources. In situations where the schools are limited in ways of finances, improvisations ought to be encouraged where possible. Discipline should be enhanced among the learners since this was a problem hindering good performance in KCSE examination. Arrangement could be made by the schools so that they can identify the very needy students financially and look into ways of assisting them through the Constituency Development Fund (CDF) and the ministry of Education bursaries.

# CHAPTER ONE

## BACKGROUND TO THE STUDY

### 1.1 Introduction

Kenya regained her independence in 1963 from the British colonial rule. Like many other African countries at that time, she had an enormous task of bringing to an end the then identified greatest enemies of development: diseases, poverty and illiteracy. The government thus recognized education as the avenue and a powerful tool through which human resource would be produced for the purpose of driving the economy of the country forward. The government had to draft policies in education to act as the vehicle for this development. According to Ominde Report (1964), education was recommended for social and economic development. This saw the rapid expansion of educational institutions from the primary level to the tertiary institutions. As a result of this, education demand increased with individuals wanting it more than anything else. Court (1974) observes that the outstanding factor about education in Kenya has been that everyone wants it more than any other thing. This kind of information is aptly captured in the Gachathi Report (1976) which gave due focus to redefining Kenya's educational policies with a keen interest on the national unity, economic and social development of the people of Kenya.

It is against this background that the government rapidly expanded the secondary school education. The government provided teachers and other materials such as the textbooks for the schools while the parents subsidized the system through building of the classrooms. This gave the emergence of the so-called Harambee schools. However, this

compromised the quality of the secondary education thus the Kamunge Report (1988) focused on improving education financing, quality and relevance. The report concluded that the government scheme of providing textbooks through the National Textbook Scheme (NTS) was inefficient and therefore affected the quality of teaching and learning. The report thus proposed the Cost Sharing aspect where the government and the education stakeholders could jointly co-fund education. The objectives of the secondary school education have been on focus since independence to date. According to the World Bank Report (2001), secondary school education is crucial for economic growth. It further notes that education in general provides countries with skilled manpower required for economic growth. The MOEST (2003) concurs with this report and outlines the objectives of secondary school education as:

- i) To develop the ability to inquire, develop critical thinking and ability to make rational judgment.
- ii) To develop a firm foundation for education and training.
- iii) Identify individual talents and develop them.
- iv) To enable the learner to choose with confidence and scope with regard vocational education after school.

The government through the MOE has been endeavoring to achieve these objectives through the provision of financial support in areas of teacher training programmes at the universities, teacher's salaries, supervision and inspection of schools to ensure that the environment is friendly for the process of teaching and learning. The MOE ensures that the curriculum is regularly reviewed to meet the demands of the changing economic, social and political needs of a country in this case Kenya. Abagi and Odipo (1997),

observe that the curriculum reforms undertaken in developing countries are aimed at making education a vehicle of national development. For instance, the education system in Kenya was reviewed from 7-6-3 to 8-4-4 in 1980s. This came along with the introduction of the new examination called Kenya Certificate of Secondary Education (KCSE) Examination which replaced the Kenya Advanced Certificate of Education (KACE) Examinations as the entry requirements to the universities and tertiary colleges. Before all this, examinations were carried out in East Africa as a whole since shortly after independence; the East African Community (EAC) was formed between Kenya, Uganda and Tanzania as an economic co-operation which encompassed other areas such as education, health, trade and even the legal system among others. Examinations was also part of this kind of co-operation and the learners would sit for East African Certificate Examinations (EACE) Other examinations sat for by the students at secondary school level included Kenya Junior Secondary Examinations (KJSE) which was sat for at the end of second year in secondary school.

The East African Community broke up in (1978) which meant that all aspects that were managed collectively by member states would now be managed individually by each country. As a result of this, Kenya National Examination Council (KNEC) was formed in 1980 in Kenya to coordinate examination related matters. In Kenya, Kenya Advanced Certificate of Education (KACE) Examinations replaced East African Certificate Examinations (EACE). This type of examination was taken by secondary school pupils up to 1989 when it was replaced with the Kenya Certificate of Secondary Education (KCSE) Examination.



Initially, KCSE examination consisted of a minimum of ten (10) subjects that had to be attempted for grading purposes as shown in the table below;

<b>Compulsory subjects</b>	<b>Group two</b>	<b>Group three</b>	<b>Group four</b>	<b>Group five</b>
English, Kiswahili and Mathematics.	Biology, Physics, Chemistry and Biological sciences (for the blind candidates)	History and government, Geography, Christian Religious education, Islamic Religious Education and Hindu Religious Education	Home science, Art and Design, Agriculture, computer Studies and Aviation.	French, German, Arabic, Music and Business Studies

(Source: KNEC 2010).

According to KNEC (2010), a candidate must take all the three compulsory subjects, at least two sciences (from Group two), one humanity (from Group three) and at least one technical (group four) or technical subject from Group five category.

The KCSE examinations are taken during the months of October and November of every year and the results are released in the month of February the following year by the minister for education. According to KNEC, these types of examinations are taken under very strict supervision to avoid cheating and run for a period of about one month. Cheating in these examinations attracts severe penalties from the Kenya National Examination Council and candidates who are caught cheating in any form get their results cancelled. It is against this background that the government of Kenya through the MOE spends a lot of money to fund education which ought to translate to good results.

For instance, the government expenditure to the secondary school education alone is enormous as seen in the following table;

Year	Amount
2004-2005	76,724,780
2005-2006	86,123,000
2006-2007	172,088,020
2007-2008	198,113,080
2008-2009	249,148,200

(Source: Economic Survey 2009- KNBS)

From table 1.2 above, it is clear that the government spends a lot of money to fund education which should translate to good results

In Kenya, examination results are taken with a lot of seriousness and hold so much respect. Wamai (1991) observes that examinations are taken as a valid measure of as students' educational achievement and that examination in Kenya is regarded as a trustworthy tool of categorizing students' into achievers and non achievers. In this case therefore, KCSE examinations are used as a measure of categorizing candidates of the secondary school education. It must be observed that KCSE examinations are taken at the end of four years in secondary school education. Performance is the result of activities of an organization or investment over a given period of time (Ambaras, 2006). In educational institutions, success is measured by academic performance, or how well a student meets standards set out by local government and the institution itself. Performance in KCSE examination therefore determines the candidate's destiny. . Good performance in this examination means better enhanced educational opportunities for the student while dismal performance termed as failure means missing opportunities to further their education. MOEST (1996) observes that internationally, the students' scores

in examinations is a proxy of achievement in education. Kyalo (1992) notes that certificates awarded to successful candidates must not only certify that such a candidate has the requirements of the examining body but also that their attainment compares and competes favorably with that of a similar cohort elsewhere in the world.

KNEC which is charged with responsibility of coordinating examination related issues in Kenya has a grading system that is used in measuring the performance in KCSE examination by the candidates which is; A (80% and above) A- (79-75) B+ (70-74) B (65-69) B- (60-64) C+ (55-59) C (50-54) C- (45-49) D+ (40-44) D (35-39) D- (30-34) E (0-29). This grading system applies both for the subjects' performance and the mean grade of the students (KNEC 1991). It further observes that the grades are from A to E in a strength scale of 12 to 1 points respectively. When a candidate scores a mean grade of a C+ which corresponds with 7 points on the scale of 12, means that he or she has the ability to advance to the next level of the educational ladder. However the serious danger is that most students score lower grades than the C+ grade where the majority lays less than a D+ mean grade. Charging from KCSE results in the year 2009 and 2010, the number of those who are scoring grade A overall has increased tremendously while on the other hand those who have scored less than a C+ grade has also remained steady as seen in table 1.3 which give a comparative view in terms of performance of the two years (2009 and 2010) nationally;

GRADE	YEAR AND NO. OF CANDIDATES 2009	YEAR AND NO. OF CANDIDATES 2010
A	930	1,566
A-	4,422	6,565
B+	9,340	12,737
B	14,960	18,173
B-	21,823	24,727
C+	29,573	33,366
C	39,745	43,769
C-	49,736	52,406
Others( D+,D , D- and E grades)	163,287	161,028

(Source: The Standard Newspaper-Wednesday march 2, 2011)

From table 1.3 above, it is clear that there is a comparative improvement in performance as reflected by various grades posted by the candidates of the years. However, the majority of the candidates have scored less than a mean of C+ where the highest number is found below a D+ mean grade. This is called poor performance in KCSE examinations by candidates pose a great danger for them in that they may not advance to the next level of study. Mandera East District has constantly been experiencing the same problem where the majority of the candidates who attempt this type of examination fall below the expected mark of what is regarded as good performance. The table below (table 1.4) shows the grades as scored by candidates in Mandera East District for two years:

GRADES	Year and No. of candidates Who scored the grades 2009	Year and No. of candidates Who scored the grades 2010
A	-	-
A-	2	4
B+	8	17
B	11	19
B-	19	23
C+	26	42
C	126	189
C-	236	243
Others.	624	887

(Source: DEO's Office Mandera East District.)

The tables above confirm that there is poor performance in KCSE examinations among the candidates who attempts it both nationally and Mandera East District. This study is therefore geared towards trying find out what are the factors affecting the students' performance in KCSE examinations.

### **1.2 Statement of the problem**

The performance by candidates in KCSE examinations has been worrying over time. This is despite the heavy financial and material investment from the government, parents, teachers and other stakeholders put in place with the anticipation that the students will end up performing better. Eshiwani, G (1983) observes that poor performance leads to educational wastage through the repeaters and dropouts. This kind of performance endangers the student's chances for future jobs and placements as well as reducing the chances of meaningful participation in the general national development. Many studies have been carried out concerning performance in KCSE examinations: Eshiwani, G.(1993), Bett, J. (1994) and Maengwe, T (1996) among others but none of them have focused on Mandera East District of North Eastern Province where the trend of performance is worrying. This study therefore aims at investigating the factors affecting students' performance in the KCSE examinations in Mandera East District

### **1.3 The purpose of the Study**

The purpose of this study was to investigate the factors affecting the students' performance in KCSE examinations in Mandera East District.

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

The main objective of this study was to establish the factors affecting students' performance in KCSE examinations in Mandera East District. Specific objectives were;

- a) To determine the extent to which the socio-economic background factors affect students' performance in KCSE examinations.
- b) To establish students' characteristics that affects their performance in KCSE examinations.
- c) To determine the community's role in students' performance in KCSE examinations.
- d) To establish the extent to which the school related factors affect the performance of students in KCSE examinations.
- e) To determine the extent to which the teaching and learning process affect the performance of students in KCSE examinations.

#### **1.5 Research Questions**

The researcher attempted to answer the following questions in the study;

- i) To what extent does the social-economic background affects the students' performance in KCSE examinations?
- ii) What is the relationship between students' characteristics and performance in KCSE examinations?
- iii) What is the contribution of the community towards students' performance in KCSE examinations?

iv) How does the school environment affect students' performance in KCSE examination?

v) What is the teacher's role on students' performance in KCSE examinations?

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

The result from this study is of significance to the MOE to make necessary adjustments towards better performance in KCSE examinations by students in the country. It will also be significant to the principals, head teachers and school managers in Mandera East District to establish the factors affecting students' performance in KCSE examinations thus providing remedies at their respective levels. It will also be important to the parents and development partners who will use the findings to establish the constraints with regard to students' performance in KCSE examinations and help to fix them. It will also contribute the pool of already existing knowledge.

### **1.7 Delimitation of the Study**

The following delimitations were made for the purpose of the study. The research involved all the secondary schools in Mandera East District which have attempted KCSE examinations for the last three years. The findings from the study was then generalized to other parts of the country

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

The study covered all secondary schools in Mandera East District. The researcher was however not able to control the attitudes of the respondent as they attempt to answer

various research questions. This is because the respondents may at times give socially acceptable answers which may affect the validity of the finding

### **1.9 Definitions of operational Terms**

This section defines terms will be used in this study. They include the following:

#### **Factors**

These are variables that cause an effect on the phenomena.

#### **School**

According to education Act Cap 211, a school is defined as an institution in which not less than ten pupils receive regular instruction or an assembly of not less than ten pupils.

#### **Secondary School Education**

Level of education of four years circle which starts at form one and ends at form four in Kenyan education

#### **Mean Grade**

This refers to average the point showing an individual or group achievement in examination performance. It will be used synonymously with the score a candidate attains in KCSE examinations.

#### **K.C.S.E Examination**

Kenya Certificate of Secondary Education which is a terminal examination taken at the end of secondary education cycle in Kenya.

#### **KNEC**

Kenya National Examination Council which is a body established by government of Kenya to coordinate examination related matters including certifying the successful candidates.



## **UNICEF**

United Nations children Fund. This organization champions the rights of children including healthy and education.

## **Learning**

Change of behaviors in a desired direction.

## **Teaching**

This is an activity of changing a learner's behavior or character in accordance with age, ability of the pupils and in the desired directions.

## **Learning/teaching resources**

This refers to the materials and equipment that facilitate the teaching and learning process.

## **8-4-4**

This is a system of education in Kenya introduced in 1985 following recommendations by the presidential working party (Mackay Report) where primary education takes 8 years, 4years for secondary education and a minimum of 4 years university education.

## **1.10 Basic Assumptions**

In conducting this research it is assumed that;

- a) Respondents will cooperate and give honest and reliable information when responding to items in the questionnaires.
- b) KCSE Examination is acceptable measure of students' performance and are appropriate for differentiating between good and poor performance.

- c) Examination data obtained from KNEC and the District Education Office are reliable.

### **1.11 Organization of the Study**

This study has been organized into five chapters. Chapter one deals with background of the study, objectives the study research questions of, delimitation of the study, limitation to the study and definitions of operational terms. Chapter two consists of the literature review derived from relevant studies carried out on factors that affect students' performance in KCSE examinations. At the end of this chapter, a conceptual framework showing the relationship among factors that affect students' performance in KCSE examination is given. Chapter three captures the research methodology that was employed in the study indicating the research design, target population, sample size and sampling procedure, validity and pre-testing of the tools. Chapter four covers the data analysis and discusses the results of the analysis of data. Chapter five presents a summary of the findings, conclusions, recommendations and suggestions for further research as pertains to the same area.

## CHAPTER TWO

### LITERATURE REVIEW

#### **2.0 Introduction**

This chapter will deal with the review of related literature with a specific emphasis to the factors affecting performance in KCSE examinations. It will capture other scholars' views on examinations and particularly the KCSE examinations. The factors in this case are divided in three broad categories: the student related factors, the school related factors and the non-school related factors. The students' related factors will comprise of students' self concept, inherited personal characteristics and students' language abilities. The school related factors will include the type of school, accessibility of the school, the availability of teachers, quality of teachers and the influence of the teaching and learning process on the students' performance. The non-school related factors will consist of the socio-economic background of the students', the subculture of the ethnic community of the student, the type of parenting and peer group factor on their influence on performance of KCSE examinations.

KCSE examination is a form of summative evaluation which measures the outcome of the teaching and learning process. Achievements that fall below the set standards nationally are a reflection of a disadvantaged educational process (Indongole 1987). It should be noted that the learning environment widely varies and depending on its quality it shall affect the students' positively or negatively on the final performance in an examination, in this case KCSE examination. Indongole further observes that factors

affecting the candidates' performance in an examination can either be social-psychological, cognitive or environmental factors in nature.

A discussion of these factors follows below.

## **2.1 The Students Related Factors**

### **2.1.1 The students' self-concept**

The aspect of self concept is widely perceived as an individual's view of his or her own world in terms of experience as well as acting on it in a diverse and complex manner (Reck 1980). Thus the element of self- concept is not only the hallmark of academic excellence but also a healthy person. Studies 'have shown that there is a correlation between self concept of a student and performance in an examination. Omizo and Hammet(1981) carried out a study with a sample of 296 Mexican-American standard seven students. The purpose of the study was to relate students' self-concept and their performance in Total Language vocabulary that is spelling, grammar and reading comprehension. They also tested Total Mathematics concept of application and computation skills as well as their composite scores on the lower tests and basic skills which included total level of the students' development and achievement including work and study skills. The primary reason for this study was a review of literature which had shown that poor academic performance by Mexican-American students was as a result of low self-concept. The study showed that more male students, 168 than female students had a high level of self-concept and the performance of the tasks were linked to positive self-concept.

Wolf and Blix (1981), in their study of 2429 students drawn from primary 1 to primary 8 also confirmed the link between the students' self-concept and their performance in mathematics as a subject. The study showed that students' attitude towards mathematics served as a predictor of his or her performance in mathematics. Central to this finding is the sense that a person with positive self-concept is more likely to perform better. The study showed that good performance is determined by one's attitude toward the subject than one's achievement in the subject per se. Shavelson and Bolus (1982) concurs with this observation and notes that self-concept is a moderation factor and possibly a cause of academic performance.

Schofield (1981) points out that good performance especially in mathematics is influenced by favourable attitude towards it. It is argued that children who enjoy a given discipline are likely to spend more time and energy gaining mastery of the discipline. They are consequently reinforced by the success they achieve which in turn continues to reinforce them to perform better in the discipline.

In Africa, studies show that the phenomena are replicated. In Uganda for instance, it is hypothesized that a child who felt more confident and more self-assured could perform better in primary examinations (Hyneman 1979). Heynman did a random sampling where 2293 students were chosen from five districts in Uganda and found out that the level of self-confidence was related to school achievement and performance in mathematics, English language and general knowledge irrespective of the sex, ethnic group or district.

He observed that in Uganda, students' performance will suffer because of lacking self-concept and not due to poor background.

In the republic of Botswana, a study commissioned by Mwamenda and Mwamwenda (1987) proposed self-concept as one of the variables contributing to the quality of education. The primary objective of this study was to establish if in the case of Botswana, a student's self-concept could be used as a predictor of his or her academic performance at the end of the primary level, which is seven years in school. The relationship between the two variables was examined on the basis of the students overall performance as well as performance in mathematics, English, Science and social studies. The sample consisted of 2559 standard seven pupils selected randomly from 51 schools covering every district on Botswana. Two personality tests were administered to each pupil. The pupils were then divided into those with good self-concept and those with poor self-concept on the basis of their scores in the tests. The performances of the two groups were then compared with the final national examination written by all Botswana pupils which was at the end of seven years of primary education. The result was that those students with good self-concept performed significantly better than those with poor self-concept. This was not only through overall but also in individual subjects examined such as mathematics, English, science and social studies. This confirmed that the student's self-concept can serve as a reliable measure of performance in examinations.

The teachers have a central role in facilitating the students' self-concept which is a likely factor that affects their performance in national standardized examinations. Franken

(1994) noticed that it is the self-concept which possibly creates the motivation for behaviour. This is therefore possible that self-concept is important aspect that drives individuals to like or dislike a subject, a person or a thing. It thus has a powerful influence on students' performance in examinations. This study will therefore try to find out the extent to which student's self concept influence either on the positive way or the negative way performance in examinations, in this case KCSE examinations.

### **2.1.2 The students' personal characteristics.**

This refers to individual personal characteristics also known as traits such as the Intelligent Quotient (IQ) which may be high or low. These characteristics may enhance or limit a student's performance in an examination. The students with special needs among them are presented with challenges of performance in examinations. These challenges will definitely make it difficult for these students to realize their full potential. This becomes worse where there are meagre resources.

### **2.1.3 The students' language ability.**

Language development is a key component in human beings. Inadequate development of the language faculty because of the environment, the deficiency in the IQ or because of poor preparation as a medium of instruction results in poor achievement (Gitau and Makatiani 1993). According to the sixth forum of education in Africa 2003, language in schools is an enormous barrier to learning. Students, whose mother tongue is not English, are in fear of being ridiculed from either fellow students or even teachers. This makes them to keep off participation in class which has a negative overall impact in

performance of their final examinations. This is because without a well developed aspect of language, a student will not be able to interpret the situations and questions properly thus ill performance in those examinations. Language development is vital since it makes a student express the feelings, emotions, approval and disapproval which is replicated in an examination process. The study will try to find out what is the effect of language in the students' performance of KCSE examinations.

## **2.2 School Related Factors**

The school related factors deal with the teachers' experience and commitment, teachers' labelling of students, the group concept, the type and accessibility of the school, the class size and the physical facilities of the school.

### **2.2.1 Teachers' Commitment and Experience**

According to Waweru (1992), teacher's commitment and experience to students emerge as a key characteristic to successful learning and performance. The teacher's attitude, self-concept, behaviour and the teaching practices are the most significant predictors of the schools and students level of performance. The students learn and remember more when they find pleasure in learning as an experience. Teachers therefore ought to endeavour to bring out changes in a student's attitude which will make learning a pleasurable exercise.

The World Bank Report (1987) observes that the number of years that a teacher has taught which comprises his experience is perceived as being consistently positive and a



significant contributor to pupils' academic achievement. Ngaru (1987) concurs with this report and observes that teachers' professional qualification and their academic qualification matters a lot and will have final effect on the students' performance. The teacher's qualification is likely to affect the delivery of necessary skills and knowledge to the child which will, affect performance.

### **2.2.2 Teacher's Labelling Of Students**

The teachers have a tendency of attaching given labels to particular students. These kinds of labels may have a positive or a negative effect on students' performance. Some of them tend to incorporate and behave like labels attached to them suggest. For instance if a student is labelled stupid then such a student will believe so and behave like that. According to Kagan (1990) teachers alienate low achievers through making assumptions about their behaviors and achievement. He notes that once a label is attached to students the teacher tends to adjust his or her teaching methods to be consistent with the label for example under achiever, slow learner, disabled learner among others. This may have far reaching effect on the candidate's performance in KCSE examinations which may either be good or bad.

Ogbu (1987) carried out a study on the white and black students' retention in American schools and found out that academic failure on some black students was as a result of the oppositional culture frame of reference, oppositional identity and continues distrust of white education. Dropping out of school by minority students as well as low achievers

might be as a result of disengaging from school and alleviating the negative effects associated with low self esteem, low motivation, and consequently poor performance.

According to Ornstein (1995), teachers who develop rigid and stereotype perceptions of students are likely to have harmful effects on them. The teacher, who understands that differences exist, and then adopts realistic methods, approaches and content, will accordingly have the most positive effect on the students.

The proponents of the Stimulus Response (S-R) techniques in learning, insist that teachers need to offer appropriate incentives and rewards in order to make students perform better in certain tasks and to behave in a socially acceptable manner. Downey (1985) observes that, prizes, good results, examinations success and teacher's approvals are all examples of extrinsic motivation to learners. It is thus important for a teacher to take note of the individual students and kind of labels they develop, how they use them as well as the unprecedented impact on the students performance. This study will therefore try to find out the central role that labelling may have particularly on performance of KCSE examinations

### **2.2.3 The use of Groups and Groupings**

Teachers usually employ groups in teaching as an approach and method. Ornstein (1995) observes that teachers are advised to use more subgroups within a class to provide for not only individual differences but also to give students an opportunity for maximum participation in learning. The most common method of teaching is a whole group where teachers have an assumption that in doing so they meet the needs of a large group and

that it saves time. He notes that in this group approach, teachers explain and demonstrate on topics, asks and answers questions in front of the class. However those who criticize this method argue that it fails to meet the needs and interests of individual students. Teachers who use this method tend to look at students as a homogeneous group with common interests, abilities, learning styles and motivational levels which may be a wrong assumption that have an impact in students' performance especially in examinations. This study will take into consideration what kind of groups that exist in schools and their effect on candidates especially in performance of KCSE examinations.

#### **2.2.4 The Type School**

Differences in schools present unique characteristics that exert positive or negative effects on the students' performance. Some schools are high cost; others are low cost a factor which determines the availability of facilities. Some are mixed day and boarding while others are single sex. This also has its own effects on the performance.

In Kenya, examination results of many high well established schools are better than the poorly established schools for instance from KNEC (2009), order of merit results, well established schools like Alliance boys, Precious blood Girls Riruta had many students in top one hundred slots whereas the private ones such as Strathmore and Kianda schools had also the same number as opposed to schools like Moi Girls Manderu and Manderu Secondary School of North Eastern province which never posted any candidate in the top one hundred slots

It is also notable that single sex schools perform better than mixed schools in KCSE examinations. According to Njuguna (1998), it is difficult to handle students of both sexes in the same school than it is in handling schools of single sex. Teachers also find it easier to give directions to students in a single sex school than in mixed schools. Njuguna further notes that, difficulties are experienced in administration of mixed schools which contributes to poor performance in KCSE examinations.

### **2.2.5 Accessibility to Secondary Education**

Accessibility to secondary education is easier in some areas while in some parts of the country it is difficult. The distance a student will travel to access a school will determine whether such student will attend school regularly or not. This will have an overall impact on the students' performance in KCSE examinations. In pastoral-nomadic life, arid and semi arid areas or in places where cattle rustling is the order of the day will affect the education system as seen in the case of Galbatura High school, in Kenya which was closed due to banditry activities that posed insecurity. These factors affect the individual performance of students in KCSE examinations.

### **2.2.6 The Class Size**

The question that keeps on disturbing many educationists, teachers, school managers and the research community is whether the small classes are better than the larger ones. The proponents of small classes argue that both the teacher's morale and the amount of attention to individual students are increased. According to Fyle (1990), teachers were found to have

a more positive attitude in small classes and were pleased with the ease of managing and teaching in small class setting.

Maengwe (1985), observes that overcrowding in classrooms affected learning negatively. This could be in terms of resources and even the teacher himself. Class size in Kenyan secondary schools varies from 40 up to 70 students per class which hinders delivery of content by teachers. Smaller classes can post good results as compared to large classes which have been cited by teachers as having negative impacts in the teaching and learning process thus poor results.

### **2.2.7 The Schools Physical Facilities**

The school facilities such as class rooms laboratories, libraries and the learning environment contributes immensely to teaching and learning. According to UNICEF Report (2003), poor learning environment in third world countries has been singled out as one of the major factors that lead to poor performance in secondary schools. This is due to increase enrolment without further expansion of the facilities. This leads to overstretching of the resources which affects the effectiveness on the teaching and learning process resulting to poor performance by students especially in KCSE examinations.

Heynman and Loxley (1993) observe that the presence of a school library contributes significantly to performance in China, Brazil Botswana and Uganda. They further observe that sound physical environment reflected in the school amenities which have order have a positive advantage to student's progress and performance. However

according to MOEST (2003), studies carried by the World Bank (2001) shows that 70 % of the school visited in Kenya had no Libraries something that may have an impact on students performance. This study will try to find out the relationship between availability of the physical facilities and candidate's performance in KCSE examination.

### **2.3 The Non-Schools Related Factors**

The student's performance is basically determined by his or her ability and will to perform. Ansu (1984) observes this can be influenced directly by the school that the student attends. A number of social factors have a direct bearing on the student's will and ability to perform well in examinations. According to Ansu, the following are some of the factors;

#### **2.3.1 The Social Stratification And The Family Social Economic Background**

Social stratification is one of the major factors which have a direct effect on the student's performance especially in examinations. Social stratification refers to a systematic organization of society members into groups and categories based on their income and life chances. With reference to family income and the general economic factor, a student is greatly affected in the process. The society is characterized with inequalities in wealth distribution, which brings about differences in lifestyles, social prestige, frame of thinking, ideas and attitudes, language use as well as the infant and child care of both categories. This has a direct bearing on the student's performance in examinations. According to Tyler (1977), in Ayoo (2002) the social-economic status of students tends to influence their performance. They agree that parents who are educated tend to provide

ample environment for learning to their children. The children are encouraged by their parents to study and read relevant literature. Ndiriti (1999) observes that children from well to do with social-economic background tend to do better. This is necessitated by high income of the parents which enable them to by supplementary reading materials and necessary textbooks for their children which boosts their performance.

Douglas (1989) observes that one of the ways in which social-economic background affects the student's performance is through the type of school they attend. Students from low income families despite their mental potential tend to go to cheaper schools whose performance may be low while their counterparts who are average and attends well performing schools because their parents can afford brings about the disparity in performance.

According to Ansu (1984), the family can help or impede the performance of the child due to the size of the family and the nature of relations within it. The family size is said to affect the learning process of the child at home because in large families parents keep less attention to the individual children. Relations within the family may also influence the child's mental health and personality traits which will be closely related to the child's performance

A broken family can also be of great obstacle to a child's ability and motivation to succeed academically. It may disturb the child psychologically and emotionally, deprive the child the valuable parental guidance and encouragement which will prompt the child

to seek untimely psychological support outside the family such as the peer group of the drop out.

### **2.3.2 The Subculture of the Ethnic Community**

The culture of the ethnic group may have some impact on the academic performance of the students since it transmits certain vital values, ideas and attitudes affecting motivation and levels of aspirations; personality traits which bear on the ability of the student to perform, linguistic expressions and logical concepts which are immediate to the learning process. In Nigeria for instance, among the Ibo community, research shows that their culture emphasizes on individual achievements and initiates values that produce persons who are likely to strive for high income, status and political power through their own efforts while on the other hand, any culture that emphasizes traditional values such as submission to the established authority and a rejection of innovation ends up producing individuals who are less motivated (UNESCO 1995).

In countries where the culture allows girls to marry at the age of 12-13 years, the school is considered as a hindrance to that process (UNESCO 1995). Nigeria is a case in point where cultural tradition of early marriage is in conflict with the school as an institution. The high rate of drop out experienced in the early years of schooling is therefore a form of resistance against coercive methods used in schools.

Wamahu (1988), in a study of Kwale district in Coast Province found out that undertakings of traditional roles by girls such as tending to household chores led to the



irregular attendance of school and interfered with the participation in school activities. He also observes that several factors in traditional education among the Digo community of the coast province acted as a barrier to effective participation on formal education of students. The faith also that a community profess to has also an impact, in the direction which education may take in that community. According to FAWE Report (2008), Northern Kenyan communities where Muslim faith is dominant realized that education is not taken serious since they widely perceived it as a Christian affair thus attachment and interest to it is minimal.

### **2.3.3 Parental Level of Involvement in Education of the Child**

The type of parent can be seen from the perspective of the extent to which a parent is involved in the student's education. Parent's involvement in the learning process has been perceived as one of the factors affecting the performance of the students in examinations. Cullen (1968) observes that the importance of parental involvement in the child's education has a bearing in his or her eventual performance. The parents of the high performing students seem to take more interest in their children's schooling process than those of the lowly performing students.

The parental attitude and influence have been identified to be among the major factors that affect the performance of their children. USAID (1993) carried out a study in Malawi on Girls attainment in basic literacy and realized that parents who had negative attitudes towards girls education had their children either dropping out school or performing poorly in the event of completing school. This was done in comparison with the parents

whose children posted better performance and their parents had high interest in their girl child. Ndiritu (1999), in a study of standard 7 pupils in Gulu district in Uganda realized that parental encouragement, social-economic background, a child's aspiration and attitudes of the parents towards education to have had a link with the performance of the students in their final examination.

#### **2.3.4 Parental Level of Education**

The educational of the parent also is seen to have a direct impact on the student's performance. Kativo (1989) in his study on the *relationship between secondary school students needs, achievement and educational level of the parents* had a strong positive connection between the father's level of education and the students need to achieve. Amalaha (1975) in Ayoo (2002), studied 370 boys and 112 girls in Nigeria realized that male students whose parents are educated performed better than male students whose parents have not attained any formal education. In the same study, it is observed that girls are faced with the greatest challenge which makes their performance poor. This study will also try to find out the relationship between education level of the parent and the students performance in KCSE examination.

#### **2.3.5 The Peer Group Factor**

The society keeps on changing and this dynamics brings I changes that were never there before. These kinds of changes have also a bearing not only at an individual level but also at a family level. They may weaken or strengthen the family or the individual. Weakening of the family is partly as a result of the strengthening of the peer group. A

peer group is a reference group to which an individual relates his or her attitude and is a measure of social achievement by its members. It is a source of influence for members and this influence may help to enhance or deter a student's academic performance. Douglas (1984) observes that depending on the values of the peer group and the mechanisms for social control exercised by the group over its members, it may effectively enhance academic performance or even lead to failure. This study, will try to find out the role of peer group as a factor affecting students performance in KCSE examinations.

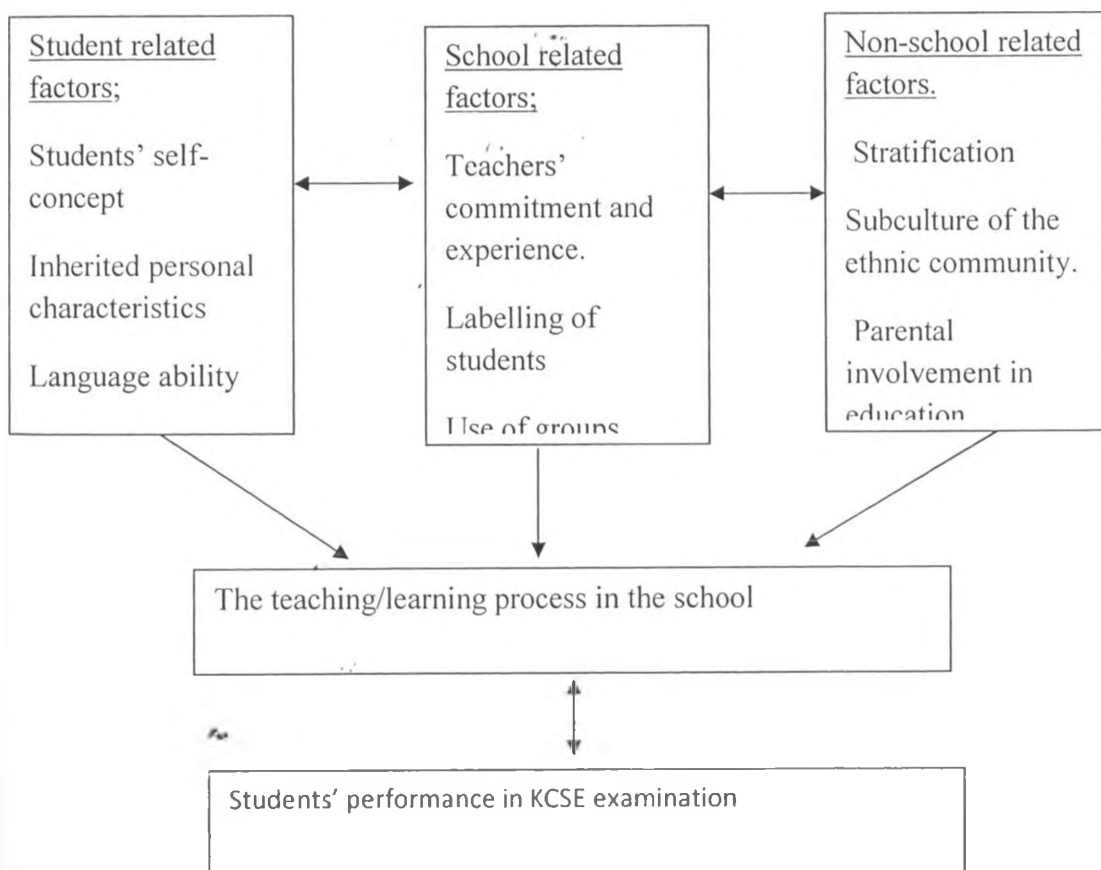
### **2.3.6 The Role of the Community**

The community is a group of people who live together and who posse common culture as well governed by common rules and regulations. A community's influence in education cannot be estimated it provides the teachers, the students, major stake holders such as the BOG, PTA and the subordinate staff. It also provides the school with land to build on as well as the experts to build the school. The culture of the community also finds itself in the school through student's behaviours. Bett (1986) observes that poor support from the local community to the school in provision of resources that may be required by the school contributes to poor performance.

In conclusion therefore, this chapter has dealt with various factors affecting performance in KCSE examinations with experiences drawn from other parts of the world into the Kenyan perspective. These factors have been categorized into three broad areas; where the first set of factors are those related with the students such as self-concept, inherited

personal characteristics, language factor, set and intention of students. The second set of factors are those related with the school environment and include teacher's experience and commitment, labelling of students, use of group and groupings, the type and accessibility of the school and the physical facilities. The last set of factors deals with the non-school related factors which include the social stratification, the subculture of the ethnic community, the type of parent and their level of education, the peer group and the role of the immediate community. This study intends to find out how these factors among others affect the performance of individual students in examinations with special focus of KCSE examinations.

## 2.4 Conceptual Framework



Emerging from the framework above, students' performance in KCSE examination is conceptualized as an outcome of interrelated factors which originate from within the students, the school environment and from the non-school environment factors. These factors are seen to interact and their interaction is indicated by the two sided arrows linking the three set of factors. The student is affected by the three set of factors as he or she goes through the education system indicated by the teaching and learning process. This is shown by the arrows that originate from the three set of factors towards the teaching and learning process. The effectiveness or ineffectiveness of the teaching and learning process which brings together all the stated factors will determine the student's performance in the KCSE examination as well as the overall performance by the school in the same examination. This explains the existence for the two sided arrows between the three boxes.

## CHAPTER THREE

### RESEARCH METHODOLOGY

#### **3.0 Introduction**

This chapter describes the methodology that was employed in the study which includes, the research design, the target population, sample size and sampling procedures, research instruments, data collection procedure and data analysis techniques.

#### **3.1 Research Design**

According to Borg and Gall (1989), a research design has been defined as the process of creating an empirical test to support or refute a knowledge claim. The study was conducted through the ex-post design. According to Kerlinger (1986), ex-post facto design is a type of research that starts with the observation of a dependent variable in retrospect for their possible relationship to and effects on independent variables. This type of research design is also called casual-comparative design since it captures two variables; the dependant and the independent variables. The ex-post facto design was suitable for this study because it involves researching on the conditions or events that have already taken place and do not exist now. The independent variable in this case KCSE performance has already occurred while the factors affecting students' performance in KCSE examination like availability of the learning facilities cannot be manipulated.

### **3.2 Target Population**

In light of the fact that this study was to determine factors affecting students' performance in KCSE examination, the most appropriate target population was the group of students in their final class in secondary school education. The form four students of the year 2011 who were preparing to sit for their KCSE examination shall comprise the first target population. It is the most suitable population for this study since they have been exposed to the whole course and learnt as much as they could have with regard to knowledge, skills and attitudes in various subjects which form the test areas for KCSE examination. The target population consisted of all 790 form four students, an average of approximately 88 students per school in the 9 out of 11 secondary schools in Mandera East District who were sitting for KCSE examination in the year 2011 (MOE Mandera East District 2010).

The second target population was teachers who were teaching form four students in the year 2011. The teachers were in position to provide adequate information that may explain the factors affecting students' performance in KCSE examinations. These teachers are expected to have taught in these schools for a long time and thus are deemed to have extensive knowledge in their respective subjects. They are also in constant interaction with students in form four class thus in a position to know the actual factors that may be affecting their performance in KCSE examinations. The third category of the target population were head teachers, principals and school managers since they coordinate and facilitate the learning activities in their respective schools which have both a direct and indirect impact on the students' performance in KCSE examinations.

### 3.3 The Sample Size and Sampling Procedure

This part describes the sampling procedure and the sample size of the schools, students, teachers and principals who were involved in the study. According to Borg and Gall (1989), sampling is a process of selecting an appropriate number of subjects from a defined population. Cooper (1989) observes that how large a sample should be is a function of variation of the population parameters under study and the estimating procession required by the researcher. Best (1998) observed that a sample should be large enough for adequate representation of the target population, and small enough to be selected economically in terms of subject availability and expense in terms of money and time involved. These aspects therefore gave a clear guideline on the process of selecting the sample size.

To determine the sample size, a table designed by Krejcie and Morgan (1970: 608) cited in Mulusa (1988) was used (**See appendix V**). This table gives the required sample for various population sizes. The target population of 790 students required a sample size of 254 students. The schools that have presented candidates for KCSE examination for the last three are nine schools in the district. Using Krejcie and Morgan table, all the schools were taken for the study. (**See appendix V**). Principals of all schools involved participated in the study thus a total of nine head teachers. The target population of the teachers was 120 using the table developed by Krejcie and Morgan.



### **3.4 Research Instruments**

Data was collected using the self administered questionnaires. The instrument of the questionnaire was chosen because it saves time and since the targeted respondents were literate and therefore comfortable for them to respond to the items. Mouly (1978: 189) cited in Mulusa (1988; 114) observes that questionnaires allows for greater uniformity in the way questions are asked which ensures greater comparability as well as giving the respondents freedom of giving their feelings to sensitive questions especially where identity is not required. Kothari (2005) concurs with them when he observes that a questionnaire is the most suitable tool for collecting data from a field especially where the respondents are many and varied. Three types of questionnaires were administered; those for head teachers, those for the teachers and those for the students. They were divided into two sections, A and B.

#### **Principals Questionnaire**

Part A of the head teacher's questionnaires collected data on their academic background, age, sex, experience as head teachers and the category of the school. Part B comprised of both open ended and closed ended questions to collect information on the students' behavior, the availability of the teaching and learning resources and the school academic performance. They were also sought the principals' opinion on the factors affecting students' performance in KCSE examinations and possible ways of improving on the schools performance.

### **Teachers Questionnaire**

Part A of the teacher's questionnaires collected the same data as those of the head teachers but now on the teachers' themselves. Part B on the other hand collected information on the teaching load, teacher's preparedness, student assignment, the teachers instructional approaches, syllabus coverage, the available school facilities and the possible factors affecting the students performance in KCSE examinations as well their view on how to improve the schools' results.

### **Students' Questionnaire**

Part A of the students' questionnaires collected information on personal data of the students, adequacy of learning facilities, information on the teachers, teaching process, socio-economic background and the immediate community. Part B consisted of the open ended questions to gather information on the effect of distance from school to home and vice versa problems that affects the students and the possible factors affecting their performance in KCSE examinations as well as the way forward to improving on the situation.

### **3.5 Pre-Testing of Research Instruments for Validity and Reliability**

The research instrument was pre-tested in three schools in order to test the validity and reliability of research instruments identify possible problems during the main study and clarify on the instrument and appropriateness of the language. According to Bell (1993), contends that the purposes of pilot exercise are to get the bugs out of the instrument so that subjects in the main study does not experience any difficulties in completing it and so that one could carry out a preliminary analysis to see whether the wording and the

format of questions would present any difficulties when the main data was analysed. The pilot schools were selected randomly from the district. The assumption was that the pilot schools being in the same district as the study schools and similar experiences and so the outcome of their responses would be fairly similar.

### **Validity**

Mugenda and Mugenda (1999) define validity as the accuracy and meaningfulness of inferences which are based on the research results. It is thus the degree to which results obtained from the analysis of data actually represents the phenomena under study. In this study content validity was ensured by checking whether items in the questionnaire reflect research questions.

### **Reliability**

Reliability is the degree to which instruments yield consistent results when administered a number of time (Shaw and Wright, 1969). An instrument is thus reliable when it measures a variable accurately and consistently if used repeatedly under similar conditions. Reliability of a questionnaire is concerned with the consistency of responses to the researcher's questions (Mitchell, 19996). According to him, internal consistency approach was used to assess reliability. In this approach, responses of each question in the questionnaire were correlated with those of other questions in the questionnaire. The internal consistency was calculated using Cronbach's alpha for each questionnaire. The calculated reliability indexes were as follows:

- Reliability index for the teachers' questionnaire was 0.91
- Reliability index for students' questionnaire was 0.56
- Reliability index for principals' questionnaire was 0.95

Since the coefficient ranges in value from 0-1, all the three questionnaires were considered reliable.

### **3.6 Data Collection Procedure**

The three sets of questionnaires were used in the data collection process. The researcher sought permission and authority to carry out research from the MOE through an introduction letter from the university. Subsequent clearance was sought from the DEO Manderla East District. Introduction letters were sent to the principals and teachers requesting them to participate in the study. The researcher then visited some schools and in some schools used a research assistant to administer the questionnaires to the respondents through the help of the school administration. This is because Manderla East District has a vast area despite the small number of schools.

### **3.7 Data Analysis and Presentation Techniques**

After the fieldwork, the questionnaires were cross-examined to ascertain their accuracy, completeness and uniformity. The collected data was then coded and organized into different categories. Both descriptive and inferential statistics were used to answer the research questions and objectives in relation to the topic. The research questions were based on seeking to establish relationships between the quantifiable dependent variable (performance) and the independent variables. To establish whether there was any relationship between the dependent variable (performance in KCSE examinations) and other variables in the study, chi-test was applied.

## CHAPTER FOUR

### DATA ANALYSIS AND PRESENTATION

#### 4.0 Introduction

This chapter deals with the analysis of data which was collected from the nine schools. The analysis was aimed at addressing the purpose of the study which was to investigate the factors affecting the students' performance in KCSE examinations in Mandera East District. The chapter looks at the analysis of data on performance in relation to the various independent variables mentioned in chapter one are presented and discussed.

#### 4.1 The Questionnaire Return –rate

Out of the nine questionnaires administered to the principals, all were collected back. This was therefore 100% return-rate. The administered number of questionnaires for the teachers was 92 and the number collected back was 82. This is 95.6% return rate. For the students' questionnaires, 254 were administered with 251 collected back representing 98.8% return-rate. This response rate was good and representative and conforms to Mugenda and Mugenda (1999) stipulation that a response rate of 50% is adequate for analysis and reporting; a rate of 60% is good and a response rate of 70% and over is excellent.

## 4.2 Teacher characteristics and KCSE performance

The data sought to establish the teacher's background information of the teachers in order to determine the reliability of the information given. The background information included gender, age, academic qualifications, teaching experience and teacher- student ratio. It was established as follows:

### 4.2.1 Gender of Principals.

A sample of nine principals was involved in the study and all of them indicated their gender. This information is presented in Table 1

**Table 1: The gender of the principals**

<b>Gender</b>	<b>Frequency</b>	<b>Percent</b>
Male	8	88.9
Female	1	11.1
<b>Total</b>	<b>9</b>	<b>100.0</b>

The gender composition of principals was such that there were absolutely more males than the females; that is 8 males (88.9%) versus 1 female teacher (11.1%).

### 4.2.2 Principals' age.

The principals were asked to indicate their age bracket. The age was then indicated as presented in Table 2

**Table 2: Age distribution for principals and teachers**

Age In Years	principals		Teachers	
	Frequency	Percent	Frequency	Percent
Below 25	-	-	4	4.9
25 -34	1	11.1	49	59.8
35 – 44	2	22.2	18	21.9
45- 54	6	66.7	11	13.4
<b>Total</b>	<b>9</b>	<b>100.0</b>	<b>82</b>	<b>100.0</b>

From Table 2, it is evident that the majority of the principals were in the age bracket of 45- 54 years; this represented 66.7% of the sample. Others were within the age bracket of 35-44 years with 22.2% and 25-34 with 11.1% respectively of the sample. Concerning the age of the teachers, there were more teachers between 26 and 45 years of age (59.8%) than in other groups. Those below 25 years accounted for only 6.5% of the sample. This shows that most of the head teachers were middle aged and only a small proportion of young people are promoted to the headmasters' position and thus remain in the teaching work.

#### **4.2.3 Gender of teachers**

A sample of 92 teachers from the 9 schools was used in the research. The gender composition was such that there were more male teachers than female teachers, that is, 79.3% males against 20.7% females. This implies that there are less female teachers in the district at the head masters position than males. The minimal number of female teachers who have moved into this region to teach could be due to its climatic conditions. This information is presented in Table 3.

**Table 3: Gender of the teachers**

Gender	Frequency	Percent
Male	73	76.8
Female	19	23.2
<b>Total</b>	<b>82</b>	<b>100.0</b>

**4.2.4 Academic qualifications of Principals and Teachers**

The principals and teachers indicated their academic qualifications. Findings on this are presented in Table 5.

**Table 4: Academic qualifications of principals and teachers**

Academic qualifications	Principals		Teachers	
	Number	Percent	Number	Percent
M.Ed	2	22.2	2	2.4
B.Ed	7	77.8	43	52.4
BA/BSc with PGDE	-		12	14.6
BA/BSc General	-		3	3.7
SI /Diploma	-		18	22.0
Technical Teacher One	-		4	4.9
<b>Total</b>	<b>9</b>	<b>100.0</b>	<b>82</b>	

The table above revealed that the majority of the school principals, 52.4% had a Bachelor of Education degree. This is in commensurate with the government policy which emphasizes on employment of graduate teachers to teach in secondary schools.

Only two (2.4%) of the principals had an M.Ed degree

Concerning the teachers, the findings showed that 52.4% had a Bachelor of Education degree. 22.0% of the teachers had an SI/Diploma. This shows that the principals position are given on merit of the level of education as all principles had either a bachelors degree or a masters degree. The small percentage of those with an M.Ed indicates an aspect of growth by both principals and teachers.



#### 4.2.5 Teaching experience of principals

The principals were asked to indicate their teaching experience which could be used to explain the performance in KCSE examinations. The information from the analysis is presented in Table 6.

**Table 5: Teaching experience of Principals.**

No. of years	Frequency	Percentage
11-15	1	11.1
16-20	6	66.7
Over 20	2	22.2
<b>Total</b>	<b>9</b>	<b>100.0</b>

The data in this table revealed that most principals (66.7%) had teaching experience of 16-20 years. Those with over 20 years accounted for 22.2% and those with experience of 11-15 years accounted for 11.1% of the sample. This information indicates that before one is promoted to the status of being a principal, he /she needs to have some teaching experience and a high level of education.

#### 4.2.6 Teaching experience of teachers

Teachers were requested to indicate their teaching experience which could be used to explain KCSE examination performance. The findings of the teachers' teaching experience is presented in Table 7

**Table 6: Teaching experience of teachers**

<b>Range of years</b>	<b>Frequency</b>	<b>Percent</b>
Less than 1 year	13	15.9
1-2	9	11.0
3-5	22	26.8
6-10	12	14.6
Over 10 years	26	31.7
<b>Total</b>	<b>82</b>	<b>100.0</b>

From the data presented in Table 7, it is evident that most teachers had an experience of over 10 years (31.7%). Those with 6-10 years of teaching experience accounted for only 14.6% of the sample. The teacher with 5 years and above seems to form a greater portion from the findings which shows that the teachers in the district are had long teaching experience and thus could give reliable information.

#### **4.2.7 Teacher – student ratio**

The principals were asked to indicate the teacher – student ratio in their schools. Table 8 presents this information.

**Table 7: Average teacher – student ratio in schools**

<b>Ratio</b>	<b>Frequency</b>	<b>Percent</b>
1:30	1	11.1
1:40	3	33.3
1:50	5	55.6
<b>Total</b>	<b>9</b>	<b>100.0</b>

The table reveals that the ratio of 1:50 was very frequent with 55.6%, while 1:30 had 11.1% and ratio 1:40 had 33.3%. This indicated that the schools were not in line with education regulations as outlined in section 19 of the Education Act; the Legal Notice 106/1968 which states that no class in any secondary school from form one to form four

should exceed 45 students. This could be explained by the introduction of free primary education which produces many pupils who join secondary schools. It could also be explained by the subsidized secondary education in Kenya which has increased the retention rate in secondary schools across Kenya.

#### 4.2.8 Principals' response on subject allocation to teachers.

The principals were requested to indicate whether teachers' in their schools were assigned to teach subjects they were not trained in. They were further asked to give reasons for assigning them to teach the subjects they were not trained in, if it occurred. The data from the analysis is presented in Table 9:

**Table 8: Response on subject allocation for teachers**

<b>Response</b>	<b>Frequency</b>	<b>Percent</b>
Yes	3	33.3
No	6	66.7
<b>Total</b>	<b>9</b>	<b>100.0</b>

The table reveals that 66.7% of the teachers were assigned to teach subjects that they had not been trained in, while 33.3% of the teachers were assigned to teach subjects they were trained in. The reason given for assigning teachers to teach subjects they were not trained in was the teacher shortage problem.

#### 4.2.9 Teacher characteristics based on students' opinions

The students were asked to give their opinions about teachers' characteristics. They were required to use the choices given to make responses to a number of statements relating to teachers. The information from the students is represented in Table 10.

- i) Strongly Agree = SA
- ii) Agree = A
- iii) Undecided = U
- iv) Disagree = D
- v) Strongly Disagree = SD

**Table 9: Students' responses on teachers' characteristics in percentages**

STATEMENT		SA	A	U	D	SD
<b>A. about teachers</b>						
1	Teachers explain concepts in subjects clearly	28.3	47.8	12	6.4	5.6
2	Teachers are very committed to their work.	31.9	44.2	12	7.1	4.8
3	Teachers use a variety of teaching aids	23.9	52.2	11.2	4.8	7.96
4	Teachers always give extra work and mark assignments given to students.	21.5	54.6	7.96	8.8	6.4
5	Teachers give a lot of encouragement and reward good performance.	29.5	46.6	11.6	6.8	5.6
6	Teachers pay keen attention to weak students in class and organize for remedial classes.	32.7	43.8	9.6	9.2	4.8
7	Some subjects lack teachers at times	29.9	47.4	8.4	10.0	4.4

From the table, 28.3% students strongly agreed that teachers explained concepts clearly, 47.8% agree with the same statement, 12% of the students were undecided on the same, 6.4% students disagreed whereas 5.6% strongly disagreed. 1.2% of the students did not respond. This shows that the teachers in the district explained concepts clearly contributing to the performance of the student.

On the teacher's commitment, 31.9% students strongly agreed that the teachers were committed to their work, 44.2% of students agreed on the same. Only 4.8% strongly disagreed with the statement. This implies that teachers in the district were committed to their work.

On the teacher's use of variety of teaching aids, 23.9% strongly agreed that they were used while presenting lessons, 52.2% agreed, 11.2% of students were undecided on the aspect whereas 4.8%disagreed as compared to 8.0% who strongly disagreed on the matter. It is thus evident that most teachers use aids in lesson presentation to enhance understanding.

From the findings, 21.5% students strongly agreed that teachers gave assignments and marked them regularly. On the other hand, 54.6% students are in agreement with the statement whereas 6.4% students strongly disagree with the statement. It is thus clear that most teachers gave assignments and marked them regularly.

On encouragement and rewarding of good performance, 76.1% students agreed or strongly agreed with the statement whereas about 12.4% disagreed or strongly disagreed with the statement. It can therefore be depicted that the teachers encourage and reward good performance.

On teachers paying keen attention to the weak students in class, 32.7% strongly agreed with the statement, 43.8% agreed with the statement while 4.8% strongly disagreed whereas 9.2% disagreed with the statement. From the findings, it is clear that teachers ought to pay more attention to individual students whenever possible so as to take care of existing difference of learners.

On the statement that some subjects lacked teachers at times, most students agreed or strongly agreed with the statement that is 77.3% of the students. This therefore means that over 50% of the subjects lack teachers. This indicates that there is an acute shortage of teachers in most schools within Mandera East District.

#### 4.3 Learners characteristics and KCSE performance.

The data sought to provide background information of learners. This included students' gender, marks scored in KCPE examinations, occupation of the parents/guardians.

##### 4.3.1 Students' gender

A sample of 254 students was used in the study from 9 schools in Mandera East District.

The information is presented in Table 11

**Table 10: students' gender**

Gender	Frequency	Percent
Male	167	65.7
Female	87	34.3
<b>Total</b>		<b>100.0</b>

The gender composition of the students was such that there were more males than females, that is, 167 boys (65.7%) against 87 girls (34.3%). This shows that the male

students' population who responded was higher than the female students which implies that more boys than girls enroll in secondary schools in the district.

#### 4.3.2 Range of marks scored in KCPE

Students were asked to indicate marks scored in KCPE, which could be used to explain performance in KCSE. The information is presented in Table 12.

**Table 11: Range of marks scored in KCPE**

<b>Marks</b>	<b>Frequency</b>	<b>Percent</b>
151 – 200	23	9.2
201 – 250	67	26.7
251 – 300	112	44.6
301 – 350	49	19.5
351 – 500	-	-
<b>Total</b>	<b>251</b>	<b>100.0</b>

The table shows that 161 students (64.1%) scored over 300marks which is regarded as above the average mark out of the total 500 marks. Those who scored below the average mark were 80 students who comprised of 34.9% students. This indicates that although most students were above average, there were quite a number who were admitted with lower than expected marks in Mandera East District.

#### 4.3.3 Number of students' per class

Students were asked to indicate how many they were in their class. This information from students is presented in Table 13 below.

**Table 12: Number of students per class**

Number per class	Frequency	Percent
20 - 30	6	2.4
31 - 40	59	23.5
41 - 50	81	32.3
51 and above	105	41.8
<b>Total</b>	<b>251</b>	<b>100.0</b>

Information on class size revealed that majority of the schools had students of 51 and above per class representing 41.8% and 32.3% had a class size ranging of 41-50 of the sample. On the other hand 2.4% representing a class of 20-30 had the lowest number of students per class. The information reveals therefore that most schools have the class size of more than 50 students which may have an impact on the delivery of the content which compares well with earlier finding of the teachers –student ratio of 1:50 being the most frequent.

#### 4.3.4 Parents/guardians occupation

The students were asked to indicate their parents/guardians' occupation in one of the items in the questionnaire. The findings were presented in Table 14 below.

**Table 13: Parents/guardians occupation**

Type of employment	Father		Mother		Guardian	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Salaried employment	89	35.5	24	9.6	6	2.4
Self-employment	103	41.0	126	50.2	193	76.9
Casual worker	23	9.2	43	17.1	18	7.2
Manual worker	36	14.3	58	23.1	34	13.5
<b>Total</b>	<b>251</b>	<b>100.0</b>	<b>251</b>	<b>100.0</b>	<b>251</b>	<b>100.0</b>



From the table above, the results indicates that;

- i) A slightly higher percentage of fathers are on the self-employment category forming 41.0% while those who are in formal employment comprise of 35.5% of the sample whereas the casual workers and the manual workers comprise of the 9.2% and 14.3% of the sample respectively. This indicates that majority of the fathers may be in a position of meeting the educational needs of their children.
  
- ii) On the other hand, the mothers have the greatest number of them being on the self-employment category with 50.2% of the sample as compared to the fathers whose percentage is 41.0% of the sample. They have the smallest percentage in the formal employment of 9.6% from the sample that was taken.
  
- iii) It also emerged from the results in the table above that the greatest percentage of the guardians were in the self-employment bracket with 76.9% of the sample. This indicates that they never relied on the constant income which may also influence the rate at which they pay the school fees.

#### **4.3.5 Payment of school fees**

The students were asked to indicate whether or not their school fee was paid in time and if not how it affected their learning. The results are indicated in Table 15 below.

**Table 14:** Payment of school fees

<b>Response</b>	<b>Frequency</b>	<b>Percentage</b>
Yes	78	31.1
No	173	68.9
<b>Total</b>	<b>251</b>	<b>100.0</b>

The table revealed that only 31.1% had their school fees paid in time as compared to 68.9% whose schools fees delayed to be paid. The results indicated that over 60% of the students had problems related to school fees payment. Due to non-payment of school fees in time, students' were affected in various ways in regard to learning which in turn had an impact on their performance.

The table below indicates how non-payment of school fees affected the students' performance.

**Table 15: How learning was affected due to non-payment of fees.**

<b>Effects on learning</b>	<b>Frequency</b>	<b>Percent</b>
Concentration on problems at home.	21	8.4
Missing lessons while sent home for fees.	83	33.1
Poor grades obtained hence discouraged.	24	9.6
<b>Total</b>	<b>128</b>	<b>51.1</b>

The table indicates that as a result of the students sent home for fees, 33.1% missed lessons and learning in the process, 8.4% revealed that their learning was affected since they tended to concentrate on the problems back at their homes while 9.6 % of sample indicated that they continuously obtained lower grades which discouraged them.

#### **4.3.6 Students' behavior as perceived by principals**

The principals were asked to indicate students' behavior in their schools to show how frequent the behavior was. The information analysis is presented in Table 17

**Table 16: Students' behavior as perceived by principals**

	Behaviour	Frequency		
		Frequent	sometimes	rarely
1	Truancy	18.3	-	81.7
2	Strikes	14.3	-	85.7
3	Sickness	55.8	28.7	15.5
4	Fees problems	57.4	25.1	17.5
5	Suspensions	-	56.6	21.9
6	Punishments	15.5	55.8	28.7

The table above reveals the following concerning the students' behaviour as perceived by principals:

- i) **Truancy:** most principals 81.7% indicated that this behaviour was rare.
- ii) **Strikes:** 85.7% of the principals' sample reported this as a very common phenomenon in their schools. 14.3% of the principals' sample indicated that strikes were frequent in their schools thus interrupting studies.
- iii) **Sickness:** 55.8% principals reported that sickness related cases were frequent in their schools, 28.7% of principals indicated that this situation sometimes occurred whereas 15.5% agreed that it was rare in their schools.
- iv) **Fees problem:** 57.4% of the principals indicated that fees related problems was frequent, 25.1% indicated that sometimes it affected the students while 17.5% indicated that it was a rare aspect that led to the situation.
- v) **Suspensions:** No cases of frequent suspensions were reported. 56.6% principals reported that students were suspended sometimes with 21.9% principals indicating that the cases were not frequent.

- vi) **Punishment:** 15.5% principals indicated that student punishment were frequent in their schools, 55.8% principals reported that student punishments were sometimes carried out. 28.7% principals also indicated that it was a rare phenomenon.

#### 4.3.7 Students' behavior as perceived by teachers

Teachers were asked to indicate the frequency of students' behaviour in their school. The findings are presented in Table 18

**Table 17: Learners' characteristics as perceived by teachers in percentage**

	Behaviour	Frequency		
		Frequent	sometimes	rarely
1	Truancy	8.4	35.1	56.6
2	Strikes	11.1	33.9	55.0
3	Sickness	38.1	22.9	39.0
4	Fees problems	60.2	22.3	17.5
5	Suspensions	13.5	62.2	24.3
6	Punishments	35.1	56.7	8.4

The table above revealed the following concerning the students' behaviour has perceived by teachers:

- i) **Truancy:** Most teachers' 56.6% indicated that this behaviour was rare, 35.1% indicated that it sometimes occurred while 8.4% indicated that it was frequent.
- ii) **Strikes:** 55.0% of the teachers' sample reported this as a rare phenomenon in their schools. 11.1% of teachers' sample indicated that strikes were frequent in their schools thus interrupting studies.
- iii) **Sickness:** 38.1% of teachers reported that sickness related cases were frequent in their schools, 22.9% of teachers indicated that this situation

sometimes occurred whereas 39.0% agreed that it was rare in their schools.

- iv) **Fees problem:** 60.2% of teachers indicated that fees related problems were frequent, 22.3% indicated that sometimes it affected the students while 17.5% indicated that it was a rare aspect that led to the situation.
- v) **Suspensions:** 13.5% of the teachers agreed that suspension is real and affects studies. 62.2% principals reported that students were suspended sometimes with 24.3% principals indicated that the cases were not frequent.
- vi) **Punishment:** 35.1% teachers indicated that student punishment were frequent in their schools, 56.7% teachers reported that student punishments were carried out sometimes. 8.4% teachers also indicated that it was a rare phenomenon.

From the responses given by both principals and teachers, it is evident that the two concurred in reporting that truancy and strikes were rare in their schools.

#### 4.4 Resources and KCSE Performance

Principals, teachers and students were asked to indicate the adequacy of various facilities and resources in their schools. The alternative choices for adequacy were as follows:

- i) Adequate - A
- ii) Satisfactory - S
- iii) Inadequate - I

iv) Not available - NA

The analysis was done under the various headings as indicated below based on the three categories of respondents.

#### 4.4.1: Principals' take on resources

**Table 18: Principals' response to availability of resources in their schools in percentages**

		ADEQUACY			
A. School Facilities		A	S	I	NA
1	Staffroom	68.8	31.3	-	-
2	Classrooms	53.1	40.6	6.3	-
3	Library	6.3	21.9	65.6	6.3
4	Science laboratories	28.1	40.6	25.0	6.3
5	Home science block	21.9	6.3	25.0	46.9
6	Dormitories	25.0	34.4	28.1	6.3
7	Teachers' quarters	12.5	12.5	62.5	12.5
8	Electricity	87.5	6.3	-	6.3
9	Playing ground	62.5	18.8	18.8	-
B. School equipment					
1	Furniture (desks, library and staff chairs)	46.9	12.5	34.4	6.3
2	Laboratory equipment	28.1	59.4	12.5	-
3	Home science equipment	40.6	6.3	12.5	40.6
4	Dormitory beds	25.5	50.0	25.5	-
C. Teaching/Learning resources					
1	Books (textbooks and exercise books)	12.5	12.5	62.5	6.3
2	Wall maps and charts	12.5	15.6	65.6	6.3
3	Laboratory chemicals	28.1	59.4	12.5	
4	Library books	62.5	31.3	6.3	-
5	Chalk boards	75.0	18.8	6.3	-
6	Stationery	53.1	25.0	21.9	-

The results from the above table revealed the following on facilities and resources:

- i) **Staffroom:** Most schools had adequate staffroom with 68.8% while 31.3% indicated their staffroom to be satisfactory.

- ii) **Classrooms:** Over fifty percent of the schools had adequate classrooms (53.1%), 40% with satisfactory classrooms and only 6.3% of the schools had inadequate classrooms.
- iii) **Library:** Only 6.3% of the sample indicated that their libraries were adequate with another 6.3% indicating that they did not have the facility in their schools.
- iv) **Science laboratories:** Majority of the schools indicated that the science laboratories were satisfactory (40.6%). Only 28.1% of the schools had adequate science laboratories. 6.3% of the sample schools did not have the facility. Those with inadequate facilities comprised of 25% of the sample schools.
- v) **Home science block:** This facility was lacking in most schools with 46.9% indicating that the facility was lacking in their schools. This could be explained by the fact that the majority of the students who take Home Science as a subject are girls who happen to be the least among the secondary schools in Mandera East District. It further could be as a result of Home Science being a very expensive subject in terms of the equipment input which most schools in the district may not manage.
- vi) **Dormitories.** In most schools, dormitories were indicated to be satisfactory with 34.4%. The inadequate response was 28.1%, schools with adequate dormitories accounted for only 25% while 6.3% of the sample did not have dormitories.

- vii) **Teachers' houses:** From the table (62.5%) of the schools indicated that teachers' houses were inadequate in their schools. 12.5% indicated that they did not have staff houses in their schools.
- viii) **Play grounds:** All the schools had play grounds with 62.5% of the sample indicating that the fields were adequate. 18.8% of the schools indicated that the play fields were satisfactory while another 18.8% of the sample school actually had inadequate fields.
- ix) **Laboratory equipment:** The table revealed that 37.5% of the sample had adequate equipment while 34.4% of the sample indicated that this equipment was inadequate in their schools.
- x) **Home science equipment:** The tables revealed that in 40.6% of the schools, equipment were adequate while 6.3% of the sampled principals were satisfied. In 12.5% of the sample schools equipment were inadequate and lacking in 40.6% of the sampled schools.
- xi) **Dormitory beds:** In 40.6% of the sampled schools, the beds were adequate while in 18.8% it was satisfactory. In 15.6% of the sample schools had inadequate beds and in 25.0% of the schools never had the beds.
- xii) **Wall maps and charts:** In most schools (65.6%), maps and charts were inadequate while in 15.6% they were satisfactory. In 12.5% schools that were sampled, they were adequate and actually not available in 6.3 % of the schools. This could be explained by the fact that teachers were preparing charts or the schools were not providing them.



- xiii) **Laboratory chemicals:** All the nine schools had the laboratory chemicals. However the findings revealed that 59.4% of the schools had inadequate supply of the chemical, 28.1% of the sampled schools had adequate chemicals while in 12.5% the chemicals were inadequate. The availability of the chemicals may be explained by the fact that schools are required to take at least two science subjects during the course of learning that are examinable at KCSE examination level.
- xiv) **Library books:** From the table, only 12.5% of the schools had adequate library books while 62.5% had inadequate books in their libraries and in 6.3% of the sample had no library books.
- xv) **Chalk boards:** All schools had chalk boards. 56.3% of the sample schools had adequate chalk boards while 31.3% was satisfactory and was actually inadequate in 12.5%.
- xvi) **Stationery:** Most schools had enough stationery with 62.5% registering adequacy while 31.3% indicated that it was satisfactory while 6.3% was actually not adequate.

#### 4.4.2 Teachers' response on adequacy of resources in their schools

The teachers were asked to indicate their response on the availability of facilities in their schools. The findings are given in Table 19 below.

**Table 19: Teachers' responses on adequacy of facilities in percentages**

		ADEQUACY			
		A	S	I	NA
<b>A. School Facilities</b>					
1	Staffroom	66.3	24.4	7.3	2.0
2	Classrooms	64.6	28.1	4.9	2.4
3	Library	29.2	12.2	50.0	8.5
4	Science laboratories	28.0	43.9	28.1	-
5	Home science block	23.2	50.0	17.1	9.8
6	Dormitories	46.3	26.8	14.6	12.2
7	Teachers' quarters	8.5	18.3	52.4	20.7
8	Playing ground	70.7	12.2	14.6	2.4
<b>B. School equipment</b>					
1	Furniture (desks, library and staff chairs)	23.4	25.6	36.6	13.4
2	Laboratory equipment	65.9	19.5	11.0	3.7
3	Home science equipment	25.6	28.1	12.2	34.1
4	Dormitory beds	42.7	29.3	15.9	12.2
<b>C. Teaching/Learning resources</b>					
1	Wall maps and charts	29.3	19.5	26.8	24.4
2	Laboratory chemicals	14.6	12.2	61.0	12.2
3	Library books	28.1	11.0	52.4	8.5
4	Chalk boards	64.6	29.3	3.7	2.4
5	Stationery	50.0	28.1	13.4	8.5

- i) **Staffroom:** Most schools had adequate staffroom with 66.3% teachers felt that the facility in their school was adequate while 24.4% indicated their staffroom to be satisfactory. Only 7.3% of the teachers felt that the staffroom facility was inadequate while 2.0% lacked the facility.
- ii) **Classrooms:** Over fifty percent of the schools had adequate classrooms with 64.6% of the teachers indicating that their schools had adequate classes. 28.1% revealed that the classrooms were satisfactory and only 4.9% of the schools had inadequate classrooms.
- iii) **Library:** 29.2% of the teachers indicated that their library facility was adequate with another 12.2% described them as satisfactory while 50.0%

- indicated that the library facility was inadequate as 8.5% of the teachers indicating that they did not have the facility in their schools.
- iv) **Science laboratories:** Majority of the schools indicated that the science laboratories were satisfactory (43.9%). Only 28.0% of the schools had adequate science laboratories. Those with inadequate facilities comprised of 28.1% of the sample schools.
  - v) **Home science block:** 50.0% of the sampled schools had the blocks satisfactory, 23.2% of the sampled schools had adequate of this facility while 17.1% of the sampled schools were inadequate and the facility lacked in 9.8% of the sampled schools. The high percentage means that most schools offered the subject.
  - vi) **Dormitories.** In most schools, dormitories were indicated to be adequate with 46.3%. The inadequate response was 14.6%, schools with satisfactory dormitories accounted for only 26.8% while 12.2% of the sample did not have dormitories.
  - vii) **Teachers' houses:** From the table (52.4%) of the schools indicated that teachers' houses were inadequate in their schools. 20.7% indicated that they did not have staff houses in their schools.
  - viii) **Play grounds:** All the schools had play grounds with 70.7% of the sample indicating that the fields were adequate. 12.2% of the schools indicated that the play fields were satisfactory while another 14.6% of the sample school actually had inadequate fields.

- ix) **Laboratory equipment:** The table revealed that 65.9% of the sample had adequate equipment while 11.0% of the sample indicated that this equipment was inadequate in their schools.
- x) **Home science equipment:** The tables revealed that in 25.6% of the schools, equipment were adequate while in 28.1% they were satisfactory. In 12.2% of the sample schools equipment were inadequate and lacking in 34.1% of the sampled schools.
- xi) **Dormitory beds:** In 42.7% of the sampled schools, the beds were adequate while in 29.3% it was satisfactory. In 15.9% of the sample schools had inadequate beds and in 12.2% of the schools never had the beds.
- xii) **Wall maps and charts:** In most schools (26.8%), maps and charts were inadequate while in 46.3% they were satisfactory. In 29.3% schools that were sampled, they were adequate and actually not available in 24.4 % of the schools. This could be explained by the fact that teachers were preparing charts or the schools were not providing them.
- xiii) **Laboratory chemicals:** All the nine schools had the laboratory chemicals. However the findings revealed that 61.0% of the schools had inadequate supply of the chemical, 14.6% of the sampled schools had adequate chemicals while in 12.2% the chemicals were inadequate. The availability of the chemicals may be explained by the fact that schools are required to take at least two science subjects during the course of learning that are examinable at KCSE examination level.

- xiv) **Library books:** From the table, only 28.1% of the schools had adequate library books while 52.4% had inadequate books in their libraries and in 8.5% of the sample had no library books.
- xv) **Chalk boards:** All schools had chalk boards. 64.6% of the sample schools had adequate chalk boards while 29.3% was satisfactory and was actually inadequate in 3.7%.
- xvi) **Stationery:** Most schools had enough stationery with 50.0% registering adequacy while 28.1% indicated that it was satisfactory while 13.4% was actually not adequate and it lacked in 8.5% of the sampled schools.

#### 4.4.3 Students' responses on adequacy of resources

Students were asked in one of the items in their questionnaire to indicate the adequacy of resources in their schools. The findings are presented in the Table 21 below

**Table 20: Students' responses on adequacy of resources (in percentage)**

Facilities	Adequate	Inadequate	Not available
Text books	69.5	25.7	-
Laboratory equipment	68.9	29.3	1.5
Desks	43.2	46.2	10.3
Chairs	95.5	3.9	-
chalkboards	97.3	1.8	0.9

The table reveals the following from the students' on adequacy of resources in their schools:

- **Text books:** 69.5% of the students described text books in their schools as adequate with 25.7% of students' sample describing them as inadequate.

- **Laboratory equipment:** 68.9% of the students' sample revealed that these facilities were adequate in their schools, 29.3% students described them as inadequate and 1.5% indicated that the equipment were lacking in their schools.
- **Library:** 43.2% of the students reported that their schools' libraries were adequate, 46.2% students revealed that their libraries were inadequate and 10.3% indicated that their schools lacked libraries.
- **Desks:** students who indicated that desks were adequate in their schools were 96.1%, with 3.9% indicating that desks were inadequate in their schools.
- **Chairs:** 95.5% of the students' sample revealed that chairs were adequate in their schools with 3.9% reporting that chairs were inadequate.
- **Chalkboard:** 97.3% students' indicated that the chalkboard was adequate in their schools, 1.8% of the students' sample reported that the same was inadequate in their schools.

#### 4.5 Class size and students' performance in KCSE examination

The students were supposed to indicate the range of student population in their classes in one of the questionnaire items. The results are indicated in Table 22

**Table 21: Class sizes as indicated by the students**

Class size	Frequency	Percent
20 – 30	3	1.2
31 – 40	13	5.2
41 – 50	73	29.1
51 and above	162	64.5
Total	251	100.0

From the table, it is clear that most classes were in the range of 51 and above students (64.5%). The second class size was that of 41 – 50 students with 29.1%. Classes with 20 -

30 students had the minimal percentage of 1.2% while those with 31 – 40 students had a percentage of 5.2%. This means that the majority of classes in Mandera East District were large which may have an impact on the delivery of the content by the teacher to the students thereby impacting on the performance of these students in KCSE examinations

#### **4.6 Relationship between performance in KCSE examination and other variables under study**

To establish whether there was a relationship between theory scores with categories above average, average and below average were cross tabulated against the categorized data. The chi-square test using the null hypothesis was used to establish this relationship.

##### **4.6.1 Relationship between KCSE performance and teacher characteristics**

The characteristics considered were:

- age of the teacher
- academic qualification of the teacher
- teaching experience
- the commitment of the teacher

##### **Hypothesis 1:**

$H_{01}$ : There is no relationship between KCSE performance and age of teachers

#### 4.6.2 The relationship between KCSE performance and age of teacher

**Table 22: Below shows the spread of teachers' ages**

	Age of teachers in years				TOTAL
	25 and below	26-35	36-44	45-54	
Performance	N	N	N	N	N
Above average	2	4	14	8	28
Average	2	15	18	3	38
Below average	3	4	2	7	16
<b>Total</b>	<b>7</b>	<b>23</b>	<b>34</b>	<b>18</b>	<b>82</b>

The data on various aspect of work content was subjected to Chi Square test using statistical package for social science to help to test the hypothesis that there is no relationship between KCSE performance and age of teachers. The calculated values were compared with critical value to establish whether to reject or accept hypothesis.

**Table 23: The chi-square test result**

t-Test: Two-Sample Assuming Unequal Variances		
	Between groups	Within groups
Mean	27	15.7
df	4	
t Stat	1.049781318	
t Critical two-tail	2.776445105	

The information in the above table confirms the findings suggested by results because  $t$  calculated = 1.049 <  $t$  critical = 2.776. This means that there is no significant difference in the KCSE performance and age of teachers. The hypothesis that there is no relationship between KCSE performance and age of teachers was therefore rejected.

#### **Hypothesis 2:**

$H_{02}$ : there is no relationship between KCSE performance and academic qualification of teachers



**Table 24: Relationship between KCSE performance and academic qualification of teachers**

Performance	Academic qualification					Total
	M. Ed	B. Ed	B. A/B. Sc	S1/Diploma	Technician	
Above average	2	14	1	8	3	28
Average	2	10	5	18	3	38
Below average	2	2	0	4	8	16
<b>Total</b>	<b>6</b>	<b>26</b>	<b>6</b>	<b>30</b>	<b>14</b>	<b>82</b>

**Table 25: Chi square test result**

t-Test: Paired Two Sample for Means		
	Between groups	Within groups
Mean	16.9	11.4
df	3	
t Stat	0.848528	
t Critical two-tail	3.182446	

The information in the table above confirms the findings suggested by results because  $t$  calculated = 0.8485 <  $t$  critical = 3.1824. This means that there was no significant difference between the KCSE performance and academic qualification of teachers. The hypothesis that there is no relationship between KCSE performance and academic qualification of teachers was rejected. This means that academic qualification of teachers affect KCSE performance.

**Hypothesis 3:**

$H_{03}$ : there is no relationship between KCSE performance and teaching experience of teachers

**Table 26: Relationship between KCSE performance and teaching experience of teachers**

Performance	Teaching experience in years					
	Below 1	1-2	3-5	6-10	Over 10	Total
	N	N	N	N	N	N
Above average	0	2	6	2	15	25
Average	1	3	20	2	8	34
Below average	1	3	10	2	7	23
<b>Total</b>	<b>2</b>	<b>8</b>	<b>36</b>	<b>6</b>	<b>30</b>	<b>82</b>

**Table 27: Chi square test result**

t-Test: Paired Two Sample for Means		
	Between groups	Within groups
Mean	16.7	19
df	3	
t Stat	0.293	
t Critical two-tail	3.182	

The data on various aspect of work content was subjected to Chi square test using statistical package for social science to help to test the hypothesis that there is no relationship between KCSE performance and teaching experience of teachers. The calculated values were compared with critical value to establish whether to reject or accept hypothesis. The information in the table above confirms the findings suggested by world bank report (1987) which noted that the number of years of experience of a teacher was the most consistently positive and significant contributor to the pupils academic achievement because  $t_{\text{calculated}} = 0.293 < t_{\text{critical}} = 3.182$ . This means that there was a significant difference between KCSE performance and teaching experience of teachers. The hypothesis that there is no relationship between KCSE performance and teaching

experience of teachers was therefore rejected. Thus there is a significant relationship between teaching experience of teachers and KCSE performance.

**Hypothesis 4:**

Ho<sub>4</sub>: There is no relationship between KCSE performance and the teachers' commitment to school work

**Table 28: Relationship between KCSE performance and the teachers' commitment to school work**

Performance	Response on teacher commitment by students					Total
	Strongly agree	Agree	Undecided	Disagree	Strongly disagree	
	N	N	N	N	N	N
Above average	40	60	8	11	13	180
Average	28	22	6	8	6	56
Below average	12	18	6	7	6	15
<b>Total</b>	<b>80</b>	<b>100</b>	<b>20</b>	<b>26</b>	<b>25</b>	<b>251</b>

The data on various aspect of working condition was subjected to chi-square using statistical package for social science to test the hypothesis that there is no relationship between KCSE performance and the teachers' commitment to school work. The calculated values were compared with critical value to establish whether to reject or accept hypothesis.

**Table 29: Chi square test result**

t-Test: Paired Two Sample for Means			
	Between groups	Within groups	
Mean	23	9.25	
df	3		
t Stat	1.451563		
t Critical two-tail	3.182446		

The information in the table above confirms the findings suggested by results because  $t$  calculated = 1.451563 <  $t$  critical = 3.182446. This means that there was no significant difference between the KCSE performance and the teachers' commitment to school work. The hypothesis that there is no relationship between KCSE performance and the teachers' commitment to school work was rejected. This concurs with findings by Waweru (1982) which established that teacher commitment to school work was a key characteristic to successful learning and achievement.

**Hypothesis 5:**

H<sub>05</sub>: There is no relationship between performance in KCSE examination and learner characteristics

**Table 31: Relationship between performance in KCSE examination and learner characteristics**

The characteristics considered were:

- Students' gender.
- Students' entry points to high school.

**Table 30: Relationship between students KCSE performance and students gender**

Performance	Students' gender		
	Male	Female	Total
	N	N	N
Above average	81	52	133
Average	38	50	88
Below average	23	7	30
<b>Total</b>	<b>142</b>	<b>109</b>	<b>251</b>

The chi- square value obtained at 4 degrees of freedom was 9.21, while the critical value of chi-square at 4df is 9.49 at 0.05 level of confidence. Since the obtained chi-square value is smaller than the critical value then there is no relationship between performance in KCSE examination and students' gender.

**Table 31: Chi square test result**

t-Test: Paired Two Sample for Means		
	Between groups	Within groups
Mean	92.5	18.5
df	4	
t Stat	2.5517	
t Critical two-tail	1.7062	

The information in the table above confirms the earlier findings in the study results because  $t_{\text{calculated}} = 2.5517 > t_{\text{critical}} = 1.7062$ . This means that there was a significant difference in the performance in KCSE examination and students' gender. The hypothesis that there is no relationship between performance in KCSE examination and students' gender was therefore accepted. This shows that there is no relationship between performance in KCSE examination and students' gender.

### Hypothesis 6:

$H_{06}$ : There is no relationship between KCSE performance and the student's entry marks to secondary school

**Table 32: Relationship between KCSE performance and the student's entry marks to secondary school**

Performance	Entry marks					Total
	150-200	2001-250	251-300	301-350	351-500	
	N	N	N	N	N	N
<b>Above average</b>	8	11	40	60	13	<b>132</b>
<b>Average</b>	6	6	8	28	22	<b>70</b>
<b>Below average</b>	7	6	12	18	6	<b>49</b>
<b>Total</b>	<b>21</b>	<b>23</b>	<b>60</b>	<b>106</b>	<b>41</b>	<b>251</b>

**Table 33: Chi square test result**

t-Test: Paired Two Sample for Means		
	Between groups	Within groups
Mean	26.4	9.8
df	4	
t Stat	2.103796	
t Critical two-tail	2.776445	

The information in the above table confirms the findings suggested by results because  $t$  calculated = 2.103796 <  $t$  critical = 2.776445. This means that there is no significant difference in the KCSE performance and the student's entry marks to secondary school. The hypothesis that there is no relationship between KCSE performance and the student's entry marks to secondary school was therefore rejected. This indicated that there was significant relationship between performance in KCSE examination and students' entry marks into secondary school.

**Hypothesis 7:**

H<sub>07</sub>: there is no relationship between KCSE performance and adequacy of resources

**Table 34: Relationship between KCSE performance and adequacy of resources**

The resources inquired for in this study such as the books, school laboratory, library and desks were taken on their average standing and the relationship was shown on the table below.

Performance	Adequacy of resources		
	Adequate N	Inadequate N	Total N
Above average	122	17	139
Average	43	21	64
Below average	19	29	48
<b>Total</b>	<b>184</b>	<b>67</b>	<b>251</b>

**Table 35: Chi square test result**

t-Test: Paired Two Sample for Means		
	Between groups	Within groups
Mean	31	10.5
df	3	
t Stat	2.314993	
t Critical two-tail	3.182446	

The information in the table above show that  $t \text{ calculated} = 2.314993 < t \text{ critical} = 3.182446$ . This means that there was no significant difference between the KCSE performance and adequacy of resources. The hypothesis that there is no relationship between KCSE performance and adequacy of resources was rejected. This means that adequacy of resources affect KCSE performance.

**Hypothesis 8:**

H<sub>08</sub>: There is no relationship between KCSE performance and class size

**Table 36: Relationship between KCSE performance and class size**

Performance	Class size range				
	21-30	31-40	41-50	Above 50	Total
	N	N	N	N	N
<b>Above average</b>	-	1	25	11	<b>37</b>
<b>Average</b>	1	48	64	36	<b>149</b>
<b>Below average</b>	1	26	14	24	<b>65</b>
<b>Total</b>	<b>2</b>	<b>75</b>	<b>103</b>	<b>71</b>	<b>251</b>

**Table 37: Chi square test result**

t-Test: Paired Two Sample for Means		
	Between groups	Within groups
Mean	12.33333	21.33333
df	2	
t Stat	0.85042	
t Critical	4.302653	

The information in the above table shows that the calculated t value = 0.85042 < critical t value = 4.302653. This means that there is a no significant difference in the KCSE performance and class size. The hypothesis that there is no relationship between KCSE performance and class size was therefore rejected.

#### **4.7 Opinion of teachers, principals and students on performance in their schools**

Principals, teachers and students' were asked to indicate whether the school performance was above average, average or below average. The result is presented in the following tables



#### 4.7.1 Principals' rating on performance in their schools.

**Table 38: Principals' performance rating**

<b>Performance</b>	<b>Frequency</b>	<b>Percentage</b>
Above average	2	22.2
Average	4	44.5
Below average	3	33.3
<b>Total</b>	<b>9</b>	<b>100.0</b>

The majority of the principals (44.6%) indicated that performance in their schools was average, 22.2% of the principals indicated that performance was above average while 33.3% of them indicated that performance was below average

#### 4.7.2 Teachers' rating on performance in their schools

**Table 39: Teachers' rating**

<b>Performance</b>	<b>Frequency</b>	<b>Percentage</b>
Above average	17	21.5
Average	43	54.4
Below average	19	24.1
<b>Total</b>	<b>79</b>	<b>100.0</b>

The majority of the teachers 54.4% reported that performance in their schools was average, 21.5% of the sample teachers indicated that performance in their schools was above average while 24.1% of the teachers indicated that performance in their schools was below average. Three (3) teachers did not give their response on this aspect.

### 4.7.3 Students rating on performance of their schools

**Table 40: Information given by the students on their performance rating.**

Performance	Frequency	Percentage
Above average	28	11.2
Average	119	47.4
Below average	92	36.7
<b>Total</b>	<b>239</b>	<b>95.3</b>

The table revealed that slightly below fifty percent (47.4%) of the sample indicated that their schools had average performance, 11.2% of the students' indicated that performance was above average while quite a number (36.7%) indicated that performance in their schools was below average.

From the above three table on rating performance by the principals, teacher and students it is clear that average rating had the highest response followed below average performance and the lastly above average performance. Twelve students did not respond to this item.

### 4.7.4 Principals' suggestions on what could be done to improve performance in schools

- Schools should be provided with adequate teaching staff and textbooks.
- Teachers needed to be motivated.
- Poor students should be assisted in paying school fees through increased funding to bursary schemes.
- Guidance and counseling to be boosted to help student improve their study habits as well as teachers ought to boost the extrinsic motivation for the learners.
- Students with higher marks to be admitted to schools.

#### **4.7.5 Teachers opinion on factors that influence performance in their schools**

- High indiscipline cases
- Low morale and lack of cooperation by students
- Fees related problems.
- Psychological needs that are not met both by students and teachers.
- Students' negative attitude towards some subjects
- Lack of adequate facilities.
- Low entry marks into form one.
- Teachers' lack of hard working culture.

#### **4.7.6 Teachers suggestion on what could be done to improve performance**

- Instilling discipline among learners.
- Guidance and counseling to be enhanced in schools
- Encouraging a study culture among the students.
- Both students and teachers to be motivated.
- Admission of classes that is manageable.
- Students are given individual attention.
- Bursaries are made available to the needy students to avoid absenteeism due to fees related problems.
- Schools to employ more teachers

#### **4.7.7 Factors cited by students as affecting KCSE performance in their schools**

- Teachers failing to explain concepts in their subjects clearly.

- Lack of adequate revision materials
- Low commitment by the students.
- Lack of self confidence by learners.
- Teachers concentrating on high performers in class.

#### **4.7.8 Students' suggestions on what could be do done to improve KCSE performance in their schools**

- Teachers should be more committed.
- Improve on counseling and teacher – student relationship.
- Students to be motivated to work harder.
- Schools and teachers to encourage discussion among students.
- Schools to ensure that form one selection is based on merit.

#### **4.7.9 Summary of the Research findings**

This chapter attempted to establish whether there were statistically significant relationships between students' performance in KCSE examination and the variables under study. The findings were that:

- Teacher's age, teaching experience, academic qualifications of teachers, teacher's commitment to school work, student's entry marks into form one, available facilities and resources were significant in affecting performance in KCSE examination.

## CHAPTER FIVE

### SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

#### 5.0 Introduction

This chapter presents the summary of the study, conclusions drawn from the findings of the study and recommendations for possible action and for further research.

The main aim of the study was to investigate factors affecting students' performance in KCSE examinations in Mandera East District. The impetus of the study was the district's continuous performance in KCSE examinations which is far below mean grade C+ (mean score of 7 points out of 12 points) which is the entry requirement into university education and other tertiary institutions.

In this study, the dependant variable was performance in KCSE examinations. This was investigated in relation to selected independent variable that is the teacher's characteristics, learner's characteristics, resources in schools and the class size.

Thus, the objectives of this study were:

- i) To determine the extent to which socio-economic background factors affect students' performance in KCSE examination.
- ii) To establish students' characteristics that affect their performance in KCSE examinations
- iii) To determine the community's role in students' performance in KCSE examinations.
- iv) To determine the extent to which the teaching and learning process affect performance of students' in KCSE examinations.

- v) To determine which school related factors that affect the performance of students' in KCSE examinations.

The district has got very few secondary schools (11) and only nine (9) of them have presented candidates for KCSE examinations. All the 9 schools were involved in the study. A total of nine principals were involved for the study and 92 teachers with 254 students. There were three sources of data: the principals of the sample schools, teachers who taught the form four class and the form four students themselves.

Data collection was done through the use of the principals, teachers and the students' questionnaires. Both inferential and descriptive statistics were used to analyze the obtained data. Chi-square statistic was used to establish the relationship between performance in KCSE examination and the various variables.

## **5.1 Summary of the findings.**

### **5.1.1 Personal data**

Data from the principals' questionnaire indicated that majority of the principals were mature aged 40 years and above. They were professionally qualified with a majority holding Bachelor of Education Degree. The study also indicated that principals had long service in the teaching profession.

Pertaining to teachers, majority were male with 76.8%. Most of them were mature and professionally qualified.

Data from students' questionnaire show that the male students were more compared to the female students. Majority of them had entry marks into secondary schools which were above 250 marks which is the average mark.

### **5.1.2 Students' performance in KCSE in relation to teacher characteristics**

- There was a relationship between age of teachers and performance in KCSE examinations.
- Academic qualifications of teachers were significant in affecting the performance in KCSE examinations.
- The experience of teachers was significant in influencing the students' performance in KCSE examinations.

### **5.1.3 Students performance in KCSE examination in relation to learner characteristics**

The chi-square test was done to find out if there was any relationship between students' gender and entry points to high school with performance. The statistics indicated that;

- There was no relationship between KCSE examination performance and students' gender.
- There was a significant relationship between students' entry points and performance in KCSE examinations.

### **5.1.4 Students' performance in KCSE in relation to availability of resources**

There was a significant relationship between availability of resources and individual performance in KCSE examinations in light of the following resources:

- i) Text books had a direct impact on performance of KCSE examinations.

- ii) The availability of laboratories in schools influences performance in KCSE examinations.
- iii) The availability of school library also influences the students' performance in KCSE examinations.

### **5.1.5 Students' performance in KCSE examination in relation to class size**

There was a relationship between the size of the class and students' performance in KCSE examinations.

### **5.1.6 Problems affecting performance in KCSE examinations**

The research findings on KCSE examinations performance derived from principals and students indicated that the main problems that affect performance in KCSE examination were those related to:

- Indiscipline among students.
- Poor or non- payment of school fees
- Lack of self drive among students
- Lack of adequate revision materials
- Lack of self-confidence by learners.

## **5.2 Conclusions**

From the foregoing findings, it can be concluded that:

- i) Teachers and students' characteristics were very significant in influencing KCSE examinations' performance.



- ii) The entry marks of the students into secondary school affect performance by the same students' in KCSE examinations.
- iii) Availability of resources by the school significantly affected performance in KCSE examination.
- iv) Class size does affect performance.

### 5.3 Recommendations

The following are recommendations based on the findings and conclusions of the study:

- i) Teachers' qualifications are significant in influencing a student's performance in KCSE examination; they ought to be provided with opportunities for more exposure through in-service training and workshop programmes. This could be organized at school, district, provincial or national levels.
- ii) The schools should strive to provide adequate resources. In situations where the schools are limited in ways of finances, improvisations ought to be encouraged where possible. This should be immediate interventions to improve on KCSE examination performance.
- iii) Discipline should be enhanced among the learners since this was a problem hindering good performance in KCSE examination. To deal with this, guidance and counseling programmes should be organized and strengthened at the school level.
- iv) Arrangement could be made by the schools so that they can identify the very needy students financially and look into ways of assisting them

through the Constituency Development Fund (CDF) and the ministry of Education bursaries.

#### **5.4 Suggestion for Further Research**

- i) Given that this study focused on Mandera East District, a similar study in other districts- Counties in the country would be useful for comparison purposes.
- ii) The study focused on a nomadic life like setting, a similar study could be carried out in a sedentary life set up to have a balanced view of the factors affecting students' performance in KCSE examinations.

## REFERENCES

- Abagi, O. and Odipo M. (1997). *Efficiency of Primary Education in Kenya; Situational Analysis and Implementation for Education Reform*. Institute of Policy Analysis and Research.
- Ansu, E.E. (1984). *Sociology of Education*. London and Lagos: Longman
- Ayoo,S. (2002). *Factors Affecting students' Performance in Kenya Certificate of Secondary Education in 86 Public Secondary Schools in Maseno Division* . unpublished M.Ed Theses University of Nairobi.
- Ayoo,S. (2002). *Factors Affecting students' Performance in Kenya Certificate of Secondary Education in 86 Public Secondary Schools in Maseno Division* . unpublished M.Ed Theses University of Nairobi.
- Bell, J. (1993). *Doing your Research Project* (2<sup>nd</sup> Ed). Buckingham: Oxford University Press.
- Bett, J. (1986). *A survey into factors that influence performance in KCSE examinations in Kericho District.Unpublished*. unpublished M.Ed Thesis :Kenyatta university.
- Bett, J. (1986). *A survey into factors that influence performance in KCSE examinations in Kericho District.Unpublished*. unpublished M.Ed Thesis :Kenyatta university.
- Borg, R.W. and Gall, M.D. (1989). *Educational Research*. Longman: University of Oregon.
- Downey, M. and Kelly, A.R. (1985). *Theory and Practice in Education*: New York: Rinehart \$ Winston.
- Eshiwani, G.S. (1983). *Education and Development in western province of Kenya*. A paper presented at the leaders conference organized by the chamber of commerce.

Eshiwani, G.S. (1988). *Education in Arid and Semi-Arid Areas: A Study on the Determinants of Schools Achievement in Kajiado District*. Unpublished Study Bureau of Educational Research. Kenyatta University.

Heyneman, P. (1979). *Why impoverished children do well in Uganda schools*. Belmont: Wadworth.

Indongole, C. J. P. (1987). *The new 8-4-4 education system and its implication for education policy and practice in Kenya*. Unpublished MA (Ed) Dissertation. University of Lancaster.

Kagan, D. (1990), *How teachers alienate students at Risk*. Teachers college Press, Columbia University: New York.

Kenya National Examination Council Result Analysis Reports (2006,2007, 2008,\$2009). KNEC: Nairobi.

Kenya National Examination Council Result Analysis Reports (2006,2007, 2008,\$2009). KNEC: Nairobi.

Kerlinger, F.N.(1993). *Foundations of Educational Research*. New York: Rinchart and Winston

Kothari, C.R. (2005). *Research Methodology: Techniques and methods*. New York: Age Publishers.

Kyalo (1984), *A Study to find out the factors that affect the teaching of science in Changwithya location in Kitui District*. Unpublished M.Ed. Thesis University of Nairobi.

Maengwe, T. (1985). *Investigation of factors influencing poor performance in rural areas: A case study of Kisii*. Unpublished PGDE Report. University of Nairobi..

- Maengwe, T. (1985). *Investigation of factors influencing poor performance in rural areas: A case study of Kisii*. Unpublished PGDE Report. University of Nairobi.
- Mitchell, V. (1996). *Assessing the Reliability and Validity of Questionnaires: An empirical example*, Journal of Applied Management Studies, 5:2,199-207.
- MOEST (2001). *International Conference on Education*. July 2001: Nairobi.
- MOEST (2003). *Report of the Sector Review and Development*. Nairobi: Government Printers.
- MOEST/KIE (2003). *Needs Assessment Survey Report on the Secondary Education Curriculum*. Kenya Institute of Education. Nairobi.
- Mouly, G. J. (1978). *Edicaptoma; Research*. Boston: Allyn and Bacon.
- Mugenda, O.M. and Mugenda, A.G. (1999). *Research Methods: Quantitative and Qualitative Approaches*. African Centre of Technology. Nairobi.
- Mwamwenda, T.S. and Mwamwenda, B. B. (1978). *Self-concept and Academic Achievement in Botswana Primary School examinations. Perceptual and motor Skills*. Journal of Education Research Vol. 65.
- Ndiritu, W. A. (1999). *A study of factors which influence performance of Kenya Certificate of Secondary Education in selected public secondary schools in Nairobi and Central provinces of Kenya*. Unpublished M.Ed. Thesis. University of Nairobi.
- Njuguna, F.W. (1998). *A Study of head teachers' leadership styles and students KCSE performance in public secondary schools in Nairobi province*. Unpublished doctorate Thesis, University of Nairobi
- Ogbu, J.U. (1987). *Variability in Minority School Performance. A problem in search of an explanation*. San Francisco: Jossey- Bass.

- Omizo, M.M. (1981). *The dimensions of self-concept as a predictor of academic achievement among Mexican- American junior high school students*. Educational Psychology measurement. New York: Macmillan.
- Orstein, A.C. (1995). *Strategies for Effective teaching*. Chicago: Brown Communications.
- Republic of Kenya (1964). *Kenya Educational Commission on Objective and Policies (Ominde Report)*. Nairobi: English Press.
- Republic of Kenya (1976). *Report on the National Committee on Educational Objectives and policies (Gachathi Report)*. Nairobi. Government Printers.
- Shavelson, R.J. and Bolus, S.R. (1982). *self concept: interplay of theory and methods*. American Journal of educational Psychology.
- UNESCO (1995). *Report on the State of education in Africa*. Dakar: UNESCO.
- UNICEF Report (2003). *The girl child: An investment in the Future*. New York: UNICEF.
- USAID Report (1993). *Basic Literacy in Girls*. Malawi.
- USAID Report (1993). *Basic Literacy in Girls*. Malawi.
- Wamahiu, S.P. and Mwiria ,K. (1995) *Issues in Educational Research in Africa*. Nairobi: East African Educational Publishers.
- Wamai, O.M (1991). *Scratching the Surface: Results of the first Secondary Examination under the new Curriculum in Kenya*. Unpublished M.Ed. Long Essay, School of Education: University of Leeds.
- Waweru, J.M. (1982). *Social Economic Background as an influence in pupils' achievement in Embu District*. Unpublished M.Ed. Thesis. University of Nairobi.

Wolf, F.M and Blix, S. I. (1981). *A cross-sectional, cross-lagged panel Analysis of mathematics achievement and attitudes: Implication of the direction of predictive validity*. Educational and psychological measurements. London. Allen and Urwin.

World Bank (1995). *priorities and strategies for education*. World Bank Review. Washington D.C: World Bank.

World Bank (1995). *priorities and strategies for education*. World Bank Review. Washington D.C: World Bank

**APPENDIX I**

**Letter to the Respondents**

Dear Respondent,

**RE: FACTORS AFFECTING STUDENTS' PERFORMANCE IN KCSE  
EXAMINATIONS: THE CASE OF MANDERA EAST DISTRICT.**

I am a postgraduate student at the University of Nairobi currently carrying out a study on the above stated subject in Mandera East District.

I kindly request you to respond to the questionnaire items as honestly as possible.

The information you will provide will be treated with absolute confidentiality. Neither your name nor the name of your school will be recorded.

Yours sincerely,

.....

JARED O. MOTANYA.



## APPENDIX II

### Head Teachers' Questionnaire.

This questionnaire is divided into two sections; A and B. Please complete it according to the instructions given. Do not write your name or name of your school to comply with confidentiality.

#### SECTION A

Kindly respond to each item by putting a tick [] next to the response that is applicable to you.

1. Indicate your gender.

- (a) Male  (b) Female

2. What is your age?

- (a) Below 25years  (c) 35-44 years   
(b) 25-34 years  (d) 45-60 years

3. What is your highest academic qualification?

- (a) M.Ed   
(b) B.Ed   
(c) BA/BSC with PGDE   
(d) SI/Diploma in education   
(e) Others (specify).....

4. For how long have you been in the teaching profession?

- (a) 1-5 years  (d) 16-20 years   
(b) 6-10 years  (e) over 20 years   
(c) 11-15 years

5 How long have served as a head teacher?

(a) 1-3 years [ ]

(d) 11-15 years [ ]

(b) 4-6 years [ ]

(e) over 15 years [ ]

(c) 7-10 years [ ]

6. How long have you served in your current station as a head teacher?

(a) Less than 1 year [ ]

(d) 6-10 years [ ]

(b) 1-2 years [ ]

(e) over 10 years [ ]

(c) 3-5 years [ ]

7. What is the category of your school?

(a) Mixed day and boarding school [ ]

(d) Boys boarding school [ ]

(b) Mixed day school [ ]

(e) Girls day school [ ]

(c) Boys day school [ ]

(f) Girls boarding school [ ]

## SECTION B

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

The alternative choices for adequacy are as follows;

Adequate = A

Satisfactory = S

Inadequate = I

Not available = NA

		ADEQUACY			
A. School Facilities		A	S	I	NA
1	Staffroom				
2	Classrooms				
3	Library				
4	Science laboratories				
5	Home science block				
6	Dormitories				
7	Teachers' quarters				
8	Electricity				
9	Playing ground				
B. School equipment					
1	Furniture (desks, library and staff chairs)				
2	Laboratory equipment				
3	Home science equipment				
4	Dormitory beds				
C. Teaching/Learning resources					
1	Books (textbooks and exercise books)				
2	Wall maps and charts				
3	Laboratory chemicals				
4	Library books				
5	Chalk boards				
6	Stationery				

9. What is the average teacher-student ratio in your school?

(a) 1:30 [ ]

(b) 1:40 [ ]

(c) 1:50 [ ]

(d) 1:60 [ ]

(e) Any other (specify).....

10. (a) Are your teachers assigned to teach subjects they are trained in?

Yes [ ] No [ ]

(b) If your answer to 10 (a) is no, give reasons.

.....  
 .....

11. Please indicate with a tick [ ] the frequency of the following students' behaviour in your school.

	Behaviour	Frequency		
		Frequent	sometimes	rarely
1	Truancy			
2	Strikes			
3	Sickness			
4	Fees problems			
5	Suspensions			
6	Punishments			

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

.....  
.....

13. How do you rate the school's performance in KCSE examination?

(a) Above average [ ]

(b) Average [ ]

(c) Below average [ ]

14. In your opinion, what can be done to improve this performance?

.....  
.....

THANK YOU.

### APPENDIX III

#### Teachers' Questionnaire.

This questionnaire is divided into two sections; A and B. Please complete it according to the instructions given. Do not write your name or name of your school to comply with confidentiality. Kindly, answer all questions.

#### SECTION A

Kindly respond to each item by putting a tick [] next to the response that is applicable to you.

1. Indicate your gender.

- (a) Male  (b) Female

2. What is your age?

- (a) Below 25years  (c) 35-44 years   
(b) 25-34 years  (d) 45-60 years

3. What is your highest academic qualification?

- (a) M.Ed   
(b) B.Ed   
(c) BA/BSC with PGDE   
(d) SI/Diploma in education   
(e) Others (specify).....

4. For how long have you been in the teaching profession?

- (a) 1-5 years  (d) 16-20 years   
(b) 6-10 years  (e) over 20 years   
(c) 11-15 years

5 How long have been in the teaching profession?

(a) 1-3 years [ ]

(d) 11-15 years [ ]

(b) 4-6 years [ ]

(e) over 15 years [ ]

(c) 7-10 years [ ]

6. (a) Indicate the subjects you have been trained to teach

.....

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

7. When do you normally complete the syllabus for your subjects?

(a) 3 months before examinations [ ]

(b) A month before examinations [ ]

(c) Just in time before examinations [ ]

(d) Never completes [ ]

(e) Any other (specify).....

## SECTION B

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

The alternative choices for adequacy are as follows;

Adequate = A

Satisfactory = S

Inadequate = I

Not available = NA

		ADEQUACY			
A. School Facilities		A	S	I	NA
1	Staffroom				
2	Classrooms				
3	Library				
4	Science laboratories				
5	Home science block				
6	Dormitories				
7	Teachers' quarters				
8	Electricity				
9	Playing ground				
<b>B. School equipment</b>					
1	Furniture (desks, library and staff chairs)				
2	Laboratory equipment				
3	Home science equipment				
4	Dormitory beds				
<b>C. Teaching/Learning resources</b>					
1	Books (textbooks and exercise books)				
2	Wall maps and charts				
3	Laboratory chemicals				
4	Library books				
5	Chalk boards				
6	Stationery				



9. Please indicate with a tick [ ] the frequency of the following students' behaviour in your school.

	Behaviour	Frequency		
		Frequent	sometimes	Rarely
1	Truancy			
2	Strikes			
3	Sickness			
4	Fees problems			
5	Suspensions			
6	Punishments			

10. In your own opinion, what are the factors that influence students' performance in KCSE examination in your school.

.....

.....

.....

.....

11. How do you rate the school's performance in KCSE examination?

(a) Above average [ ]

(b) Average [ ]

(c) Below average [ ]

12. In your opinion, what can be done to improve this performance?

.....

.....

THANK YOU.

APPENDIX IV

Students' Questionnaire.

This questionnaire is divided into two sections; A and B. Please complete it according to the instructions. Do not write your name or name of your school to comply with confidentiality.

SECTION A

1. Indicate your gender by putting a tick [√] against the appropriate response.

Male [ ]

Female [ ]

2. How many marks did you score in KCPE?

(a) Below 100 [ ]

(d) 201-250 [ ]

(b) 100-150 [ ]

(e) 251-300 [ ]

(c) 151-200 [ ]

(e) above 300 [ ]

3. How many are you in your class?

(a) Below 20

(b) 20-30

(c) 31-40

(d) 41-50

(e) Any other (specify).....

4. Kindly indicate the occupations of parents /guardians.

Father.....

Mother.....

Guardians.....

5. Who pays your school fees?

Parents.....

Guardian.....

Voluntary organization

6. (a) is your school fees paid in time?

(a) Yes [  ]

(b) No [  ]

(b) If your answer is No, how has it affected your learning?

.....

.....

7. Below is a list of various facilities used for learning in school. Indicate their adequacy

by putting a tick [  ] against the most applicable option.

FACILITIES	ADEQUATE	INADEQUATE	NOT AVAILABLE
Text books			
Laboratory			
Library			
Desks			
Chairs			
Chalk boards			

8. What is the occupation of your parent/guardian? Tick  the appropriately.

Type of employment	Father	Mother	Guardian
Salaried employment			
Self-employment			
Casual worker			
Manual worker			

9. In the following questions, please indicate with a tick [√] against the most appropriate response. Use the following alternative choices for your answers.

Strongly agree =SA

Disagree =D

Agree = A

Strongly disagree = SD

Undecided = U

STATEMENT	SA	A	U	D	SD
<b>A. about teachers</b>					
1 Teachers explain concepts in subjects clearly					
2 Teachers are very committed to their work.					
3 Teachers use a variety of teaching aids					
4 Teachers always give extra work and mark assignments given to students.					
5 Teachers give a lot of encouragement and reward good performance.					
6 Teachers pay keen attention to weak students in class and organize for remedial classes.					
7 Some subjects lack teachers at times					
<b>B. About the Learner</b>					
8 I have language related problem that affect interfere with my learning.					
9 I have a negative attitude towards learning					
10 Many times, I absent myself from attending lessons.					
11 I am mostly influenced by my friends in negative ways.					
12 Most of my time in school is spent in preparing for examinations.					
13 Many times, I find difficulties understanding concepts in subjects.					
14 I perceive myself as a very high achiever in education.					
15 My parents/guardians give me a lot of support and encouragement in my education.					
16 I have been sent home for school fees severally					

SECTION B.

Kindly provide short answers to the following questions in the spaces provided.

10. Are there problems you are experiencing that may affect your performance in KCSE?

Yes [ ] No [ ]

If yes, specify.

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

11. In your own opinion, what are the factors that influence students' performance in KCSE examination in your school.

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

12. How do you rate the school's performance in KCSE examination?

(a) Above average [ ]

(b) Average [ ]

(c) Below average [ ]

13. In your opinion, what can be done to improve this performance?

.....  
.....

THANK YOU.

## APPENDIX V

Determining a sample size from a given population.

N	S	N	S	N	S
10	10	220	104	1,200	291
15	14	230	144	1,300	297
20	19	240	148	1,400	302
25	24	250	152	1,500	306
30	28	260	155	1,600	310
35	32	270	159	1,700	313
40	36	280	162	1,800	317
45	40	290	165	1,900	320
50	44	300	169	2,000	322
55	48	320	175	2,200	327
60	52	340	181	2,400	331
65	56	360	186	2,600	335
70	59	380	191	2,800	338
75	63	400	196	3,000	341
80	66	420	201	3,500	346
85	70	440	205	4,000	351
90	73	460	210	4,500	354
95	76	480	214	5,000	357
100	80	500	217	6,000	361
110	86	550	226	7,000	364
120	92	600	234	8,000	367
130	97	650	242	9,000	368
140	103	700	248	10,000	370
150	108	750	254	15,000	375
160	113	800	260	20,000	377
170	118	850	265	30,000	379
180	123	900	269	40,000	380
190	127	950	274	50,000	381
200	132	1,000	278	50,000	382
210	136	1,000	285	100,000	384

NB:

N is population size

S is sample size

Source: Krejcie and Morgan (1970:608) as quoted in Mulusa (1988:86).

## APPENDIX VI

Mandera East District Schools and KCSE Mean score, 2006-2010

	School	Mean Score				
		2006	2007	2008	2009	2010
1	Mandera sec. School	5.634	5.873	5.974	6.143	6.515
2	Moi Girls Secondary	4.013	5.532	4.981	3.342	3.400
3	Lafey boys	-	3.765	4.757	4.891	3.905
4	Arabia Girls	-	3.445	3.342	3.67	3.919
5	Arabia Boys	5.790	5.811	-	3.575	4.344
6	Khalilio Sec. School	-	-	-	-	-
7	Border Point Sec. School	3.226	4.860	3.992	3.231	3.122
8	Johar-Islam Sec. School	4.942	5.811	4.933	4.432	3.342
9	Mandera integrated Academy	4.675	4.789	3.375	3.331	3.543
10	Barwaqo Boys Secondary School	-	-	-	-	-
11	Buru Buru Sec. School	-	-	-	-	-
12	Towfiq Sec. School	-	3.345	3.346	3.754	3.763

SOURCE: DEO MANDERA EAST

NB: Mandera East District has a vast land but with the above number of schools due to the nomadic nature of life.