

**A COMPARATIVE STUDY OF KCPE RESULTS AGAINST
KCSE PERFORMANCE IN SECONDARY SCHOOLS IN
KAJIADO NORTH SUB COUNTY.**

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A research project report submitted in partial fulfillment of the
requirement of Post Graduate Diploma in Education.

UNIVERSITY OF NAIROBI

OCTOBER 2013.

CHAPTER ONE

INTRODUCTION

1.0 Introduction

This chapter discusses the background to the study, statement of the problem, objectives, research questions, significance of the study, limitations, assumptions and operational definition of terms.

1.1 Background to the Study

The key purposes of public examinations have remained that of selection and certification since the first written public examinations were introduced over 2000 years ago in China to select the most able citizens for positions in the civil service. The Chinese system of public examination spread into Europe in the 16th century and to USA in the 19th century. Governments in those days were the main employers and competitive examinations were considered fair means of selecting a few competent people for governmental service.

In schools, the public examination system seems to have a short but still considerable history. Its use in schools in Kenya can be traced back to the colonial times and have continued to be used ever since. Even today some African countries continue to adopt the British and French models in the development administration and processing of public examinations (Van der Berg, 2004) . Kenya has developed its own examination system structured on British and French models.

Public examination systems in Kenya may be paying little attention to the disparities that exist in terms of opportunities for learning for individual learners and their impact on access to education and employment. This is depicted when a common national examination is set for all students who have completed a specific number of years of schooling with an assumption that all students were exposed to similar opportunities for learning. This study will utilize KCPE and KCSE examinations results. The KCPE and KCSE examinations which are national examinations administered in the current system (8.4.4 system) of education in Kenya.

Parents in Kenya today are very cautious in choosing the secondary school where their children will go through. When the KCPE results are out and the child has excelled, the parents would wish their children to join a secondary school where they are guaranteed their children's KCSE excellent performance. A recent case that hit the media headlines was a case whereby parents give bribes to some senior education officers in the ministry to get back door placements of Form 1 students to national schools. The parents, teachers and administration of schools will also want information that will enable them put measures in place that will ensure good academic performance.

The problem so stated is very significant and worth solving. Through this descriptive and qualitative research, the researcher seeks to find the relationship between a student's KCPE score and the KCSE grade attained at the end of the Four(4) years course case study of secondary schools in Kajiado North Sub-County.

1.2 Statement of the Problem

There has been a notion that a student's KCPE performance is directly related to the KCSE performance. Consequently, various divergent schools of thought have emerged with some claiming that if one performs well in KCPE then the student will definitely perform well in KCSE, others believe that good KCSE performance is attributed to a 'good school'. These divergent thoughts have led to a crisis worth solving. It is therefore important to find the veracity of these assertions.

Selection of primary school pupils to enter secondary schools is based on KCPE examination results. The selection procedure is based on the pupils examination performance only. Those with high marks are therefore selected and not necessarily those that likely to succeed in KCSE examination. This seems to point out that the selection of secondary school candidates is very critical and it has even generated great debate among parents, schools and policy makers because of its nature, timing and severity.

The ministry of education through a government appointed team has noted that abolishing of KCPE examination was one of the radical options being considered by the government. The team proposes that pupils should automatically progress from Standard Eight to Form one if KCPE examinations are scrapped in order to address the perennial problem of low transition to secondary education. However it has not been statistically established that KCPE examination scores have no correlation with the KCSE performance.

This study was set to investigate how the KCPE scores will be viewed with regard to the grade obtained by the same student at KCSE examination.

1.3 Purpose of the Study

Predictive studies are concerned with measuring a variable that can be used to predict some future event (Borg, 1981). Therefore , this study was carried out to establish the predictive validity of KCPE results to the KCSE performance. The purpose of this study was to investigate how the KCPE results of a pupil on entry into secondary school will compare to the grade the same student obtains at KCSE examination.

1.4 Objectives of the Study

The specific objectives of this study are :

- i) To establish the relationship between KCPE results and KCSE performance in Secondary Schools in Kajiado North Sub-County.
- ii) To what extent does school category affect examinations among the secondary schools in Kajiado North Sub-county.
- iii) To establish the causes of disparities if any in performance between KCPE and KCSE amongst schools in Kajiado North Sub-county.

1.5 Research Questions

The research questions in this study are:

- i) Will there be a correlation between KCPE results and KCSE performance?
- ii) Is there a relationship between gender and performance in KCSE examinations amongst the schools in Kajiado North sub-county?
- iii) Does subject choice affect students mean grade at the KCSE examinations?

1.6 Significance of the Study

Students perform differently during their final primary education exams, KCPE exams and most people will use this to gauge their Form Four exams, KCSE results. However, we should note that KCPE results may not always be used to forecast KCSE results . It has been noticed that some students from National Schools end up scoring low grades while those from District or County Schools score high grades. This is because there are factors which play a big role in student's academics and performance during secondary school life in which case we are going to concentrate on the academic performance of the school.

The research took into perspective county secondary schools, district secondary schools and private secondary schools where the KCPE entry marks of the students vary significantly amongst the students who are admitted into Form 1 amongst the schools. Therefore the students form a good representation of model secondary schools in Kajiado County and as a result in Kenya. We will establish the trend of their performance and find out whether the trend is changing.

Over the past years performance in different subjects has been different and this has left more questions that answers. Generally performance in science subjects and mathematics has been poor compared to other subjects . A relationship ought to be established between performance in those subjects done in high school.

The administration in secondary schools are struggling to achieve good performances so as to stand out in the national exams. They are yearning for information that will guide them on strategies and measures to be put in place to guarantee good overall performance of the school.

1.7 Scope of the Study

The study concentrated in schools that are found in Kajiado North Sub-county, the researcher carried out a comparative analysis of performance in both KCPE and KCSE in selected public and private secondary schools . This was done with an aim of finding out whether the nature of the school affects the performance of students in the examination.

1.8 Assumptions of the Study

Other independent variables for example study environment, content levels achieved at primary and secondary levels, teachers and age of the students will be affecting the performance at the same level. This implies that all the students are affected in the same way. Again , examination procedures or machinery applied are the same at a given level thus the generalization.

1.9 Limitations of the study

This study was carried out in selected secondary schools in Kajiado North Sub-county in Kajiado County, Kenya. Due to the small sample size investigated , generalization of the findings to the whole population may need larger representative sample.

1.10 Delimitations of the Study

This research study featured county and district public secondary schools only since there is no national school in Kajiado North Sub-county. The factors that affect academic performance in county , district secondary schools and local private secondary schools are not representative to

the factors that affect academic performance in national secondary schools and international private secondary schools.

1.11 Operational Definition of terms

A-Level: KACE examination was done at the end two years of high school.

Achievement: Performance in school in a series of educational tests.

Achievement test: A test measuring the knowledge of the content and is normally referred to as examination.

Career - refers to a profession or an occupation with opportunities for advancement or promotion.

Career teacher - refers to a dully certified member of staff appointed by the Teachers Service Commission or School Management to teach and guide Students in a secondary school.

Certification: Evidence that students have reached certain level of achievement. (To certify an individual's competence in a particular field)

Correlation coefficient: Statistical summary of the relationship between variables.

Curriculum - refers to a set of broad decisions about what is taught and how it is taught, that determines the general framework within which lessons are planned and learning takes place.

Education System - refers to an organized plan, method or process of imparting or acquiring skills for a particular discipline which has sequence and progression.

Grade: An index of success in the form (A, B, C.)

Gender - refers to the socially determined personal and Psychological characteristics associated with being male or female namely “masculinity and femininity”. (Garret 1992) or continuing process concerned with determining and providing for developmental needs of boys and girls in Kajiado North Sub-County.

Selection: A process of deciding who should go on further with a program of instruction.

Subject choices - refers to an opportunity provided by the school in the course of study where boys and girls carefully select subjects taught by the school for the purpose of their study.

Subject Guidance and Counseling - refers to a process of assisting boys and girls to choose a subject to prepare for it and progress in it later in a career

Variable: A property whereby the member of a group or set differ from one another.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

The review of pertinent literature will be done under the following topics: theoretical background, studies outside Kenya, Kenya-based studies and finally a summary of the chapter will be given.

2.1 Theoretical background

Regression and correlation analyses are the techniques of determining how the variations in one series are related to variation in another. Correlation measures the degree of relationship between the variables while regression analysis shows how variables are related. The nature and strength of relationship between two variables is determined by regression and correlation analysis (Kothari, 1978)

The term 'regression' was first used in 1877 by sir Francis Galton who made a study that showed that the height of children born to tall parents will tend to move back or regress toward the mean height of the population (cited in Kothari, 1978). Regression refers to the process of predicting one variable from the other variable. However, the relationship found by regression is relationships of association but not necessarily of cause and effect.

The technique of regression analysis is therefore used to determine the statistical relationship between two (or more variables) and to make prediction of one variable on the basis of the other(s). If one knows the relationship between two variables, the correlation coefficient can be used to predict scores in one distribution (say, Y) on the basis of scores in other (X) distribution.

Correlation makes a better showing in forecasting the probable performance of groups than in predicting the likely achievement of a selected individual.

However, standard error of estimate ($SE_{(est)}$) provides an accurate measure of the range in the individual forecast, which is the error made in taking the predicted measure instead of the actual measure. The size of the standard error of estimate depends upon the standard deviation of the dependent variable (the variable we are predicting) and upon the extent of correlation between X and Y. This means that when one uses the regression equation for forecasting, he or she should always give the standard error of estimate because the value of the prediction will depend primarily upon this error of estimate.

Garrett & Woodworth (1961) noted that if the variability in X distribution is small and the correlation coefficient is high, X can be predicted quite adequately from known measures in Y. But when the variability of the dependent variable is large or the correlation is low, or when both conditions exist, estimates may be unreliable.

Predictive validity involves two variables, the predictor(s) and the criterion variables which are obtained at different times. The main purpose of the predictor(s) is to forecast future behaviours. The criterion is a report on how good an outcome is and it usually a numerical index of success (Cronbach, 1970). In this case, correlation is the degree of the relationship between the variables. Therefore, the correlation between the predictor and the criterion is called the predictive validity coefficient. Examples of predictors are primary school scores or secondary grades which can be used to predict college or university success. Criterion variables may be secondary school grades or university grades among others.

2.2 Related studies

Studies set out to predict academic success have been carried out over years. These studies have utilized grades, high school ranks, ratings and aptitude test scores as predictors. These studies have revealed that the predictors are highly correlated with the criteria used and have a high predictive power with just a few exceptions. A few studies in countries outside Kenya will be highlighted followed by Kenya-based studies. Other pertinent literature will be reviewed during the final testing.

2.2.1 Studies outside Kenya

Flexer (1984) carried out a study in Abington to predict 8th grade Algebra. They established that Algebra prognosis scores and performance in the 7th grades were the most influential predictors of algebra grades in the 8th grade. However, a correlation study carried out by Borg (1981) in Eastern Oregon revealed that the students' previous year's Grade Point Average (GPA) was not significantly correlated. He studied 32 boys and 32 girls in grades 8-11.

Walker (1995) investigated the predictive validity of High school GPA in relation to success in the National Licensure Examination (NCLEX) for 350 student nurses in an associate degree program. Results showed that the indicators of course achievement in high school had weak ability in forecasting which nurse will obtain a passing score in NCLEX. College GPA offered the best way of identifying students who were most likely to succeed in the NCLEX. This study showed that high school academic performance is highly predictive of college performance.

Andres (1996) assessed the importance of achievement tests as predictors of graduation GPA and Freshman GPA in major fields at the University of Puerto Rico. The predictors were scores from the College Board Tests and High School GPA. The university required applicants for admission

to take three achievement tests, but had never used these for selection. Other variables considered were sex, type of High School attended and socio-economic status. The achievement tests were found to be best predictors in most institutional units and fields of study.

A study to investigate the relationship of elementary and secondary school achievement test score to college performance was carried out by Ansley and Forsyth (1983). They utilized the Iowa Tests of Basic skills (ITBS) and Iowa Tests of Development (ITED). It was established that ITED and ITBS were significantly related to first semester college Grade Point Average (GPA), final GPA and graduation status. These findings imply that any achievement test score could be reasonably used the help in predicting future academic performances of students.

MacCausland (1985) investigated the relationship between estimated and achieved marks of pupils in external examinations. This study was done in New Zealand and was aimed at analyzing the accuracy of teachers' predictions of the pupils' marks in School Certificate. He used a sample of 1,440 secondary school students and the study took a period of six years. The teachers' predictions were found to be highly correlated with the achieved marks of the students.

Other predictive studies have been carried out looking at High school performance as a good predictor of college performance (Yimer et al, 1991). The study compared the predictive powers of the Ethiopian School Leaving Certificate Examination (ESLCE) with other measures (Freshman English, Freshman Mathematics and GFA grades. They used a sample of 1720 regular first year students at the University. The resultant correlations of GPA correlations were all found to be significant and thus the measures were good predictors of freshman grades.

White et al (1985) carried out a study in Beaumont. They used 400 Freshman and looked at academic course grades as better predictions of graduation from a commuter type college than

Scholastic Aptitude Test (SAT) scores. They used high school transcripts and established that the best predictors were academic profiles of courses taken in high school followed by high school rank and lastly SAT scores. The number of High school units passed was found to be the best predictor when academic courses were considered alone.

Hughes (1983) carried out a study in Australia to determine the comparison of time-based and error-based learning measures as predictors of general intelligence. He used a sample of eighty (80) undergraduates who were divided in two groups (strategy instruction and no-strategy instruction). The use of appropriate learning strategy correlated significantly with the general intelligence score for the strategy instruction group. Both the error-based and time-based learning measures were found to be related in prediction of general intelligence.

The studies outlined above indicate that tests that are designed to measure a given characteristic reveal a strong relationship with each other. This means, on the basis of (the findings in the above studies, we can predict from a given test score the probable individual's academic performance.

2.2.2 Kenya-Based studies

In Kenya, researches of predictive nature as well as those investigating the concurrent validity of tests measuring given a common trait especially achievements have been done. The studies have utilized scores from public examinations like Certificate of Primary Education (CPE), Kenya Certificate of Education (KCE), and Kenya Advanced Certificate (RACE) and Kenya Certificate of Secondary Education (KCSE) .None of these studies has used the Kenya Certificate of Primary Education (KCPE).

Opinya (1980) investigated the relationship between "Mock" examinations (Mock is an examination common to all schools within a district) and East Africa Certificate of Education

(EACE) examination scores in history administered in form four. He used a sample of eight schools in Nairobi and test scores of the year 1976-1979. He established that there was a high correlation between mock and EACE examination scores in History. Some correlation coefficients were found to be as high as 0.885. This indicates a reasonable degree of relationship and thus History Mock examination were found to be good predictors of History EACE scores.

Lunalo (1983) investigated the extent to which efficiency in the prediction of East African Certificate of Secondary Education (EACE) is affected by performance in the certificate of primary Education (CPE) examination, secondary school quality, range restriction and gender. The sample consisted of 165 students who had sat the EACE in 1979 in ten schools in Western province in Kenya. Their CPE performance was traced back to 1975. Scatter diagrams, Pearson Product Moment correlation coefficients, the analysis of variance and multiple regressions were used to examine the relationship between EACE and CPE. The correlation between the two examinations (CPE and EACE) was found to be significant.

A study by Bali et al (1984) investigated the contribution of an Aptitude test Intelligence and Developmental tests for East Africa (IDEA) in predicting school performance. They established that the Aptitude tests had predictive validity with the correlations ranging .54 to .74. In the same study, CPE examination was found to be a good predictor of KCE examination with a correlation of .62 between them which was significant.

Gatumu (1989) sought to answer the question, how well do Ordinary Level (O-level) grades predict performance in Primary Teacher Training Colleges (TTCs). The sample consisted of 1,622 subjects from five post-secondary TTCs in Kenya. Data was first analyzed using selected predictor variables (O-level Aggregate, Mathematics and English) in an intercorrelated matrix.

The criterion variables considered here were all the ten subjects done at the final college examination. Among them O-level aggregate was found to be the best overall predictor. These results agreed with the common belief that previous performance reveals qualities within the learner that are needed in the next level of learning. The aspect one of the rationale of this study

Ng'ang'a (1995) investigated the relationship between form four teacher made tests and KCSE examination. She used test scores in school examinations (End of Term one and Mock examination) and KCSE examination. She established that correlations obtained between first term and Mock examinations were not all statistically significant. Some were high, others substantially lower and for some (Mathematics, Biology and physical science) negligible. Again, she found out that first term examination was not well related with the criterion (KCSE examinations).

In the same study (Ng'ang'a, 1995), the results obtained between the mock and KCSE examinations emphasize earlier discussed findings. All the correlations obtained were significant ranging from 0.234 to 0.758. This may be attributed to the fact that both Mock and KCSE are external examinations which meant that a number of people were involved in construction and scoring hence reliable measures.

Gatumu (1976) investigated the predictive validity of O-level, A-level and Aptitude tests in relation to performance at the university in four Faculties (Education, Agriculture, Arts and Medicine). The correlation coefficients of A-level, O-level and Aptitude tests with University first year examinations performances were found to be 0.31, 0.27 and 0.25 respectively. This indicated that A-level had the highest correlation with the university performances thus the best predictor.

A study by Wambua (2003) was set out to find the efficiency in selection and classification. He used a sample of 320 Bachelor of Arts and 206 Bachelor of Education Science students at Kenyatta University. KCSE aggregate Grade had low but significant correlations (.22) with University performance for both the Bachelor of Education (Arts) and Bachelor of Education (Science). This shows that the achievement scores or grades were potential predictors of the students' future performance.

2.3 Conceptual Framework

This study will borrow theoretical arguments from an evaluation model of human resource development interventions. This model outlines factors that determine individual performance and organizational results. Holton (1996) proposed that on the basis of existing evaluation models and research, causal relationships arise among motivational elements, environmental elements, ability or enabling elements and outcomes. He showed that individual performance is a function of learning outcome, which, in turn, is influenced by motivation to learn and individual ability. In this context, academic performance can be viewed as an immediate learning outcome and thus can be predicted by several precedent variables such as prior academic performance, motivation and ability to learn. Therefore, the conceptual framework can be developed as follows;

FIGURE 1.1: CONCEPTUAL FRAMEWORK FOR THE STUDY

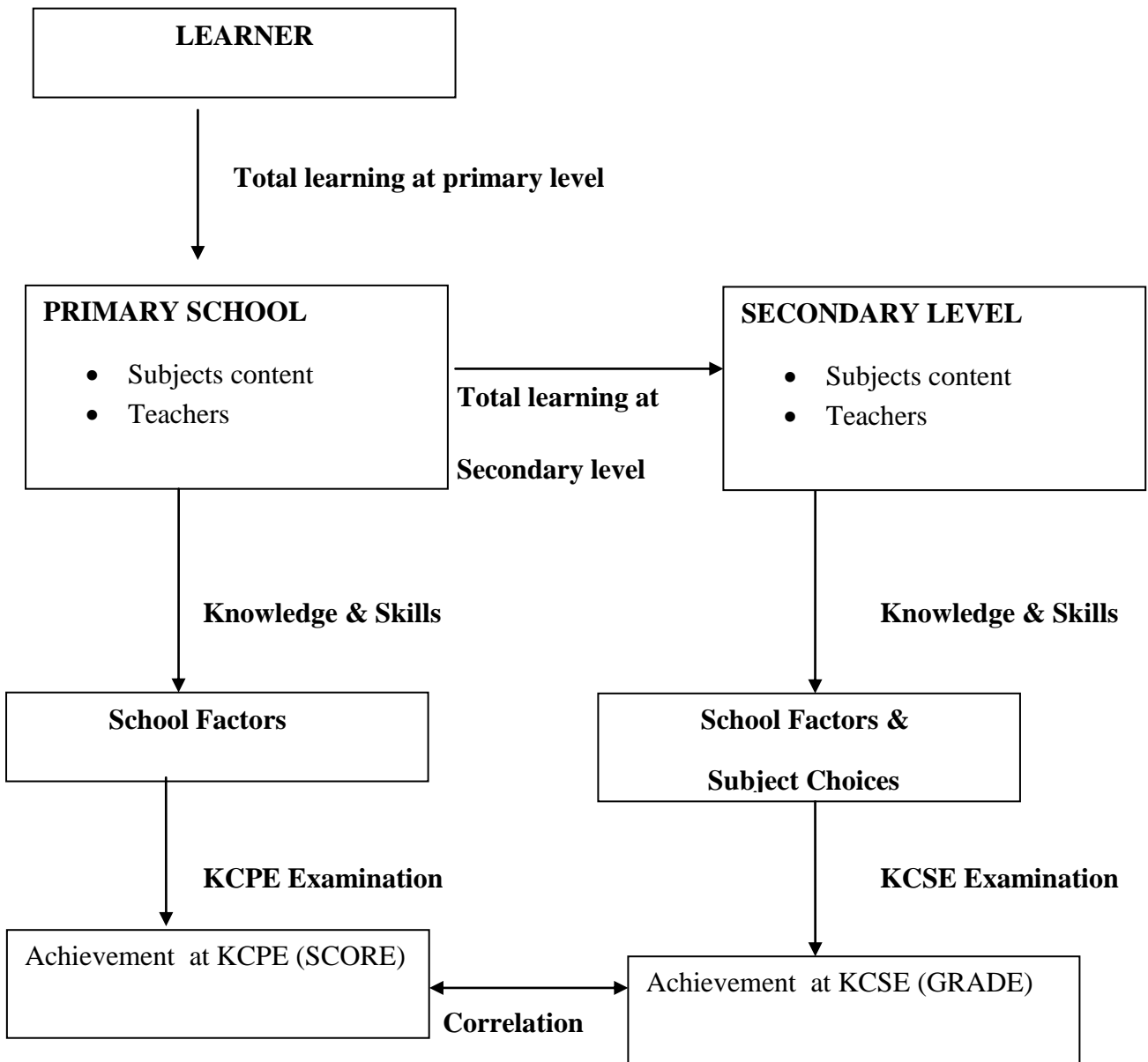


Figure 1: Conceptual Framework

2.4 Summary

The studies outlined above have revealed that past academic scores are good predictors of academic performance. Most of these studies have proved that examinations (CPE, KCE and EACE) done at the end of a course in Kenya have predictive validity. These studies utilized CPE and KCE examination scores which were in the earlier system of Education (7-4.2-3) and only KCSE examination scores in the 8-4-4 system(current system). No study has been carried out in Kenya to correlate KCPE and KCSE examinations which are public examinations administered in the current system. There is need, therefore, for a study to establish the predictive validity of KCPE and KCSE examination performance.

In addition, (lie studies which attempted to correlate public examination achievement administered at different levels (primary and secondary) of education utilized the average or global achievement. This study will utilize grades obtained by students in mathematics in KCPE and KCSE examinations. This study therefore will be set out to achieve the objectives stated earlier in order to answer the question, what is the predictive validity of KCPE mathematics performance?

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter describes the research methodology that was used in the study. It explains the research design, target population, sampling procedures and sample size, validation procedures, data collection and analysis procedures. The research design gives an overall review of the study. The population and sample section outlines the target population, the sample size and sampling technique. The section on variables gives a brief description of the variables to be considered in the study. A detailed description of the instruments to be used is also given followed by an outline of the data collection method. The last section deals with the method of data analysis to be employed in the study.

3.1 Research Design

The research design adopted in this study was descriptive survey. Descriptive survey studies are concerned primarily with determining “what is” (Mutai, 2000). Therefore, descriptive survey in education while simple in design and execution can yield important information about a phenomenon. Surveys are excellent vehicles for collecting original data for the purpose of studying the attitudes and orientations of a very large population. Using descriptive survey design, a large population can be studied with only a portion of that population being used to provide the required data. Descriptive survey design is the most appropriate when the purpose of

the study is to create a detailed description of a phenomenon (Cohen & Manion, 1987; Gall, Borg & Gall, 1996; Wiersma & Jurs, 2005).

The researcher would wish to establish the relationship between a student's KCPE results and KCSE performance. County public secondary schools, District public secondary schools and local private secondary schools were taken into perspective whereby the student's KCPE entry marks vary significantly amongst the students who get admitted into Form 1 from Kajiado North Sub-county and beyond. All the Form four students registered in the sample secondary schools in Kajiado North Sub-county were considered in the study.

3.2 Variables

3.2.1 Independent Variable

This is the predictor variable which is obtained from the predictor in the study. The predictor is the KCPE examination which is an achievement test and is done by all pupils at the end of the eight year of primary education. KCPE examination score will be treated as an independent variable in this case.

3.2.2 Dependent Variable

The criterion variable is the KCSE examination and the dependent variable will be the KCSE examination grade achieved by a student as it is believed will be affected by the performance at KCPE (independent variable).

3.3 Locale of the Study

This study took place in Kajiado North Sub-county (formerly Kajiado North District) in the larger Kajiado County. Its largely a cosmopolitan settlement located in the western part of Nairobi. It comprise of only one constituency i.e Kajiado North Constituency.

3.4 Target Population

Target population is a set of subjects that the researcher focuses upon and to which the results obtained by testing the sample can be generalized (Kothari, 1990 & Orodho , 2005) . The target population in this study was all secondary school graduates in the years 2010, 2011 and 2012 in the sample school in Kajiado North Sub-county. Kajiado North Sub-county has 47 secondary schools, whereby 21 are Public Secondary Schools and 26 Private Secondary schools. There are 6 Boys secondary schools, 7 Girls secondary schools and 24 mixed secondary schools. The school differ in a number of ways as shown in the table 1 and table 2 below

Table 1 : Types of schools in Kajiado North Sub-county

School	Type of School	Number of Schools	Number of Candidates
Secondary Schools	County Schools	4	1,374
	District Schools	17	2,249
	Private Schools	26	2,461
Total		47	6,084

Source : Kajiado North District Education office : Registration, Examinations and Results.

As shown in the table, the study targets forty seven (47) secondary schools with a population estimate of six thousand nine hundred and eighty four (6,984).

Table 2 : Summary of the schools by category in Kajiado North Sub-County.

	Category	Frequency
Public Schools	Boys Schools	4
	Girls Schools	5
	Mixed Schools	12
Private Schools	Boys Schools	2
	Girls Schools	4
	Mixed Schools	20
TOTAL		47

3.5 Sampling techniques and sample size

3.5.1 Sampling techniques

This will involve a multi-stage sampling technique which requires two or more successive steps or stages to obtain the required sample. Purposive sampling was used to select the sub-county of study. Singleton (1993) observed that the ideal setting for any study is one that is directly related to researcher's interest and is easily accessible. Stratified random sampling was then employed. Stratified random sampling involves dividing the population into homogenous subgroups and then taking simple random of each group. The sample is taken in such a way to ensure that certain subgroups in the population are represented in the sample proportion to their number in the population (Kombo & Tromp, 2006).

This study required a stratified sample so as to have a representative sample of all the types of secondary schools in the sub-county. This means sample schools were randomly selected from each group.

3.5.2 Sample size

It is not necessary to study entire population in order to provide an accurate and reliable description of the characteristics. In most cases, studying a sample is sufficient , (Mugenda & Mugenda, 1999). The study focused on all secondary school graduates in the sampled schools. The sample were obtained by stratified random sampling techniques. The strata was identified in terms of the group to which each school belongs. The schools were drawn from the strata present in Kajiado North Sub-county.

Sampling Matrix I

Description	Population size	Sample size
Boys Schools	6	2
Girls Schools	9	3
Public Mixed Schools	12	4
Private Mixed Schools	20	6
TOTAL	47	15

Table 3 : Sample schools to be used in the study.

This study was out carried in a sample of fifteen (15) schools which is 31.9 % of the total school population from Kajiado North Sub-county which is about 30 % as recommended by Mugenda and Mugenda (1999). Each school was assigned numbers 1 to 48, written on small pieces of paper, folded and put in baskets and shuffled. The researcher then picked the number of papers randomly in order to give each school equal opportunity of being selected for the study from every stratum. All form four students in the selected schools were considered in the study.

According to Krecie and Morgan (1970) as quoted by Kasomo (2001), the following table is used for determining the sample sizes for different population sizes.

Table 4: Recommended Sample Sizes for different Population Sizes.

Population size	Sample Size	Population size	Sample Size
10	10	250	162
20	19	300	169
30	28	400	196
40	35	1,500	306
50	44	2,000	322
60	52	3,000	341
70	59	4,000	351
80	66	5,000	357
90	73	10,000	370
100	80	20,000	377
150	108	50,000	381
200	132	10,000	384

Source : Kasomo, (2001)

The total number of candidates included in the sample in each school category is given in the table 4. The number of candidates varied from one school to another. Simple Random Sampling was used to select the students to include in the sample.

Sampling Matrix II

Category	Population Size	Sample Size
Boys Schools	1057	54
Girls Schools	1144	63
Public Mixed	2249	125
Private Mixed	1634	114
TOTAL	6084	357

Table 5: Sample size for each school category

3.6 Instruments

3.6.1 Public examinations

Tests and other procedures assessing pupil achievement are essential tools of the educator. This study used results obtained from public examinations which are achievement tests conducted by the KNEC. The KNEC, the national examining body for schools plans and designs examinations which are based on standard planning procedures that achieve levels of content validity and reliability. The study used results from KCPE examination done between the years 2006 - 2008 and results of KCSE examinations between the years 2010-2012. The selected years of KCSE examination are relatively recent to represent the current status of examination performance in selected schools.

3.6.2 Data collection sheet

The data collection exercise was done with the use of data collection sheet (Appendix A). This helped the researcher keep a record of data which in turn would enable checking out any omissions by the researcher. Only students with complete records were considered in the study to ensure that the same number of grades is collected for both examinations.

3.7 Methods of Data Collection

This research study used secondary sources of data obtained from schools archives. The data collected for the sample was the KCPE entry marks and KCSE points and grade (Appendix B) in KCSE examination. This data covered the KCPE scores for the years 2006-2008 and their respective KCSE grades for the years 2010-2012.

3.8 Methods of Data Analysis

A clear understanding of what individual pupils have learned in specific subjects is reflected in achievement tests (Brown, 1983). Therefore, analysis of the results obtained gives further information on the adequacy with which essential content and skills are actually being taught (Anastasi, 1982).

Pearson Product Moment Correlation (r) was used in our analysis to show the degree of relationship between a student's KCPE entry mark and KCSE grade in each strata.

Using Statistical Package for Social Sciences (SPSS), descriptive analysis of data was done. The analysis included computation of:

- 1) The means for KCPE scores and KCSE grades for students for each school category.
- 2) Standard deviation for KCPE scores and KCSE grades in each school category and gender. Standard deviation gives an overall measure of variability for a set of test scores hence characterizes a distribution of scores or grades.
- 3) Correlation coefficients (r) using the Pearson-Product Moment correlation formula. The examinees' KCPE scores were correlated with their KCSE grades so as to obtain the indices of relationship. This technique was adopted because the grades are considered as continuous variables.

3.9 Validity and Reliability of the Study.

Validity refers to the extent to which a test measures what the researcher actually wishes to measure. It indicates the degree to which an instrument measures what it is intended to measure. The researcher will rely heavily on secondary sources of data from the school's archives. The KCPE results used as entry marks of the students examined in the years 2006 , 2007 and 2008 and respective students KCSE performance results as examined in the years of 2010, 2011 and 2012.

CHAPTER FOUR

RESULTS AND DISCUSSIONS

4.0 Introduction

This chapter contains; demographic information of the data, presentations, interpretation and discussions of research findings. Data from the different sample categories was first captured by Ms Excel application package and then later imported to SPSS IBM (Version 20.0) for analysis of models under study and R (Version 3.1.0) Statistical Software for descriptive and exploratory analysis.

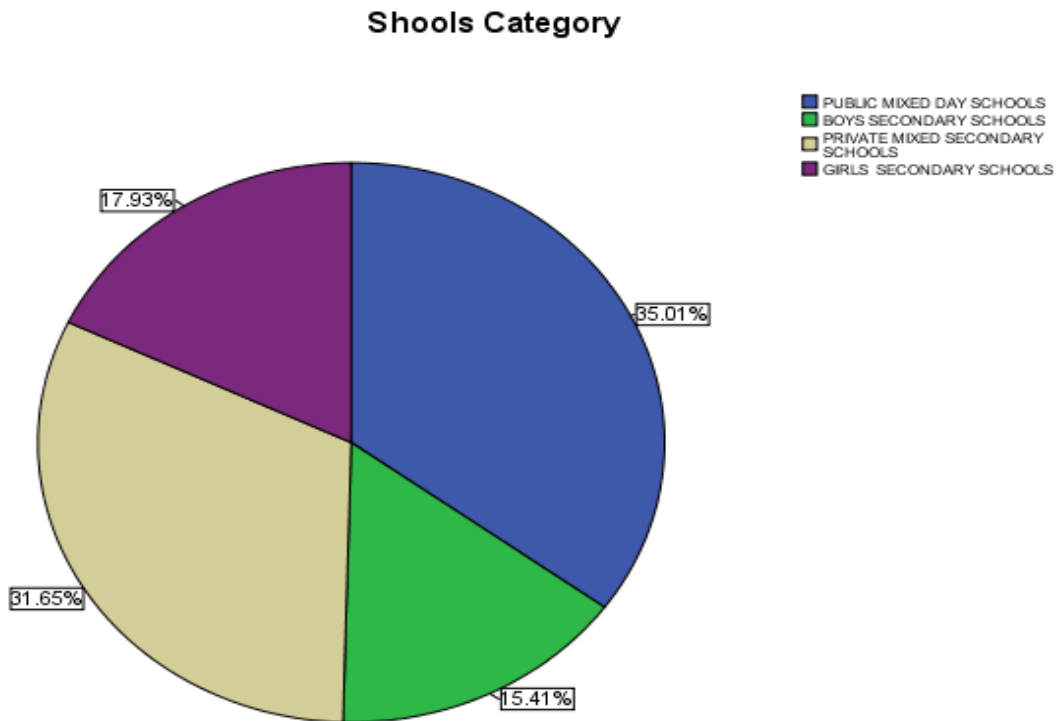
4.1 Sample Frequencies

The research studied 15 schools out 47 schools in Kajiado North Sub-county which represents 31.9% out of the total population under study. The research sampled 357 students out of 6084 students who sat for their KCSE examinations in the years 2010, 2011 and 2012 in Kajiado North Sub-county.

Table 6 : Sample Frequencies

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid PUBLIC MIXED DAY SCHOOLS	125	35.0	35.0	35.0
BOYS SECONDARY SCHOOLS	55	15.4	15.4	50.4
PRIVATE MIXED SECONDARY SCHOOLS	113	31.7	31.7	82.1
GIRLS SECONDARY SCHOOLS	64	17.9	17.9	100.0
Total	357	100.0	100.0	

The research further studied 2 Boys Schools , 3 Girls schools, 4 Public mixed secondary schools and 6 Private mixed secondary schools. Students from Public mixed schools took leading percentage of 35.0% , followed students from private mixed schools at 31.7 % , followed by students from girls schools at 17.9% and lastly by students from boys schools at 15.4 % as shown in the Pie Chart below for Sample Frequencies for each school Category.



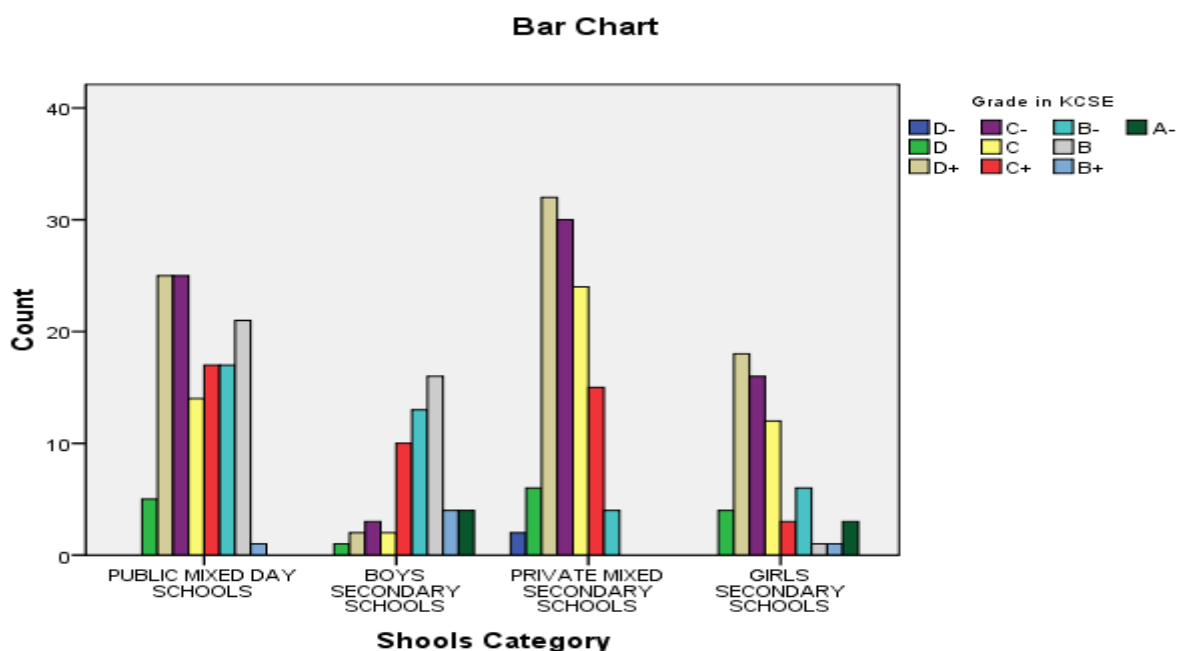
4.2 KCSE Performance Analysis

Table 7 shows Analysis of KCSE performance across the different school categories upon KCSE grades cross tabulation.

Table 7 : Schools Category * Grade in KCSE Crosstabulation

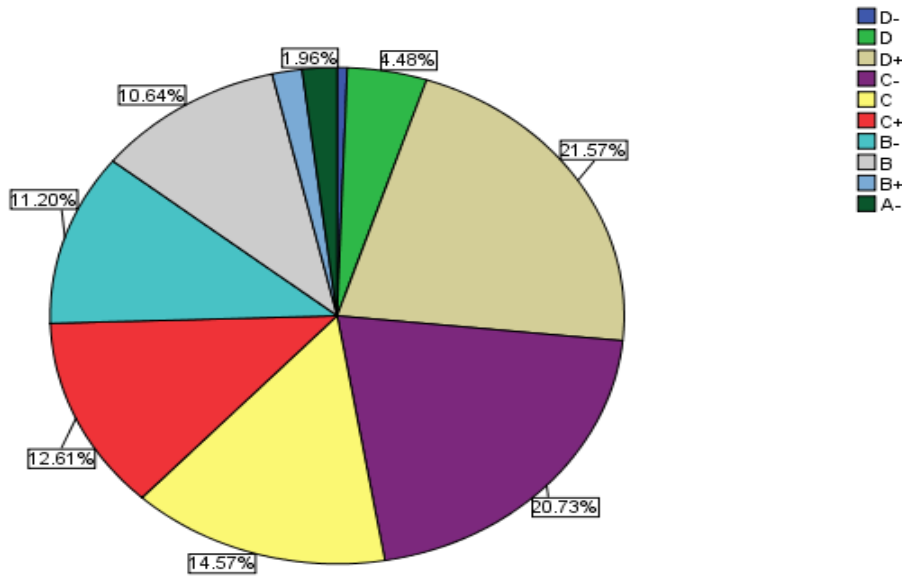
		Grade in KCSE									Total	
		D-	D	D+	C-	C	C+	B-	B	B+		A-
Schools												
Category	PUBLIC MIXED	0	5	25	25	14	17	17	21	1	0	125
	BOYS SCHOOLS	0	1	2	3	2	10	13	16	4	4	55
	PRIVATE MIXED	2	6	32	30	24	15	4	0	0	0	113
	GIRLS SCHOOLS	0	4	18	16	12	3	6	1	1	3	64
Total		2	16	77	74	52	45	40	38	6	7	357

The bar chart the KCSE grades.



The highest number of students scored a mean grade of D + (plus), which is 21.57 % of the population under study. The results clearly showed that 12.61 % of the students scored a mean grade of C+ (plus), 11.2% scored a B – (minus), 10.6% scored B (plain) grade whereas 1.96% scored B + and A – grades combined. Generally this performance shows a 36.3 % transition rate to University.

Grade in KCSE



KCSE performance had a mean performance of 42.32 points , C (plain) mean grade which is an average performance whereas the entry marks of the KCPE results had a mean performance of 297.88 which is above average performance as shown in the descriptive statistics of the KCSE Performance analysis in table 8 .

Paired Samples Statistics

	Mean	N	Std. Deviation	Std. Error Mean
Pair 1 KCPE Marks	297.88	357	42.971	2.274
KCSE Points	42.32	357	13.233	.700
Pair 2 KCPE Marks	297.88	357	42.971	2.274
Grade in KCSE	6.04	357	1.966	.104

Table 8 : Descriptive Statistics.

The exists a great disparity and lack of consistence between the entry marks of KCPE mean results of the boys and girls when joining Form 1 in the various schools and the KCSE mean performance at the end of the 4 year course of study. This shows that the schools do little in terms of value addition to the students entry behaviors. Single schools performed better than mixed schools, whereas Boys schools further performed better than Girls schools.

4.3 Correlation Results

There was a significant positive linear relationship between KCPE results and KCSE performance ($r= 0.701$) regardless of the school where the candidate sat for the KCSE examinations.

Table 9 : Correlations

		Schools Category	KCPE Marks	KCSE Points
Schools Category	Pearson Correlation	1	-.252**	-.245**
	Sig. (2-tailed)		.000	.000
	N	357	357	357
KCPE Marks	Pearson Correlation	-.252**	1	.701**
	Sig. (2-tailed)	.000		.000
	N	357	357	357
KCSE Points	Pearson Correlation	-.245**	.701**	1
	Sig. (2-tailed)	.000	.000	
	N	357	357	357

** . Correlation is significant at the 0.01 level (2-tailed).

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This chapter summarizes the findings of the study and present conclusions and recommendations.

5.1 Summary

The purpose of the study was to investigate the relationship between a student's KCPE results and KCSE performance in Kajiado North Sub-County, Kajiado County. The research took into perspective secondary data that was collected from 15 secondary schools in Kajiado North Sub-county. The research data was precisely collected from 6 private mixed secondary schools, 4 public mixed secondary schools, 2 boys secondary school, 3 girls secondary school. Data was analyzed using Statistical packages SPSS IBM (Version 20.0) for analysis of models under study and R (Version 3.1.0) Statistical Software for descriptive and exploratory analysis

5.2 Conclusion of the study

The study concludes that

- i) The KCPE results highly determine the KCSE performance of boys and girls in Kajiado North Sub-county.

- ii) The Boys secondary schools and Girls secondary schools performs better than mixed secondary schools. Boys secondary schools performs better than Girls secondary schools in Kajiado North Sub-county.
- iii) There is little input in value addition that the teachers and secondary schools do to the students who go through four years course in secondary schools in Kajiado North Sub-county.
- iv) The choice of KCSE subjects highly affect the KCSE performance for the boys and girls in Kajiado North Sub-county.

5.3 Recommendations

In the light of the research findings the study wishes to make the following recommendations.

- i) Teachers ought to implement strategies that would enable learners to improve performance.
- ii) Boys and girls should be provided with adequate information on the importance of the subject that they take in schools. There should be professionally trained career teacher counselor in all schools. Since career counseling has been found to be most effective in career guidance of students.
- iii) There is need for involvement of parents in the education of their children. Areas that are challenging in secondary schools should be demystified by the teachers and parents so that learners can see and appreciate their achievement in such areas.
- iv) Teachers and learners can attend symposia and excursions to enhance skill development and competition to advance in creativity and better the performance.
- v) Teachers and administrators should formulate viable policies which will make learners foster positive attitudes to better their grades.

5.4 Suggestion for further Research

Taking the limitation and delimitation of the study, the researcher makes the following suggestions for further research;

- i) The same title to be replicated to other sub-counties at least one in each county throughout the country.
- ii) How the choice of subjects affect KCSE performance among students in secondary schools in Kajiado North Sub- County.
- iii) Factors affecting KCSE performance in Kajiado North Sub-County.

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APPENDIX B

GRADING SYSTEM

GRADE	NUMBER OF PONTs
A	12
A -	11
B+	10
B	9
B-	8
C+	7
C	6
C-	5
D+	4
D	3
D-	2
E	1

NB : The superior performance is awarded grade A and the weakest performance grade E

APPENDIX C

LIST OF SCHOOLS IN KAJIADO NORTH SUB-COUNTY.

PUBLIC SCHOOLS

	NAME	CATEGORY
1	Oloolaiser High	Boys
2	Enoomatasian Girls	Girls
3	Baraka Ontoyie	Girls
4	Nakeel Sec school	Boys
5	Oloolua Sec School	Mixed
6	Olooseos Sec School	Girls
7	Nkaimurunya Mixed Sec School	Mixed
8	PCEA Ngong Hills	Mixed
9	Olkeri Mixed Sec School	Mixed
10	Olekasasi Mixed Sec School	Mixed
11	Najile Boys Sec School	Boys
12	Kiserian Mixed Sec Schoo	Mixed
13	Kibiko Sec School	Mixed
14	Ewuaso Girls Sec	Girls
15	Magadi Sec School	Mixed
16	PCEA Kimuka Girls	Girls
17	Paterson M. Sec School	Mixed
18	Oloyiankalani Sec School	Mixed
19	Ilingarooj Boys Sec School	Boys
20	Loodariak Sec School	Mixed
21	PCEA Upper Matasia	Mixed

PRIVATE SCHOOLS

	NAME	CATEGORY
1	Maasai Academy	Boys
2	Maasai High School	Girls
3	Serare School	Mixed
4	St Patricks Senior School	Mixed
5	Laiser Hill Academy	Mixed
6	Kiserian Junior Seminary	Boys
7	St. Patrick Hill Girls	Girls
8	Bishop Mazzoldi Sec School	Mixed
9	Bro Beausang Education	Mixed
10	Domus Marie	Mixed
11	Joram GM Academy	Mixed
12	Kiseryan Girls Sec School	Girls
13	Ngong Open Learning	Mixed
14	Oloiren Sec School	Mixed
15	Lewisa Academy	Mixed
16	St. Augustines Sec School	Mixed
17	Star sheikh Girls	Girls
18	Finken Education Centre	Mixed
19	Upper Matasia Sec Schoo	Mixed
20	Magnet High School	Mixed
21	Mbagathi View Academy	Mixed
22	Nkoroi Plainsview	Mixed
23	Valley High School	Mixed
24	Ole Frema Sec School	Mixed
25	Ongata Complex	Mixed
26	Royal Star High School	Mixed

WORK PLAN

ACTIVITY	DURATION	PERIOD
Writing Research proposal	4 months	January– April 2013
Review of Proposal at Department and School	3 months	May – July 2013
Application of Research permit	1 month	August 2013
Data collection	1 month	September 2013
Data Analysis, Interpretation and Report writing.	1 month	October 2013
Submission of Report		November 2013

BUDGET ESTIMATES

ACTIVITY / ITEM	AMOUNT (KSH)
Equipment and Stationary	5,000
Travelling	10,000
Subsistence	5,000
Proposal typing	3,000
Printing and Photocopying	3,000
Binding	4,000
Research Permit	2,000
Miscellaneous	5,000
TOTAL	37,000