A STUDY OF FACTORS WHICH INFLUENCE PERFORMANCE IN KENYA CERTIFICATE OF SECONDARY EDUCATION IN SELECTED PUBLIC SECONDARY SCHOOLS IN NAIROBI AND CENTRAL PROVINCES, KENYA

BY

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DECLARATION

This thesis is my original work and has not been presented for any degree in any other university.

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DEDICATION

This thesis is dedicated with a lot of respect and appreciation to my husband Charles Ndiritu whose tireless efforts, sacrifice and encouragement have resulted to this work.

ABSTRACT

The purpose of this study was to investigate the factors that influence performance in Kenya Certificate of Secondary Examination in selected secondary schools in Nairobi and Central Provinces. The research was intended to find out whether good academic performance could be attributed to specific factors that are present in the schools performing relatively better. The major factor considered in this study was the role played by headteachers parents, teachers and students in determining KCSE performance.

The literature review was divided into four subheadings: effect of school-related factors on academic performance, effect of non-school factors on academic performance, effect of student-related factors on performance and effect of motivational factors on performance. From the literature review, a conceptual framework was designed. The conceptual framework showed variables (inputs) and their expected directional effect on each other and on the output (performance).

The study used ex post facto research design. Three sets of questionnaires were designed by the researcher and validated by three lecturers in the Department of Educational Administration and Planning of the University of Nairobi. The instruments' reliability was found to be 0.89 for the headteachers' questionnaire, 0.84 for the teachers' questionnaire and 0.93 for the students' questionnaire. Stratified random sampling technique was used in selecting the study sample. The sample consisted of 32 headteachers, 575 teachers and 773 students. The questionnaire return rate was 93.35 percent, 63.48 percent and 89.13percent for headteachers, teachers and students respectively.

The data obtained was analyzed and interpreted using descriptive statistics (frequencies and percentages) and the chi-square statistical test which was accompanied by a contingency coefficient. Each computed chi-square statistical value was compared with the appropriate table (critical chi-square value) to determine its significance. The 0.05 level of confidence was used as the standard for rejecting or accepting the null hypothesis. If the calculated chi-square value was found to be higher than chi-square critical, then this showed that there was a significant relationship between the variables.

The study revealed that there was a significant relationship between the condition of school facilities, as perceived by headteachers, and students' performance in KCSE. The study also revealed that students' Kenya Certificate of Primary Examination(KCPE) entry marks, headteachers' frequency of holding staff meetings, students' socioeconomic background, teachers' academic qualification, teachers' workload, involvement of teachers in administrative decision-making, method used to solve teachers' problems, headteachers' frequency of holding meetings with parents, frequency of headteachers' meetings with form four students, teachers' attendance of in-service training and promptness of school fees payment were significant in determining KCSE performance. The factors that were not found to be statistically significant in determining KCSE performance were teaching of extra hours and reinforcement by parents on their children.

Based on the findings, it was recommended that there is need for headteachers to hold frequent staff meetings in which problems and progress of the school could be discussed. It was also recommended that there is need to encourage bursary schemes

to cater for students who come from low socio-economic background. Finally, it was recommended that there is need for headteachers to involve parents in school activities and need to consider conversion of day schools into boarding schools.

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LIST OF ABBREVIATIONS

BOG	-	Board of Governors
CPE	-	Certificate of Primary Education
EACE	-	East African Certificate of Education
KCE	-	Kenya Certificate of Education
KCPE	-	Kenya Certificate of Primary Education
KCSE	-	Kenya Certificate of Secondary Education
TSC	-	Teachers Service Commission

CHAPTER ONE

THE PROBLEM AND ITS CLARIFYING COMPONENTS

Background to the Study

The future of every country depends more than anything else on the rapid and effective development of its system of education (Todaro,1997). Hopes of achieving higher standards of living and even establishing independence in viable form seem to depend almost directly upon the ability of each country to train men and women at all levels (Burns, in Asunda 1983). After political independence in 1963, in an attempt to foster economic growth and development, Kenya opted to lay more emphasis on formal education as the key to economic, social and political development (Republic of Kenya,1964). The government realised the need to invest in education as a way of bringing both private and social returns. Kenya, like other developing countries, invests in education because of the belief that an educated, skilled labour force is a necessary condition for sustained economic growth in terms of its productivity (Meir,1965). In this case education is seen as a tool to equip the citizenry with capacities for higher productivity. People with improved skills and knowledge gained through education are likely to disengage themselves from the traditional methods of production.

Kenya's education system is so much examination oriented that right from the primary school the pupil is made to understand that success only comes when one is able to competitively pass well in all national examinations (Bett,1986). This is evident from the present system of education, 8 years of primary education, 4 years of secondary education and a minimum of 4 years at the university (8:4:4) which was designed in

such a way that there are two major national examinations that students should pass in order to proceed to the university. The first examination is done at the end of the 8 years of primary education called the Kenya Certificate of Primary Education (KCPE) and the next one is done at the end of form four called Kenya Certificate of Secondary Education (KCSE).

In most Kenyan schools today, the students are drilled to pass examinations as this is the only criterion for selection into jobs, courses of further studies or vocational training (Eshiwani, 1983). Examinations are stressed so much that some major areas of education are left out. This was emphasized by Fafanua (1994) a social education specialist in Africa, as follows:

> African countries are running exams rather than educational systems. Education has become so exam-oriented that all other aspects of the system have been over-looked because of the craze to achieve good grades. Examinations take the front stage even when 200 million of the 600 million Africans remain illiterate...(Daily Nation, 30th June, 1994 p.21).

It is therefore not surprising that there are often cases of cheating in examinations. For example, Mudolla, a District Education Officer lamented that eight Murang'a schools leaked the KCSE among them the famous Njiris High School (Kenya Times, 24th Feb, 1994 p.3). Examination papers have also been reported as having fallen off a moving District Officer's landrover (Daily Nation, 9th Nov,1996 p.7). This happens because of the stress that is laid on examinations as a major determinant of joining institutions of higher learning and the job market. Every year there are many students who sit for KCSE in the whole country as shown in the Table 1. It is regrettable that only a few of those who sit for the examinations are admitted to institutions of higher learning (Republic of Kenya,1997.)

performance (KNEC,1997). In 1994 for instance, Njiris High School was position nine in the country only to be position 39 in 1997. This variation from one school to another and even in the same school causes a lot of concern to all those involved. Poor performance of pupils in these examinations has drawn the attention of the Government, educationists, parents and even the pupils (Mwangi, 1995). Another factor that has drawn most people's attention is the variation that exists in performance of pupils in different schools in spite of the fact that they may have admitted pupils who had attained similar scores in KCPE. Some schools also have been noted to be doing better in academic performance than their counterparts despite the similarity in facilities.

High controversy exists among experts in scholastic achievements as to the factors that contribute jointly in determining students achievement (Waweru, 1982). Among the factors that have been cited as significant determinants of performance are unfavourable home environment, intelligence quotient of pupils, students discipline, teachers qualifications, anxiety level of pupils as they sit for national examinations, and teachers' and students' motivation (Fraser, 1959, Cantu,1975; Maundu, 1980; Bali, Drenth, Flier and Young, 1984).

Statement of the problem

Although Kinyanjui (1972) found that low selection grades at the time of enrollment is a significant factor contributing to poor performance Dworetzy (1981) has explained that schools can draw from a similar group of students in terms of performance but end up with big differences in the next national examination. It is evident that most of the students who sit for the KCSE examination do not manage to proceed for further studies or even getting good jobs due to poor KCSE results. For

instance, out of the 156,714 who sat for KCSE in 1996, only 17,287 had B and above (KNEC, 1997). Out of such large numbers who sit for KCSE, public universities admit about 8, 500 students every year.

There is also a lot of variation in performance in schools that select students with similar scores in KCPE. For example, Precious Blood Secondary School-Riruta, has remained a top school in performance despite the fact that it is a provincial school. Schools also vary in performance from year to year. For example, Alliance High School lost its position one which it had maintained for a long time, gradually to position four in 1997. Since it is not possible to attain equitable distribution of resources in schools, there is need to investigate the factors that cause variation in performance in secondary schools that enroll students with similar KCPE grades. Although studies done on secondary schools reveal that such factors like textbooks, teachers qualification and students' background affect performance in examinations, little seem to have been done on motivational styles. This research was intended to find out whether good academic performance can be attributed to specific factors that are present in the schools performing relatively better. The researcher went a step further to determine whether motivational styles used in different schools had any effect on academic performance. It can be noted, for the years 1993 to 1997 examination performance, that most schools that led in KCSE performance were from Nairobi and Central Provinces of Kenya (Table 3).

Table 3: **Number of top ten schools in KCSE from Nairobi and Central provinces compared to other provinces.**

YEARS	NAIROBI AND CENTRAL PROVINCES	OTHER PROVINCES IN KENYA
1993	9	1
1994	8	2
1995	9	1
1996	8	2
1997	9	2

Source: Kenya National Examination Council.

Purpose of the Study

The purpose of this study was to determine factors that influence academic performance in selected secondary schools in Nairobi and Central Provinces. In addition the study sought to investigate the prevailing conditions that may account for poor and good academic performance. The study was intended to determine the role played by headteachers, teachers, parents and students in the preparation for KCSE and their possible effect on performance. Other factors that the researcher considered were class size, teachers' qualifications, students' home background and motivational styles used in different schools.

Objectives of the Study

The objectives of the study were as follows:

1. To determine the motivational styles used by headteachers to enhance academic performance in selected secondary schools.

2. To establish the influence of students' home background on their performance in KCSE performance.
3. To determine the relationship between teachers' academic qualifications and the performance of their students' in KCSE.
4. To determine the relationship between teachers' professional qualifications and their students' performance in KCSE.
5. To determine the relationship between teaching and learning facilities as perceived by headteachers in their schools and students' performance in KCSE.
6. To establish the extent to which parents' involvement in their children's studies influences performance of their children in KCSE.

Hypotheses of the Study

1. There is no significant relationship between headteachers' frequency of holding staff meetings and students' performance in KCSE.
2. There is no significant relationship between teachers' academic qualification and students' performance in KCSE.
3. There is no significant relationship between teachers' workload and students' performance in KCSE.
4. There is no significant relationship between teaching of extra hours and students' performance in KCSE.

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4. There is no significant relationship between teaching of extra hours and students' performance in KCSE.

5 There is no significant relationship between parental verbal or material rewards and students' performance in KCSE.

6. There is no significant relationship between the condition of learning facilities, as perceived by headteachers and students' performance in KCSE

7. There is no significant relationship between the KCPE entry marks and their performance in KCSE.

8. There is no significant relationship between students' socio-economic background and students' performance in KCSE.

Significance of the Study

This study was expected to be significant to the Kenyan education because of a number of considerations. Besides funds allocated for the establishment of new schools, large sums of money are invested in secondary education for training teachers, paying salaries of educational personnel, and for providing teaching and learning materials to various schools. The government spends a big portion of its annual budget on education: For instance, the forward development budget on education for 1997/98 is K£118,026,563 (Education Statistics, Ministry of Education, 1996) and it would be a big loss to the country if the sacrifice is not properly utilised and the students continue to fail their examinations. Poor performance leads to undesirable wastage through dropouts and repeaters. The results found from this study were therefore expected to be useful in identifying the factors that contribute positively to KCSE performance. The results were expected to be useful to educational planners, policy makers and the government as they can utilise the findings to bring the high wastage under control.

It was hoped that educators, parents and teachers would benefit from the findings and the recommendations of this study in selecting ways and means of motivating students to learn. The Ministry of Education for example was expected to utilize the findings to eliminate those factors that are likely to be identified as contributing to poor performance. The principals were also expected to utilize the findings to look for ways and means of improving poor performance in their own schools. This study was also expected to contribute towards a better understanding of academic performance by showing how academic performance is affected by variables studied in the research.

To the parents the results were expected to help in identifying the roles they could play in promoting or supplementing teachers' effectiveness. The knowledge gained from this study was also expected to be helpful to the students as they could use the factors identified in the study to enhance their performance. The findings expected from the study, were also expected to aid the researcher in identifying the best cause of action to improve KCSE performance in a fairly balanced way in the whole country of Kenya.

Limitations of the Study

This study was limited by a number of factors beyond the control of the researcher. Firstly, there was the possibility of unreliability of the KCSE rankings of schools which were used in the study as a measure of relative performance. Secondly, in some cases, school performance changed markedly from one year to the next thus making it impossible to label a school as 'good' with certainty. Finally some factors were beyond the control of this study such as the Intelligence Quotient of students and the

anxiety level of students and which may have influenced the performance of students at KCSE.

Delimitations of the Study

Although there are 632 schools in Nairobi and Central provinces, only 32 schools were studied. However, the researcher was denied access to two schools, one in each province, leaving only 30 schools. From the 30 schools two headteachers did not respond to the questionnaires. All efforts to recover the questionnaires were not successful. This study concentrated on students, teachers and headteachers in the selected secondary schools leaving out other equally important personnel in the learning institutions such as the Ministry of Education officers and the Teachers Service Commission senior personnel. These people could also be crucial in determining KCSE performance. Only public schools were studied leaving out private schools which were assumed to have different factors that influenced their performance in KCSE.

Basic assumptions

In pursuing this study, the following assumptions were made:

1. KCSE is an acceptable measure of academic performance.
2. The respondents would be willing to cooperate and give honest and uninfluenced answers.
3. The rankings of schools using their arithmetic means was an accepted and accurate method of determining the actual positions of each school in terms of performance.

Definition of Significant terms in this study

Academic performance: refers to grades representing the sample of achievement of a student with respect to attained academic skills or knowledge.

Achievement: refers to the extent to which a student has attained the goals of a course as indicated by his/her grade.

Effect: Power to produce consequences or results.

Motivation: refers to forces that prod and give direction to behaviour, in this case academic performance.

Motivational style: refers to the ways and methods used in inducing a person to accomplish a goal.

National examination: A systematic procedure of determining students' academic ability after a specific period of study.

C+ and above schools: Schools were categorised as above C+ if more than 50 percent or of candidates who sat for KCSE examination in the selected years passed in grade C+ or above.

Below C+ schools: Schools were categorised as Below C+ if 50 percent or more of the students who sat for KCSE in the selected years had below C+.

Organisation of the rest of the study

Chapter two consists of the literature review which is be divided into the following sections: school related factors, external factors, student-related factors and motivational styles. Chapter three describes the research methodology and includes the research design, target population, sample and sampling procedure, research instrument, instrument validity, instrument reliability , data collection procedure and data analysis techniques. Chapter four consists of the data analysis and discussions of the findings and Chapter five consists of the summary of the findings, conclusions,

recommendations and suggestions for further research. This is then followed by the appendices and list of references.

CHAPTER TWO

LITERATURE REVIEW

The importance of education cannot be underestimated especially from the way it is taken as an agent to success in life. In a developing country like Kenya where employment opportunities continue to diminish, the importance of good performance cannot be ignored. This is because performance is a determinant on who should take up the available opportunities in the job market. With the increasing expenses of university education, many poor parents have come to take secondary education as terminal. The KCSE is taken as a crucial examination because those who perform poorly cannot compete effectively for the few opportunities that exist in both higher institutions and the job market.

It is known that not all those who sit for KCSE succeed to the next level of education(Kenya National Examination Council,1996). This study is intended to identify the motivational styles that are lacking in the institutions that perform poorly in this crucial examination. Earlier studies have highlighted what might be the factors that affect performance (Olembo,1977; Makau and Somerset,1980; Musango, 1982; Eshiwani, 1983; Loxely, 1983; Goodlad, 1984; Kariri, 1984; Caldas and Bankston III, 1997). These factors can be grouped into three: school factors, external factors and student-related factors.

Effect of school related factors on academic performance

Research exploration into why some schools excel more than others has been done by various scholars. Eshiwani (1983) carried out a study of factors that affect performance in Western Province of Kenya, by obtaining data from secondary school headteachers, secondary school teachers who taught form four and six, chairmen of Board of Governors and from the Kenya National Examination Council. In this study he administered questionnaires to 170 secondary schools through the Provincial Education Officer to be completed by school teachers, headteachers and Boards of Governors. The findings of this study revealed that the factors which significantly caused poor performance were: school resources (class size, textbooks, school administration and management, libraries and laboratory facilities), teacher characteristics (certification, experience, training, teacher-pupil ratio, professional commitment and transfer index) and students' traits (pre-primary education, primary education).

Another study by Heynemann and Loxely (1983) showed that a school library has a significant effect on learner academic performance. They found out that the simple presence of a school library was significantly related to achievement in Brazil, Chile, Botswana and Uganda. This was consistent with Coleman's study (1966) where the findings were that the number of textbooks on loan from the library was significantly related to learning achievement of students in the United States of America.

Posteithwaite in Eshiwani (1983) also points to the great importance of school facilities. These facilities include libraries, textbooks, dormitories, visual aids, electricity, water and playing grounds among other things. Differences in teaching

methods have also been cited as a major factor that affects performance. Somerset (1977) and Makau and Somerset (1980) carried a study using some rural schools and Nairobi schools. Spearman's rank order correlation method was used in the analysis of their data and indicated a strong correlation between teaching methods and pupils' performance at CPE examination. In their study also, there was a strong correlation between the quality of administration and the students' performance in CPE.

The size of the school has been reported as having an effect on performance. Wiseman in Kariri (1984) explained that larger schools perform better than smaller ones. He explained that this could be due to the fact that larger schools attract better headteachers who delegate proper and conducive administration which leads to high academic attainment. He also explained that larger schools receive equipment and textbooks promptly and effectively. Elsewhere, enrollment size of the school was found to correlate negatively with student achievement (Dimuzio, 1989).

Some work done in American secondary schools by Gittei in Kariri (1984) showed that traditional variables that supposedly affect quality of performance are class size, pupil-teacher ratio, teachers experience and condition of school buildings. Contrary to Gittei, Kemp's (1955) study showed a low correlation between school size and performance. Surprisingly, the larger schools were more efficient than small ones. Wiseman (1966) suggested that Kemp's findings could be because larger school receive equipment and textbooks promptly and effectively.

Olembo (1977) also noted that the quality of a headteacher in a school matters in students' performance. On education and administration, Olembo hints that the way

the headteacher structures and administers the school, his/her relationship with the school subsystems, teachers and students has a strong effect on the students' performance. Eshiwani (1982) had a similar finding that school administration is closely related to the students' performance. He quotes the then Minister of Education (Standard, 29th March, 1982 p.21) as having underlined the importance of sound administration as follows:

> ...the basic reason why some schools performed better was that while some headteachers organized the learning process for their pupils, others left performance to chance...

This points to the importance of the headteacher being actively involved in whatever goes on in the teaching and learning process in the school.

Headteachers' attitude has also been identified as a factor that affects performance. In a study carried out in 20 selected secondary schools in Uganda, Musango (1982) reported a positive relationship between headteachers' attitudes and performance. He used the questionnaire method to measure the headteachers' attitude. He analysed his data using descriptive methods (percentages) and the non-parametric method of chi-square test. His finding indicated that the attitudes of headteachers towards a subject led to lack of teaching and learning of the same. For instance, a headteacher with a negative attitude towards introduction of Fine Art in his school may buy relatively few materials in that subject and even show lack of interest in the subject's performance.

Headteachers' training in management has also been cited in factors that affect performance. Heynemann and Loxely (1983) outlined the importance of headteachers training in management techniques that are conversant with goals of

high achievement rates for pupils at the secondary school level in Egypt. They found out that headteachers who attended more training courses and had longer teaching experience before becoming heads of schools, often had their schools attaining higher levels of academic achievement for their learners.

Qualification of teachers has also been identified as a crucial factor in influencing performance. Somerset (1966) noted that schools with well qualified teachers tended to be the more successful. Bett (1986) carried out a study on factors affecting performance in Kericho District. He used questionnaires and structured interview as his methods of data collection. The data obtained was analyzed and interpreted using descriptive statistics(frequency and percentages). The findings of the study revealed that the major factors that influence performance in the said district were unequal distribution of graduate teachers and ineffective role played by the teachers and the headteachers. Similarly, Eshiwani (1982, 1983), in his studies cited earlier, also reported a positive relationship between student academic performance and teacher characteristics which include his/her qualifications. He further revealed in his report that the reason why so many schools perform poorly in the national examinations is that 40 percent of teachers in primary schools are untrained. He said that students prepared by such teachers did not perform well in KCSE as they failed to have a proper foundation.

Teachers' qualification tends to have apositive effects on academic achievement at the secondary level (Husen, Saha and Noonan,1978). According to this study, moderate correlation between teachers' school attainment and pupil performance ($r=0.34$) was observed at. Heynemann and Loxely (1983) also found out a strong

correlation between the teachers' length of post secondary schooling or the number of teacher training courses completed and learning achievement. In another observation, Beebout (1972) had found out that teaching experience was associated with higher learner educational outcomes and that this contention was more strengthened by teachers receiving more pre-service courses.

Time allocated to teaching and learning has also been cited as a factor that contributes to performance. Comber and Keeves (1973) have observed that within limits, the more the hours allowed to instruction in a subject, the higher the achievement. Eshiwani (1983) also noted that many schools normally lose many teaching and learning hours at the beginning and at the end of the term. This could also be a factor accounting for many failures at the national examinations.

A study on whether school expenditure has any effect on students' performance has been done by Psacharopolous and Loxely (1986). They found a positive relationship between school expenditures and learning achievement. Thias and Carnoy (1973) also found that the per-pupil expenditure had a significant effect on learning achievement levels.

Lack of school fees has also been reported as having a negative relationship to performance. Michieka (1983) in his study on causes of dropout in Kisii district explained that lack of school fees causes frequent absenteeism which further leads to failure in examinations. School organizational climate has been cited as having no effect on performance. Dimuzio (1989) carried out a study to evaluate the achievement of large and small secondary schools of New York State through an examination of the relationship between school enrollment, school climate and

student achievement. Fifty three secondary schools participated which represented districts located in rural, urban and suburban locations. The socioeconomic status of students was found to be the most significant predictor of student achievement while a negative correlation was reported between school organizational climate and students' performance. This was contrary to a Lane and Tinto's findings. A study done by Lane and Tinto (1987) revealed that school organizational climate contributes to academic performance. They concluded that a school climate characterised by social rewards for academic excellence, where discipline and scholastic achievement are valued by the teachers and students have a direct influence on student's performance. Such characteristics could be shaped by school administration.

Teacher's job satisfaction has also been cited as a factor that influences students achievement. Chapman (1983) reported that a high quality of professional life for the teacher contributed to an increase in student achievement. Elsewhere (United States) there is further evidence that satisfied teachers have a positive effect on classroom learning conditions (Goodlad,1984). There seems to be no such evidence in Kenya but it is easy to think that dissatisfied teachers do not contribute to the improvement of student learning and achievement. Teacher satisfaction is a source of motivation that sustains effort in performing the many routine and necessary tasks required of good teachers (Watson, Hatton, Squires and Suliman, 1991). In their study on levels of teachers satisfaction, Reyes and Imber (1992) found that teachers who perceived their workload as unfair, tended to have higher levels of job dissatisfaction than those who perceived their workload as fair. This dissatisfaction can be perceived to be the cause of poor performance as the dissatisfied teachers do not teach well.

The effect of non-school factors on academic performance

These are the factors that are normally external to school control like home environment, parental level of education and parental participation in school activities. The importance of home environment is supported by Talcott in Banks (1976). Partons argues that the family exerts a profound influence on response of the child to the school. From this contention, Partons holds that we should attempt to describe the family environment which is most likely to encourage a favourable or non favourable response to school academic performance. Muthungu (1983) in his study with Harambee schools in Nyandarua District also asserts that there is a positive relationship between students' performance and home environment.

Children from good socio-economic backgrounds tend to perform better in school as a result of good parents' educational standards, high incomes, their proximity to urban areas where best schools are found, their parents' willingness to help them in school work, giving incentives in terms of presents and their ability to buy supplementary books (Prewitt, 1970; Somerset, 1972; Wanyoike, 1976; Gakuru, 1977; Kinyanjui, 1981). All these activities by parents which are a function of socio-economic status, put children from good backgrounds at a better position compared to those from a poor socio-economic background. Kinyanjui (1979) had also asserted that limited incomes among lower class families tends to restrict the provision of school books and other necessary materials that ensure good performance and school attendance. Sewell and Hauser in Avalos (1986) had similar findings on socioeconomic background. In their study of education, occupation and earnings in the United States, they found a set of socio-psychological factors (school

grades, parental and teacher encouragement of higher education, friend's plans and respondent's school plans and aspirations) to account for additional variance in attainments and to explain how and why prior family background and ability affect attainment. Social class definition of a family has also been found to influence the academic achievement to its children. Avalos (1986) in his study on teaching children of the poor explained that incomes among lower class families restrict provision of tuition fees, school books and other material inputs necessary to ensure good performance or continuation in school. Heynemann and Loxely (1983) also cited home background as a significant factor that affect performance. This was consistent to another study by Caldas and Bankston III (1997). They found out that of the great number of inputs used to estimate learning effects, learner social economic status stands very significantly. They also noted that peer family background had a significant effect on learner academic achievement particularly in a situation where the learners come from different backgrounds.

Parental involvement in the student's work has also been identified as a factor that affects students' performance. In a study done on 106 standard 7 school children in Nairobi, Kapila (1976) reported a positive association between parents' participation in the child's school work and academic performance. Okumu (1995) in her study with standard 7 pupils in the slums of Nairobi also reported similar findings. She used the questionnaire method to measure parental involvement with the children's work. She analyzed her data using both descriptive (percentages) and inferential statistics (chi-square). Her findings indicated that there was a strong relationship between parental involvement with their children's work and their performance in CPE.

Osire(1983) and Bali, et. al,(1984) found no relationship between academic performance and parental involvement. In his study, Osire attributed low and negative correlation's to the possibility that too much encouragement given by some parents cause worry and anxiety to the child which consequently may lead to poor performance. This was contrary to Okumu's finding. The other conflicting finding reported in a study by Bali et. al (1984) was conducted on 571 Kenyan standard seven pupils from 4 different regions (Nairobi/Kiambu, Mombasa/Kwale, Kisumu and Meru). Low and negative relationships between parents' support and interest, and pupils' performance in the CPE and KCE were reported in the study. Follow-up studies by Rees (1989) and Kitivo (1989) have also shown similar results to Bali et. al (1984). Okwir-Akana in Muola (1983) however found a positive relationship between students' performance and parental encouragement. Okwir-Akana in a study of 426 primary standard seven pupils in Gulu district in Uganda found parental encouragement, socio economic status, the child's educational aspirations and attitudes of parents towards education to be significantly related to the child's academic performance. He however found no significant relationship between abnormal home background (the case where one or both parents of the child are dead, or the family is polygamous) and academic achievement. Family size has also been cited as having on effect on academic performance. Sazz and Lexmund in Muola (1983) in a study of 148 students found family size to be inversely related to the students' academic performance. In their study, family size, birth order position and age spacing did not correlate significantly with intelligence. A further study by Comer and Haynes (1991) also supports this fact. They found parental participation in a child's education to be essential for effective learning and teaching. They

characterised school as providing learners with opportunities for positive interactions with adults (teachers) and other school children that would transfer to the learner's home life and other learning environments. Parental participation has also been stressed upon by Griffin (1996). He pointed out that parents' involvement is an important element in learner academic achievement and that this is consistently correlated with the learner test performance. This relationship was observed even when the school level variables like class size, school student population, teacher qualifications and experience were controlled.

Parental education level has further been cited and related to students' need to achieve and the educational level of their parents. In his study, Kitivo (1989) looked at the relationship between secondary school students' need to achieve and the educational level of their parents. He used Thematic Apperception Test (TAT) technique to measure students need to achieve. Results from his study show that there is a positive and significant correlation between father's level of education and pupil's achievement motivation. He also reported a further positive relationship between the mother's level of education and student's achievement motive.($r=0.130$). The students' need to achieve was further correlated to his/her academic performance which showed a positive correlation. Another study by Jamison and Lockheed (1987) had similar findings. In this study, schooling of the household head, attitudinal modernity of the household head, the numeracy of the household head and the number of children were considered as important factors that determine learning achievement at the school level. Studies have also been done on parent-student relationship and how it affects performance. Studies by Kapila (1976) in Nairobi

secondary schools revealed that children whose parents made solicited visits to the schools do better academically than those parents who did not pay such visits.

Rural environment has also been cited as having some effect on academic performance. Nash in Muola (1983) observed that the rural environment is lacking in challenge and intellectual stimulation factors which account for the relatively poor performance of rural children. However, Kathuri (1986) in his study conducted in Nakuru district found no significant difference between academic performance of rural and urban pupils. Both rural and urban environments seem to have different effect on performance. For instance Zafar Khan (Standard, 20th August, 1983 p.10) lamented as follows on urban influence:

> ...in many cases especially the urban centres children are exposed to the unwholesome influences of the mass media, the craze of new styles, yellow journalism and other lure of city life...

The nation's level of economic development has a great effect on academic performance. This can be explained by the fact that a developed country is able to not only provide necessary equipment for learning but also to train the required personnel in its education system. Farell observes that:

> ...the poorer a nation, the greater is the influence on academic performance of the school quality factors; the richer a nation, the greater the influence of student socio-economic status... (Farell, 1993 p.29).

Effect of student-related factors on academic performance

Students' Certificate of Primary Education(CPE) performance has been reported to have an effect on East African Certificate of Education(EACE). Lunalo (1983) obtained data from a sample of 165 students who had sat for EACE in 1979. He carried out his study with students selected from 10 secondary schools from 3

districts in Western Province. These students' CPE results were traced and then compared to their EACE results. Regression graphs, means, standard deviations, Pearson product- moment correlations and multiple correlations were undertaken to examine the relationship between CPE and EACE results. The t-test and other statistical tests at 5 percent significance level were computed. The results indicated that in general CPE examination was a fairly good and efficient predictor of the EACE examination performance. The Pearson product-moment correlation found in this case was positive and statistically significant. This result established the existence of some positive linear relationship between CPE and EACE results.

Muthungu (1986) also carried out a study with a sample of 205 students from 6 randomly selected harambee schools in Nyandarua district as reported earlier. He used the questionnaire method to determine the factors that accounted for the students poor performance at KCE. Chi-square and Gamma statistical computations were used in his analysis. Results showed that the primary school background factors were significantly related to KCE results.

Other factors that have been observed to influence performance include school organizational climate. Sandy (1988) in his study with 266 academic and technical/vocational teachers in the republic of Trinidad and Tobago sought to establish the factors that made teachers more effective. In a Pearson product-moment correlational analysis teacher performance was related to school climate. Dimuzio (1989), however, found no relationship between school organizational climate and academic standards.

Achievement motivation has also been correlated to school achievement. Okumu (1995) in his study with 251 standard seven pupils from 4 primary schools as reported earlier showed that there was a significant relationship between pupils' achievement motivation and pupils' attitudes towards school. Their attitudes determined their performance in the examinations. This was in support to Wanderi's (1989) study with teachers' trainee achievement motivation and the teachers' attitudes towards school. However, Hartley and Hogarth (1991) argued that there is no clear-cut evidence to support the view that achievement motivation is related to academic performance.

Academic aspirations have been correlated to the school performance. Robinson (1991) based his study of academic achievement and occupational aspirations among secondary school pupils in Mozambique. A close relationship was reported between the two variables.

Effect of motivational factors on academic performance

Motivation is a central concept in any theory of education. When a failure occurs in an education system motivation is often blamed (Ball, 1974). Page (1958) conducted a research using more than 2000 students in 74 high school classrooms. All teachers gave an objective test to their students, who were subsequently assigned to one of three conditions. One-third of the students received no comment on their tests, one-third received specified comments of a rather stereotyped nature such as "Excellent ! keep up!", and the final one-third received a personal comment freely written by the teacher and designed to encourage that student. On a latter test the free-comment group did best and the no-comment group did worst. The greatest improvement was

shown by the poorest students in the personalised-comment group. This clearly shows that even poor students can be encouraged to do well academically.

Elsewhere in United Kingdom, motivation has been reported as having a positive effect on performance. Ismail (1988) carried out a study on the relationship between exposure, attitudes, motivation and competence. The purpose of the study was to investigate the standard of competence and the degree of some learner variables affecting competence. The sample consisted of 441 form four pupils from selected schools. The instruments used for data collection were an achievement test, an exposure scale, an attitude scale and motivation scale. The analysis of data was carried out using the cross-tabulation or correlation procedures. The statistical test of significance used was the chi-square. The analysis of quantitative data revealed among others that motivational orientations, desire to learn and motivational intensity were strong. The correlation analysis revealed that the relationships between competence and integrative motivational intensity were positive and significant.

Colon (1991) also carried out a study on Puerto Rican students on factors influencing motivation towards academic achievement. His sample comprised 95 Puerto Rican high school students. Colon achievement scale was used to measure the students' perception of their level of achievement and a Colon Motivation Scale (CMS) was used to measure the students perception of their level of motivation. Pearson product moment correlation (0.05 level of significance) revealed a positive relationship between motivation and achievement and a varied relationship between self-concept and motivation towards academic achievement. A t-test indicated that a

positive relationship existed between students' perception of parents level of education, motivation and achievement.

Successful schools have been quoted as ones which have an academic emphasis. Academic goals are clearly stated, there is a certain degree of structure and there are high achievement expectation (Goodlad, 1984). Effective schools are also characterised by regularly assigned and graded homework and by having a high proportion of time devoted to active teaching (Dworetzy, 1984). They also have a system of checks to make certain that teachers are following the intended practices of the school, (Ouston and Smith, in Dworetzy 1984). All these factors listed for the effective schools ensure that both teachers and students are motivated and therefore strive to achieve high performance in examinations.

Feedback of results have also been identified as playing a major role in performance (Davies, 1986). Feedback not only provides the learner with information concerning his performance but also serves as a reward, providing an extremely strong incentive to continue a task since it relates to the distance between a present standard and a goal or objective. Teachers' expectations of a student's potential can also be a very powerful factor influencing the motivation to continue to study. Davies (1986) argues that with respect to his or examination performance, a student will very often fulfill the expectations of his teacher, tending to do well if the teachers' expectations are high and optimistic, and tending to do badly if they are low and pessimistic. Other motivational strategies cited by Davies include a happy and secure emotional climate created through satisfying, consistent, harmonious relationships and interesting meaningful projects, reinforcement (pleasing consequences or unpleasant

consequences after a behaviour such as good performance), praise and criticism, recognition of students and competition among students.

The product of aptitude and treatment has also been cited to account for students performance. A child's achievement level (aptitude) may interact directly with classroom structure (treatment) to produce the best learning and the most enjoyable learning environment (Peterson, 1977). That is, students with high-achievement orientation often do well in a flexible classroom and enjoy it; students with low-achievement orientation do not usually do as well and dislike the flexibility. The reverse is true in a structured classroom. There are many other aptitude treatment interaction (ATI) factors operating in the classroom. Education experts are just beginning to pin some of these down; further clarification of aptitude x treatment interaction should lead to useful information about how children can be taught more effectively (Santrock and Yussen, 1984). This study is a further clarification of aptitude x treatment interaction.

Summary of Literature Review

There is sufficient evidence to suggest that school and non-school related variables have an important role to play in determining students' performance. The studies done reveal that factors that affect performance in examinations include teaching and learning facilities, teacher characteristics such as qualification and experience, socio-economic background of the students and motivational factors. Motivation, a human behaviour, is of particular interest to educationists, especially as a component of learning (Kituvo, 1989). Learning is evident in change in behaviour. In educational institutions, good performance is considered to be as a result of learning. The

literature review indicates that motivational styles boost both the teachers and students' morale thereby contributing to improved performance. Motivation is a source of good performance and should therefore not be ignored.

Conceptual framework

With regard to literature review, there are various inputs that seem to account for student's academic performance which is the output. The inputs which have been used in various studies include school-related factors, non-school-related factors , student-related factors and motivational factors. The following conceptual framework was used to show groups of variables and their expected directional effects on each other and on the output. This is shown in Figure 1.

Figure 1: **Relationship between various variables**

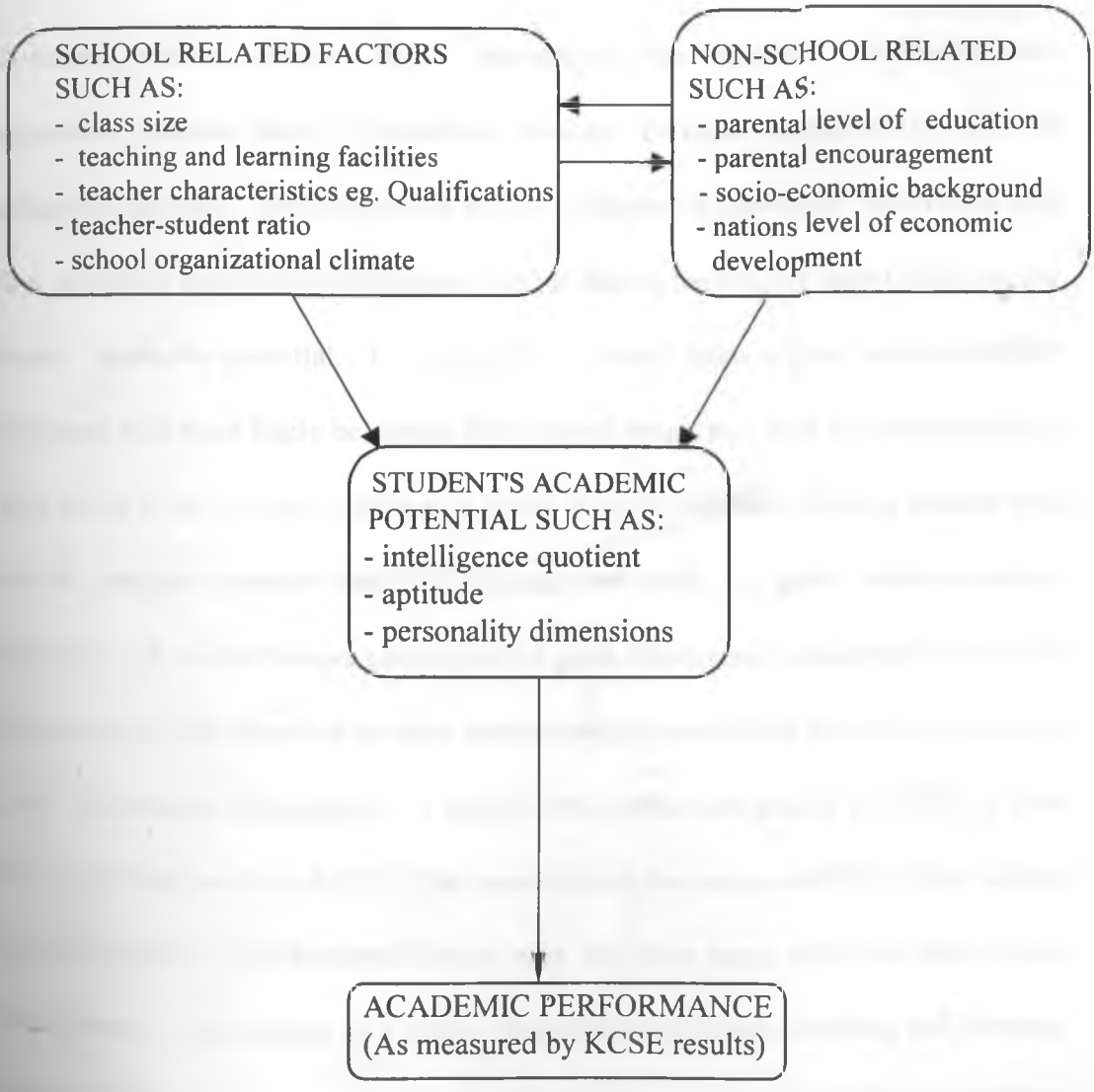

Figure 1 above describes the relationship between groups of variables and the output variable. School-related factors include factors such as libraries and laboratory facilities, teachers' characteristics, school size, time allocated to teaching and learning, school organizational climate, teacher-student ratio and the teachers' job satisfaction. These variables have an effect on the students' academic potential. For example, a student is expected to perform better in science subjects if the school he is studying in has good laboratory facilities and the teachers are more motivated than in a school without a laboratory and motivated teachers.

Non-school related factors above encompass the students' socio-economic background, parental level of education, students' personal characteristics such as intelligence, students' performance in KCPE, students' achievement motivation and nation's level of economic development. These factors have also a direct effect on the students' academic potential. For example, a student from a poor socio-economic background will most likely be absent from school because of lack of school fees,and is also likely to be of poor health as a result of poor nutrition. Such a student will therefore perform poorer than his counter-part from a good socio-economic background. A student whose parents are of good educational background will have role models and will therefore be more motivated than one whose parents do not have a good educational background. A student who performed poorly in KCPE is also likely to perform poorly in KCSE if the same factors that accounted for his/her failure are still in place. School-related factors may also have some effect on non-school related factors. For instance, if a school does not have enough teaching and learning materials and students are required to provide these materials, this will have an effect on the parents' economic welfare.

Non-school related factors also have some effect on school-related factors. For instance, a nation's level of development will affect the school's ability to supply essential facilities. The government's failure to supply textbooks, for example, will affect the student's potential. Other factors like parental socio-economic background also have an affect on the school. For example, a parent's failure to pay school fees for his/her child will affect the student in school by causing absenteeism.

The out-put in figure 1 reveals that it is affected by the student's academic potential. If as a result of poor non-school factors a student has low academic potential, the result is expected to be poor academic performance as measured by KCSE .

CHAPTER THREE

RESEARCH METHODOLOGY

This chapter describes how the scientific investigation was carried out. It describes the research design, target population, sample and sampling procedure, the research instruments, data collection and data analysis procedures.

Research design

This study was an ex post facto design. An ex post facto has been defined by Kerlinger as

> ...systematic empirical inquiry in which the scientist does not have direct control of independent variables because their manifestations have already occurred or because they are inherently not manipulable. Inferences about relations among variables are made, without direct intervention from concomitant variation of independent and dependent variables(Kerlinger, 1967 p. 379).

This study was considered ex post facto because it studied conditions or events which had occurred in the past and were assumed to be still existing in the field at the time of the study. The study analysed KCSE performance in the last five years. Factors that accounted for the performance in the last five years were assumed to be existing at the time of the study. The demographic variables were also not manipulable. The research design was also selected because the study sought to investigate and establish the relationship between the variables under investigation.

Target Population

The target population for this study was the 585 public schools in Central Province and 47 public schools in Nairobi Province, 150,846 students in Central Province and 18,840 students in Nairobi Province, 9,915 teachers in Central Province and 1,556 teachers in Nairobi Province (Ministry of Education, 1998).

Table 4 summarizes the target population:

Table 4:**Target population**

	Gender	Nairobi Province	Central Province	Total
Number of public schools		47	585	632
Number of students	Boys	11,692	73,177	84,869
	Girls	7,148	77,669	84,817
Trained teachers	Male	430	4,786	5,216
	Female	1,103	3,697	4,800
Untrained teachers	Male	12	1,012	1024
	Female	11	420	431

Source: Ministry of Education, 1997.

Sample

The sample was drawn from both provinces (Nairobi and Central). In Central Province, the sample consisted of 22 randomly selected schools. A total of 10 schools were also randomly selected from Nairobi Province. The total number of teachers in the sample was 370 from Central Province and 306 from Nairobi Province. The number of students in the sample was 387 from Central Province and 377 from Nairobi Province. All the headteachers in the 32 schools were included in the sample.

Sampling Procedure

Stratified random sampling technique was used in selecting the study sample. The stratification parameter was the geographical location of the schools in Nairobi and Central provinces. The sample was determined using the population figures in table 4 above and Krejcie and Morgans' (in Mulusa 1990) table (see appendix I p.113).

From Table 4, there were 1156 teachers in Nairobi. The arithmetic mean would be approximately 33 teachers in each school, that is, 1156/47. According to Krejcie and Morgan a sample of 306 cases should be selected from a population of 1500. This number, 306 was divided by the average number of teachers in each school, 33 to come up with a sample size of ten schools in Nairobi Province.

From the Central Province, the same procedure was used. According to Table 4 above, there were 9915 teachers in the 585 Central Province schools. There were therefore approximately 17 teachers in each school, that is, 9915/585. According to Krejcie and Morgan (in Mulusa 1990), a sample of 370 cases should be from a population of 10,000. The study therefore used 370 teachers. This number was divided by the average number of teachers in each school to come up with a sample size of 22 schools in Central Province, that is, (370/17).

The students' sample was chosen as follows: From table 4 there were 18,840 students in Nairobi Province. According to Krejcie and Morgan a sample of 370 cases should be selected from a population of 20,000. A total number of 377 students were therefore chosen in Nairobi Province. This number, 377, was divided by the number of schools to come up with the sample size of 37 students from each school (377/10).

The same procedure was used to select the students' sample size in Central Province. There were 150,846 students in Central Province. According to Krejcie and Morgan in Mulusa (1990), a population size of 150,000 is not provided for. However, from a population of 50,000 to 100,000 only 3 entities have been added to the sample size, that is, (50,000:381, 100,000:384). In our case, a sample size of 384 was chosen to represent a population of 100,000 and three other entities added to make a sample size of 387 to represent the population of 150,846. This number, 384 was divided by the sample size of schools to come up with the sample size of 23 students in each school38/17.

The schools were categorised in three groups: national, provincial and district (in Central province or zone(in Nairobi Province). The schools were listed down and assigned numerals. A random digit table was used to select the required number of schools from each of the three strata.

Research Instruments

The main research instrument in this study was the questionnaire. Three sets of questionnaires were designed by the researcher: one for the headteachers, one for the teachers and the other one for the students as follows:

Headteachers' Questionnaire

The headteachers' questionnaire had 19 items (See appendix c p.95). These items were designed to elicit the headteachers' personal background, the school facilities, and the headteachers leadership style in the school. Two types of question items were presented in the questionnaire: structured and unstructured. In the structured

questions, several options were given among which the respondent was expected to indicate the one that refers to his/her case.

Teachers Questionnaire

The teachers' questionnaire had 17 items designed to elicit the teachers' academic and professional qualifications, ways in which they were motivated and their relationship with students and the headteacher (See appendix D p. 99). The questionnaire items were also of two types: structured and unstructured. In the structured form, several options were provided from which the respondent was expected to indicate the one that refers to his/her case.

Students' Questionnaire

The students' questionnaire contained 25 items which were designed to elicit the students' background and school related factors that may have accounted for their performance(See appendix E p.105). The questions were of two types: structured and unstructured. In the structured questions, several options were given from which respondents were expected to select the most appropriate to them. In the unstructured form, respondents were asked to respond to the questions on the space provided.

Instrument Validity

Firstly, supervisors in this study and lecturers from the Department of Educational Administration and Planning were requested to review the questionnaire, and adjustments made by the researcher where necessary.

Secondly, content validity was ascertained through the results of the pilot study. In this pilot study, the whole procedure of the research was carried out on 41 subjects. This group comprised of 30 students, 10 teachers and one headteacher. This was in

line with what is recommended by Borg and Gall (1989) who suggest that at least 30 cases should be studied in a research. The students were randomly selected from a form four class. Names of teachers who had ever taught form four classes were listed down and a sample of 10 teachers randomly selected.

The pilot study was undertaken in order to get an overall appraisal of the questionnaires. It was also done to test out the soundness of the items and to estimate the average time required to complete each questionnaire. After the pilot study, the relevance of each item was evaluated, some questions rephrased or removed and clarity of instructions evaluated.

Instrument Reliability

The equivalent forms reliability method was used to test the instrument reliability. In this method, two or more parallel forms of a test are given to the same group in close succession and scores expected to be similar. The same questions were framed differently and were given to the same subjects in the pilot study after a duration of 15 minutes to test whether the instrument was reliable. Scores from both tests were recorded and a correlation between the two scores calculated. Rank correlation formula was applied to calculate the reliability of the items in both tests.

$$1 - \frac{6 \Sigma D^2}{n (n^2 - 1)}$$

D = is the difference between ranks of the responding pairs of x and y

n = number of observations (Best 1971)

Reliability was found to be 0.89 for the headteachers' questionnaire, 0.84 for the teachers' questionnaire and 0.93 for the students' questionnaire. The instruments were therefore taken to be reliable.

Operationalization of variables

Academic performance: refers to grades representing the sample of achievement of a pupil with respect to attained academic skills or knowledge as compared with other pupils or with a criterion. Grades A, A- ,B+,B, B-, C+, C, C-,D+, D, D- and E were in order from the highest score to the lowest measures of the pupils' academic performance in the present study.

C+ and above category of school: is one in which majority of pupils achieve an aggregate of C+ and above in on KCSE. The minimum public university entry grade is C+.

Below C+ category of school: is one in which pupils achieve an aggregate of below C+ in KCSE. For research purposes, 1993-1997 years were used to select C+ and above and below C+ schools.

KCPE entry marks: total number of points a student obtained prior to joining secondary schools.

School environment: total conditions prevailing in the schools which include; laboratories, classrooms and libraries

Motivational styles were measured by: frequency of headteachers meetings with teachers, parents, form four students, method used to solve teachers problems and rewards to teachers for good performance.

Data Collection Procedure

Permission to conduct the research was obtained from and approved by the Office of the President. Authority was also granted by the Provincial Directors of Education of the two provinces. After the pilot study, the main study followed. The schools were visited and appointments booked with the administration in case questionnaires could not be completed on the particular visit. Class-teachers assisted in

administering the questionnaires to the students while the researcher requested teachers (with the headteachers' permission) to complete the questionnaires addressed to them.

Data Analysis Procedure

Descriptive statistics (percentages and frequencies) were used to describe the basic data. These were used concurrently in the analysis with chi-square to test the hypotheses. Chi-square test is a non-parametric analytical technique and is useful when searching for relationships in non-parametric data. Its choice is justified on the grounds that the study is for investigating the existence of possible relationships among the variables identified in this study. Based on that, this statistical tool was used a measure how closely related observed distribution approximates the expected distribution. The Chi-square formula used was

$$\chi^2 = \sum \frac{(o-e)^2}{e}$$

where o = the observed frequency in each cell and e = the expected frequency

$(N_2 - 1)(N_1 - 1)$ = degree of freedom. The 0.05 level of confidence was used as the standard for rejecting or accepting the null hypothesis. If the calculated chi-square was found to be higher than the critical chi-square, then this showed that there is a significant relationship between the variables. However, if the calculated chi-square was found to be lower than critical chi-square, then this showed that there was no significant relationship between the variables (Williams ,1993 p.392)

The calculated chi-square was also accompanied by the contingency coefficient. The contingency coefficient is expressed as a measure of association. This association is a

measure of strength of relationship which a chi-square statistic is unable to provide (Youngman, 1979). Thus in order to assess the strength of association between the dependent and independent variables, the contingency coefficient was provided to accompany the chi-square values. The contingency coefficient formula used was

$$C = \frac{X^2 + N}{X^2}$$

where N = number of cases

X^2 = calculated chi-square value

The contingency coefficient values range from 0-1, with high values close to 1 indicating a strong association (Youngman, 1979). This statistic was used to show whether or not the variables had a strong relationship.

Summary of research methodology

The study was an ex post facto research design. The researcher used the survey method of data collection. Three sets of questionnaires were designed and administered to the headteachers, teachers and students in the study sample. Descriptive statistics were used to describe the basic data. Chi-square statistic was also used to test the null hypotheses. This statistic was accompanied by contingency coefficient which tested for the strength of the relationships between the variables under the study.

CHAPTER FOUR

DATA ANALYSIS AND INTERPRETATION

The objective of this chapter is to report the results of the data collected in the study. This chapter is divided into four sections: questionnaire return rate, demographic data of the respondents, analysis of selected factors using descriptive statistics and analysis of relationships between the selected factors (independent variables) and students' performance in KCSE (dependent variable) in selected secondary schools in Nairobi and Central provinces. This data was collected from headteachers, teachers and students in the selected schools.

Questionnaire Return Rate

In Nairobi and Central Provinces, 30 questionnaires were administered to the headteachers and 28 of them returned their completed questionnaires. Only two headteachers did not return their questionnaires. The questionnaire return rate was therefore 93.35 percent. A total of 575 questionnaires were administered to the teachers in both provinces. A total of 210 were not returned which implied a 63.48 percent questionnaire return rate. A total of 773 questionnaires were also administered to students in both provinces and only 104 questionnaires were not returned. The questionnaire return rate was therefore 89.13 percent.

Analysis of demographic data of the respondents

The data presented in this section of the study was obtained from the completed questionnaires from headteachers, teachers and students in the selected secondary

schools in Nairobi and Central Provinces. Frequencies and percentages were used to describe the demographic data of the three groups as follows:

Headteachers' demographic characteristics

Headteachers' gender

The gender of the headteachers is presented in Table 5 as shown.

Table 5: **Gender of headteachers in selected secondary schools in Nairobi and Central provinces**

Gender	Number	Percentage
Males	16	57.14
Females	12	42.86
Total	28	100.00

The findings on the gender of the headteachers showed that both sexes were fairly represented in the study sample. There were 16 male headteachers(57.14%) and 12 female headteachers(42.86%).

Administrative experience

The headteachers were also asked to indicate their administrative experience. The findings are presented in Table 6.

Table 6: **Headteachers' administrative experience in selected secondary schools in Nairobi and Central provinces.**

Administrative Experience	Number	Percentages
Under 1 year	2	7.14
1-3 years	3	10.71
4-6 years	5	17.86
7-9 years	1	3.57
Over 9 years	17	60.71
Total	28	100.00

The data in Table 6 above indicate that majority of headteachers (60.71%) had served as headteachers for a period of more than 9 years. Only a small percentage (7.14%) of headteachers had administrative experience of less than one year. This led to the conclusion that most headteachers were highly experienced.

Headteachers' professional qualification

Headteachers were also asked to indicate their highest professional qualification. This data is presented in Table 7.

Table 7: **Headteachers' professional qualification in selected secondary schools in Nairobi and Central provinces**

Professional Qualification	Number	Percentage
M.Ed	1	3.57
M.A(Ed)	3	10.71
B.Ed	14	50.00
B.Sc(Ed)	4	14.28
Diploma(Ed)	5	17.86
'A' level Certificate	1	3.57
Total	28	100.00

From Table 7, it can be inferred that majority of headteachers are trained. That is, 18 out of 28 studied had a degree in education and only 6 out of the studied headteachers (21.43%) had either a diploma or a certificate. 1 out of the 28 studied was a form six graduate.

Frequency of staff meetings

The headteachers were also asked to indicate the number of times they held staff meetings per year. This data is presented in Table 8.

Table 8: **Frequency of headteachers' staff meetings in selected secondary schools in Nairobi and Central provinces**

Frequency of holding staff meeting	Number	Percentage
Weekly	4	14.28
Monthly	9	32.14
Termly	12	42.87
Adhoc	3	10.71
Total	28	100.00

It is evident that only a small percentage (14.28%) of headteachers hold meetings weekly. The majority of headteachers (42.87%) hold staff meetings either monthly or termly (42.87%). A few (10%) indicated that they hold meetings only when there is a need.

Teachers demographic characteristics

Gender of teachers

The gender of the teachers who participated in the study is shown in Table 9.

Table 9: **Gender of Teachers in selected secondary school in Nairobi and Central provinces**

Gender	Number	Percentage
Males	141	38.63
Females	224	61.37
Total	365	100.00

Data concerned with the gender of the teachers indicated that the population sample was composed of more female teachers (61.37%) than male teachers (38.63%). This is consistent with Njuguna (1998) who explained that the reason why there were more female than male teachers in Nairobi was that the Teachers Service Commission gave them preference in posting if their husbands worked in Nairobi. The possible reason that would account for the large number of female teachers in Central province could also be similar to that for Nairobi because Central Province boarders Nairobi Province.

Teachers' academic qualification

The teachers were also asked to indicate their highest academic qualification. This data is presented in Table 10.

Table 10: **Teachers' academic qualification in selected secondary schools in Nairobi and Central provinces**

Academic Qualifications	Number	Percentage
M.Ed	8	2.19
M.A (Ed)	8	2.19
B.Ed	204	55.89
B.Sc(Ed)	37	10.14
Diploma(Ed)	94	25.75
"A" Level Certificate	14	3.84
Total	365	100.00

It can be inferred from Table 10 that majority of teachers in Nairobi and Central provinces are B.Ed holders (55.89%) followed by those with a diploma in education (25.75%) and a very small percentage (3.84%) with certificates in education.

Teachers' experience

Teachers were also asked to indicate their teaching experience. The data indicating their teaching experience is indicated in Table 11.

Table 11: **Teachers' experience in selected secondary schools in Nairobi and Central provinces.**

Teaching experience	Number	Percentage
Less than 1 year	18	4.99
1-3 years	59	16.34
4-6 years	77	21.33
7-9 years	74	20.50
Over 9 years	133	38.84
Total	361	100.00

Most (95.07%) teachers in this study had taught for more than 1 year and only a few (4.93%) had an experience of less than 1 year.

Teachers' workload

The teachers were asked to indicate their average workload per week. The data is presented in Table 12.

Table 12: **Teachers workload in selected secondary schools in Nairobi and Central provinces.**

Teaching load	Number	Percentage
Less than 10 lessons	7	1.92
10-15 lessons	63	17.26
16-20 lessons	171	47.67
Over 20 lessons	121	33.15
Total	365	100.00

It is evident from Table 12 above that majority of teachers(47.67%) teach between 16 and 20 lessons About 33 percent teach a workload of over 20 lessons while only a very small percentage(1.92%) have less than 10 lessons.

Teaching of extra hours

The teachers were asked to indicate whether or not they taught extra hours other than the hours stipulated on the time table. The findings are shown in Table 13.

Table 13: **Teaching of extra hours in selected secondary schools in Nairobi and Central provinces**

Teaching of Extra hours	Number	Percentage
Teach extra hours	249	68.22
Do not teach extra hours	116	31.78
Total	365	100.00

It is evident from Table 13 that most teachers (68.22%) teach extra hours other than the ones indicated on the timetable. This is expected to enable them to complete the syllabi in time and to have sufficient time for revision. This is also assumed to enhance the students' confidence and hence good performance in KCSE

Students' demographic characteristics

Students' gender

The students' gender was obtained from the questionnaires administered to them. The findings are as presented in Table 14.

Table 14: **Gender of the students in selected secondary schools in Nairobi and Central provinces**

Gender	Number	Percentage
Males	375	54.43
Females	314	45.57
Total	689	100.00

It is evident from Table 14 above that more male students(54.43%) responded to the questionnaires than female students(45.57%). There was a fair representation of both sexes in this case because the sample contained 36.66percent of boy schools, 40percent of girl schools and 23.33% mixed schools.

Students' ages

The students were also asked to indicate their ages and the responses areas represented in Table 15.

Table 15: **Students' ages in selected secondary schools in Nairobi and Central provinces**

Ages	Number	Percentage
Below 18	15	2.18
18 and Above 18	674	97.82
Total	689	100.00

Almost all the students (97.82%) were above 18 years of the age. Very few (2.18%) were below 18 years of age. All the fifteen were males. That a great majority were above 18 years of age could be explained by the fact that since all of them were in form four they had spent a minimum of 12 years in school. Assuming that they joined school at the age of 6, then they would have attained the age of 18 years by form four.

Students' motivation by parental verbal or material encouragement

The students were asked to indicate whether their parents gave them verbal or material encouragement when they did well in school examinations. The findings are presented in Table 16.

Table 16: **Material or verbal encouragement to students in selected secondary schools in Nairobi and Central provinces.**

Material or verbal reward	Number	Percentage
Yes	647	93.90
No	31	6.10
Total	678	100.00

From Table 16 it is evident that almost all the students (94%) receive verbal or material encouragement from their parents when they did well in their examinations.

A small percentage (4.5%) did not received any encouragement for doing well in examinations

Students' KCPE background

The researcher divided the selected schools into 2 categories: Schools with high academic achievers and schools with low academic achievers. Schools that admitted students with less than 400 marks were considered to have low academic achievers while those which admitted students with over 400 marks were considered to have high academic achievers. The results are shown in Table 17.

Table 17: **Students' primary school background in selected secondary schools in Nairobi and Central provinces.**

Category of students	Number schools	Percentage
Low academic achievers	13	46.43
High academic achievers	15	53.57
Total	28	100.00

Most students (53.57%) in this sample came from high academic achievers category. However, a substantial percentage(46.43%) came from low achievers category.

School characteristics

School category

The categories of school studied are presented in Table 13.

Table 18: **Category of Schools**

Category	Number	Percentage
National	7	23.33
Provincial	13	43.33
District/zone	10	33.34
Total	30	100.00

The data shown in Table 18 indicates that provincial schools formed the greatest proportion of the sampled schools(43.33%) while the national schools formed the smallest percentage (23.33%). This is consistent with the notion that majority of schools in Kenya are provincial and only a few are national.

School type

Schools were also classified into three types: boarding, boarding/day and day. This data is presented in Table 19.

Table 19: **Type of schools**

Type	Number of schools	Percentage
Boarding	19	63.34
Boarding/Day	3	10.00
Day	8	26.67
Total	30	100.01

*Percent higher than 100 due to rounding

Most schools (63.34%) in the sample were boarding schools while a few (10%) were boarding/day. Most of the day schools were in Nairobi Province probably because of a

good and reliable transportation system to and from the schools, and also proximity of residential areas to the schools.

Condition of school learning facilities

The headteachers were asked to indicate the conditions of various learning facilities in their schools. The results are presented in Table 20:

Table 20 **Condition of various learning facilities in selected secondary schools in Nairobi and Central provinces**

Condition	Number	Percentage
Good	13	46.43
Fair	9	32.14
Poor	6	21.43
Total	28	100.00

About 54 percent of the headteachers indicated that the condition of various learning facilities were not good. However, a substantial percentage(46.43%) indicated that the condition of their learning facilities was good.

The data presented in the subsequent section was analysed using descriptive statistics (frequencies and percentages). The information gathered for this purpose was classified into three parts: Headteachers' administrative style; teachers' in-service training, reinforcement and desire to leave or remain in the school; and, promptness of school fees payment and teacher-student interaction.

Headteachers' administrative style and their students' performance in KCSE

Factors that were discussed in this part were: Headteachers' involvement of teachers in administrative decision-making, method used to address teachers' problems,

frequency of holding meetings with parents and the frequency of holding meetings with form four students.

(a) **Involvement of teachers in administrative decision-making**

Headteachers were asked to indicate whether they consulted their teachers in administrative decisions that affected teachers. The comparison in Table 21 shows teachers' involvement in decision making in schools where for five consecutive years' mean grade has been the university entry grade C+ and in schools where the mean grade has been below this mark.

Table 21: **Involvement of teachers in decision making**

Involvement	**Students' performance**			
	Schools of mean grade C+ and above		**Schools of mean grade below C+**	
	Frequency	**Percentage**	**Frequency**	**Percentage**
Always	7	53.85	10	66.67
Sometimes	6	46.15	5	33.33
Total	13	100.00	15	100.00

From Table 21, it is evident that most headteachers from(53.85%) from schools of mean grade of C+ and above involved their teachers always in decision making as compared to 46.15 percent who did not. The same trend is observed in the below C+ category of schools. A bigger percentage of headteachers(66.67%) involved their teachers always as compared to 33.33 percent who did not.

(b) **Method used in addressing teachers' discipline problems**

The teachers were asked to indicate how their headteachers dealt with their inadequacies. The findings were presented in Table 22

Table 22: **Method used in solving teachers' problems and students' performance in KCSE**

Method	Students' performance			
	Schools of mean grade C+ and above		Schools of mean grade Below C+	
	Frequency	Percentage	Frequency	Percentage
Holding dialogue	107	53.77	73	43.98
Ignoring the problem	3	1.51	14	8.43
Warning the teacher	89	44.72	79	47.59
Total	199	100.00	166	100.00

The findings show that more of the headteachers (53.77%) in the C+ and above category of schools solved teachers' problems through dialogue as compared to 43.98percent of headteachers in the below C+ category of schools. Most of the headteachers (47.59%) in the below C+ category of schools warned their teachers as compared to 44.72 percent of headteachers in the above C+ category of schools.

(c) **Frequency of holding meetings with parents**

The headteachers were asked to indicate the frequency of holding meetings with parents. The responses are presented in Table 23.

Table 23: **Frequency of headteachers' meetings with parents and students' performance in KCSE**

Meetings	Students' performance			
	Schools of mean grade C+ and above		Schools of mean grade Below C+	
	Frequency	Percentage	Frequency	Percentage
Termly	11	84.62	11	73.33
Yearly	2	15.38	4	26.67
Total	13	100.00	15	100.00

Table 23 indicates that most headteachers (84.62%) in the above C+ category of schools held meetings with parents termly as compared to 15.38 percent who did not. A high percentage of headteachers (73.33%) in the schools of mean grade below C+ also held meetings with parents termly as compared to 26.67 percent who did not. Descriptive statistics therefore show that students tend to do better when their parents are more involved than when they are less involved in the running of the school

(d) **Frequency of holding meetings with form four students**

Headteachers were also asked to indicate the number of times they held meetings with form four students to counsel them on academic performance. The findings are presented in Table 24.

Table 24: **Frequency of headteachers' meetings with form four students and their performance in KCSE**

Meetings	Students' performance			
	Schools of mean grade C+ and above		Schools of mean grade Below C+	
	Frequency	Percentage	Frequency	Percentage
Weekly	6	46.15	4	26.67
Monthly	5	38.46	5	33.33
Termly	2	15.38	6	40.00
Total	13	100.00	15	100.00

It can be inferred from Table 19 that more headteachers (46.15%) in the C+ and above category of schools held weekly meetings with form four students as compared to only 26.67 percent of headteachers in the below C+ schools. A bigger percentage of headteachers (40%) in the below C+ category of schools held meetings on a termly basis as compared to 15.38 percent of headteachers in the C+ and above category of schools. Headteachers' frequent meetings with form four students is assumed in this case to have a positive influence on performance.

Teachers' in-service training, reinforcement and desire to leave or remain in the school

Factors that were considered in this part were: teachers' attendance of in-service training, verbal or material rewards for good performance and teachers' desire to remain or transfer from their current schools.

(a) **Teachers' attendance of in-service training**

Information concerning this factor was obtained from the teachers' response to the number of times they had attended in-service training. The findings were presented in Table 25 below:

Table 25: **Teachers' attendance of in-service training and students' performance in KCSE**

In-service	Students' performance			
	Schools of mean grade C+ and above		Schools of mean grade Below C+	
	Frequency	Percentage	Frequency	Percentage
Over two times	29	14.80	27	16.77
Between 1 & 2 times	48	24.49	46	28.57
Never attended	119	60.71	88	54.66
Total	196	100.00	161	100.00

It is evident from table 25 above that majority of teachers in both cases had not attended in-service training. A bigger number of teachers (60.71%) in the C+ came from above category of schools had not attended in-service training as compared to the ones who had attended (39.29%). The same trend was observed in the below C+ category of schools. A bigger percentage (54.60%) of teachers had not attended in-service training as compared to 45.34 percent who had attended. In-service courses were designed to equip teachers in the field with the latest methods of teaching. It was assumed that attendance of in-service courses could improve teachers' efficiency and consequently students' performance as teachers would be able to communicate to

the students the latest information using the latest methods of instruction. Poor attendance of in-service may indicate inaccessibility of this facility or ignorance.

(b) **Teachers' rewards for good performance**

Teachers were asked to indicate whether or not they received any verbal or material reward for assisting students in acquiring high grades in KCSE examination. The findings are presented in Table 26.

Table 26: **Teachers' rewards and students' performance in KCSE**

Reward	**students' performance**			
	Schools of mean grade C+ and above		**Schools of mean grade Below C+**	
	Frequency	**Percentage**	**Frequency**	**Percentage**
Yes	128	64.34	93	56.02
No	71	35.68	73	43.98
Total	199	100.00	166	100.00

Majority of teachers (64.34%) in the C+ and above category of schools indicated that they were rewarded for good performance as compared to 56.02 percent in the below C+ category of schools. Only 35.68 percent of teachers in the C+ and above category of schools indicated that their effort was not recognised as compared to 43.98percent of teachers in the below C+ category of schools. Reward for good performance was expected to raise the morale of teachers and encourage them to work which could account for students' good performance.

(c) **Teachers' desire to remain or transfer from their current schools**

Teachers were asked to indicate whether they would rather remain or transfer from their present schools if they had a choice. Those who indicated that they would want to transfer were assumed to be dissatisfied with their current stations while those who

indicated that they would rather remain even if they had a choice were assumed to be satisfied with their current stations. The findings are presented in Table 27.

Table 27: **Teachers' desire to remain or transfer from their stations and students' performance in KCSE**

Remain/transfer	**Students' performance**			
	Schools of mean grade C+ and above		**Schools of mean grade Below C+**	
	Frequency	**Percentage**	**Frequency**	**Percentage**
Remain	166	83.92	120	75.95
Transfer	32	16.08	38	24.05
Total	198	100.00	158	100.00

Most teachers (83.92%) in the C+ and above category of schools indicated that they would rather remain in their current schools even if they had a choice to transfer. More teachers (24.05%) in the below C+ schools indicated that they would rather transfer if they had a choice as compared to 16.08 percent of teachers in the above C+ schools.

Promptness of school fees payment and teacher-student interaction

Factors that were discussed in this part were: how prompt the parents were in the payment of school fees, how the students interacted with their teachers and students' socio-economic background.

(a) **Promptness of school fees payment**

Students were asked to indicate whether or not their school fees was paid in time. The findings are presented in Table 28.

Table 28: **Students' promptness of school fees payment and their performance in KCSE**

School fees	Students' performance			
	Schools of mean grade C+ and above		Schools of mean grade Below C+	
	Frequency	Percentage	Frequency	Percentage
Paid in time	278	85.02	219	63.29
Not paid in time	49	14.98	127	36.71
Total	327	100.00	346	100.00

It is evident from Table 28 that most students (85.02%) in the C+ and above category of schools had their fees paid in time as compared to 63.29 percent of students in the below C+ category of schools. A bigger percentage (36.71%) of students in the below C+ category of schools indicated that their school fees was never paid in time as compared to 14.98 percent of students in the C+ and above category of schools. Payment of school fees in time is assumed to be an important factor likely to affect students' performance. This is because a student who is frequently sent away from school is likely to miss lessons taught in his/her absence. When school fees is paid in time, a student may also feel that the parents are concerned with his/her education and therefore make more effort in his or her studies.

(b) **Teacher-student interaction**

In order to get information concerning student-teacher interaction, the students were asked to indicate whether they consulted their teachers in case they did not understand a concept in class. The findings were indicated in Table 29.

Table 29: **Teacher-student interaction and students' performance in KCSE**

Consulting teacher	**Students' performance**			
	Schools of mean grade C+ and above		**Schools of mean grade Below C+**	
	Frequency	**Percentage**	**Frequency**	**Percentage**
Consulted	253	76.90	244	72.62
Never consulted	76	23.10	92	27.38
Total	329	100.00	336	100.00

More students (76.90%) in the C+ and above category of schools consulted their teachers as contrasted to 72.61 percent of students in the below C+ category of schools. A smaller percentage (23.10%) of students in the C+ and above category of schools never consulted their teachers as compared to 27.38 percent of students in the below C+ category of schools.

(c) **Students' socio-economic background**

Students were asked to indicate the specific occupations that their fathers were engaged in. The researcher categorised the occupations as professional and non-professional. The findings are presented in Table 30.

Table 30: **Fathers occupations in selected secondary schools in Nairobi and Central provinces**

Fathers' occupation	Number	Percentage
Professional	314	49.76
Non-professional	230	36.45
Unemployed	87	13.79
Total	631	100.00

A total of 49.76 percent of the students had their fathers holding professional occupations, 36.45 percent had their fathers engaged in non-professional jobs while only 13.79 percent indicated that their fathers were not employed.

Testing of hypotheses

The analysis of relationships between the independent variables and the dependent variable is done in this section. The data presented in this section are the results of analysing the possible factors that influence KCSE performance in selected secondary schools in Nairobi and Central Provinces. These factors were selected from the questionnaires that were administered to the headteachers, teachers and students.

In analysing the relationship between the variables, chi-square test was used. This was accompanied by the contingence coefficient analysis which tested the strength of the relationship between the variables. All hypotheses were considered significant or non-significant at 0.05 confidence level. The hypotheses were restated in each case and the results of the tests presented in tabular form.

Holding staff meetings

The first hypothesis stated that:

HO_1: There is no significant relationship the headteachers' frequency of holding staff performance in KCSE and the students performance in KCSE.

The headteachers were asked to indicate the number of times they held staff meetings per year. The data were then subjected to a chi-square analysis to test for a possible relationship between the frequencies of holding staff meetings and students performance in KCSE. The analysis are shown in Table 31

Table 31: **Analysis of the relationship between the headteachers' frequency of holding staff meeting in an year and students' performance in KCSE**

Staff meetings.	**Students' performance**		
	Schools of mean grade C+ and above	**Schools of mean grade below C+**	**Row Total**
Weekly	0	4	04
Monthly	3	9	12
Termly	8	1	9
Adhoc	2	1	3
Column Total	13	15	28

calculated Chi-square =17.39 contingency Coefficient =0.61

critical chi-square = 7.8

degrees of freedom =3

Calculated chi-square of 17.39 was greater than the critical chi-square of 7.80 at 0.05 level of significance. The null hypothesis that states that there is no significant relationship between the students' performance in KCSE and the headteachers' frequency of holding staff meetings was therefore rejected. Contingency coefficient was also calculated and found to be 0.61. The figure indicates a strong relationship between the frequency of staff meetings and students performance in KCSE. It was concluded that the frequency of staff meetings had a relationship with KCSE performance. This was contradictory to Kisilu's (1988) findings who found no relationship between the frequency of holding staff meetings and performance in KCSE in harambee secondary schools in Kathiani division. The findings were

however consistent with Eshiwani's (1982). Eshiwani found a close relationship between students' performance and headteachers' involvement in teaching and learning process. A possible explanation for this relationship is that in these staff meetings, problems affecting the school are discussed and sorted out. Progress is also likely to be discussed in such meetings. The involvement of teachers in the running of the school and feedback on progress are likely to serve as a motivating factor on the side of teachers, who in turn work hard to influence performance positively.

Teachers' academic qualification

The hypothesis formulated for this factor was:

$H0_2$: There is no significant relationship teachers' academic qualification and students' performance in KCSE.

The teachers were asked to indicate their highest academic qualification. The data was then subjected to a chi-square analysis to test for a possible relationship between teachers' academic qualification and the students' performance in KCSE. The analysis is shown in Table 32.

Table 32: **Analysis of the relationship between teachers' academic qualification and students' performance in KCSE**

Teachers' qualification	Students' performance		
	Schools of mean grade above C+	**Schools of mean grade below C+**	**Row total**
M.Ed	6	2	8
M.A	6	2	8
B.Ed	124	80	204
B.Sc	16	21	37
Diploma	44	50	94
"A" level Certificate and below	3	11	14
Column total	199	166	365

Calculated chi-square =16.26 Degrees of freedom =5

Critical chi-square =11.07

Contingency coefficient =0.21

Calculated chi-square of 16.26 was greater than the critical chi-square of 11.07 at 0.05 level of significance. The null hypothesis stating that there is no significant relationship between teachers academic qualification and students' performance in KCSE was rejected. Contingency coefficient was also calculated and found to be 0.21. This could mean that the academic qualification of teachers has an impact on the performance of students in the selected secondary schools in Nairobi and Central Provinces. This was consistent with Somerset (1966) who noted that schools with well qualified teachers tended to be the more successful. Other studies which had similar findings include Husen, Saha and Noonan (1978) who found a moderate

correlation between teachers' academic attainment and pupil performance. Bett(1986) also found a close relationship between teachers' academic qualification and students' performance in Kericho District. Eshiwani (1982) also reported a positive correlation between students' performance and teachers' academic qualification. Similar findings were also reported by Heinnemann and Loxely (1983). A possible explanation for this finding is that low academic qualification could imply a low mastery of subject matter and hence poor teaching.

Teachers' workload

The hypothesis stated for this part was:

$H0_3$: There is no significant relationship between teachers' workload and students' performance in KCSE .

To test this hypothesis, teachers had been asked to indicate their average workload per week . The findings are presented in Table 33.

To find out whether there was a relationship between the teachers' workload and students' performance in KCSE examination, the above data were subjected to a chi-square analysis test. The findings are as shown in table 33

Table 33: **Analysis of relationship between teachers' workload and students' performance in KCSE**

Teachers workload	**Students' performance**		
	Schools of Mean grade C+ and above	**Schools of mean grade below C+**	**Row Total**
Less than 10 lessons	1	6	7
10-15 lessons	32	31	63
16-20 lessons	122	52	174
Over 20 lessons	44	77	121
Column Total	199	166	365

Calculated chi-square =38.08

Critical chi-square =7.82

Degrees of freedom =3

Contingency Coefficient =0.05

As indicated in Table 33, the calculated chi-square of 38.08 was greater than the critical chi-square of 7.82 at 0.05 level of significance. Based on these findings, the null hypothesis stating that there is no relationship between teachers' workload and the students' performance in KCSE rejected. Considering the ample time required by a teacher to prepare his/her students for KCSE, it is possible that a big workload makes it difficult for teachers to prepare their students adequately. These findings are consistent with those of Reyes and Imber (1992). In their study Reyes and Imber (1992) found that teachers' workload was a significant factor in determining teachers' job satisfaction and subsequently performance.

Teaching of extra hours

The hypothesis formulated for this part was stated as follow:

$H0_4$: There is no significant relationship between teaching of extra hours and students' performance in KCSE.

The teachers were asked whether or not they taught extra hours other than hours stipulated on the time table. The data was then subjected to a chi-square analysis to test for a possible relationship between teaching of extra hours and students performance in KCSE. The analysis is shown in Table 34.

Table 34: **Analysis of students' performance as a result teaching of extra hours in selected secondary schools in Nairobi and Central provinces**

Teaching of extra hours	**Students' performance**		
	Schools of Mean grade C+ and above	**Schools of mean grade below C+**	**Row Total**
Teach extra hours	131	118	249
Do not teach extra hours	68	48	116
Column total	199	166	365

Calculated chi-square =1.61

Critical chi-square =3.84

Degrees of Freedom =1

Contingency coefficient = 0.07

Calculated chi-square of 1.61 was smaller than the critical chi-square of 3.84 at 0.05 level of significance. The null hypothesis that states that there is no significant

relationship between the teaching of extra hours and students' performance in KCSE was therefore accepted. There was hardly any relationship as indicated by the contingency coefficient value of 0.05.

It was concluded that if the teachers and students used the time allocated on the time table well, then their students could still perform well. Parents are made to pay a lot of money for tuition especially in poorly performing schools. It seems that teachers end up wasting a lot of class hours in the hope of recovering the lost time during tuition hours.

Student motivation through parental verbal or material encouragement

The hypothesis formulated for this part was:

$H0_5$: There is no significant relationship between parental verbal or material reward for good performance and students' performance in KCSE.

To test this hypothesis, students were asked to indicate whether their parents gave them material or verbal encouragement when they did well in school examinations. This question was based on the assumption that students who are rewarded on achieving high marks are encouraged to do even better in later examinations.

The data was then subjected to a chi-square analysis to test for a possible relationship between material or verbal rewards to students and students' performance in KCSE examination. The analysis is shown in Table 35.

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$H0_5$: There is no significant relationship between parental verbal or material reward for good performance and students' performance in KCSE.

To test this hypothesis, students were asked to indicate whether their parents gave them material or verbal encouragement when they did well in school examinations. This question was based on the assumption that students who are rewarded on achieving high marks are encouraged to do even better in later examinations.

The data was then subjected to a chi-square analysis to test for a possible relationship between material or verbal rewards to students and students' performance in KCSE examination. The analysis is shown in Table 35.

Table 35: **Analysis of the relationship between parental verbal or material rewards and students' performance in KCSE**

Material or verbal Reward	Students' performance: Schools of Mean grade C+ and above	Schools of Mean grade below C+	Row Total
Material/verbal reward	317	313	647
No material/verbal reward	13	18	31
Column total	330	348	678

Calculated chi-square =0.58

Critical chi-square =3.84

Degrees of freedom =1

Contingency coefficient =0.03

Calculated chi-square of 0.58 was smaller than the critical chi-square of 3.84 at 0.05 level of significance. The null hypothesis stating that there is no significant relationship between parental verbal or material rewards and students' performance in KCSE was therefore accepted. Contingency coefficient was also calculated and found to be 0.03. This figure indicates a very weak level of association. These findings contradicted Parton's,(1976) in Banks, Okwir-Akana's(1991) in Muola, and Comer and Haynes'(1991) findings who postulated that there was a positive relationship between students' performance and favourable home response to academic performance. However, the findings are consistent with other researchers' findings. For example, Osire(1983) and Bali,et. al.(1984), Rees(1989) and Kitivo(1989) found no relationship or even a negative relationship between academic performance and parental involvement. Osire (1983) for example, observed a

negative relationship between academic performance and parental involvement which he attributed to the possibility that too much encouragement given by some parents cause worry and anxiety in the child which consequently leads to the child's poor performance.

Condition of learning facilities

The hypothesis formulated for this part stated:

$H0_6$: There is no significant relationship between condition of learning facilities in the school and students' performance in KCSE. In order to find out whether or not learning facilities could influence performance, the headteachers were asked to indicate the conditions of various learning facilities which the researcher assumed to be paramount for efficient teaching. The obtained data was then subjected to a chi-square analysis test. The findings are shown in Table 36.

Table 36: **Analysis of students' performance by the condition of school learning facilities in selected secondary schools in Nairobi and Central provinces**

Condition school facilities	Students' performance		
	Schools of Mean grade C+ and above	Schools of mean grade below C+	Row Total
Good	9	4	13
Fair	4	5	9
Poor	0	6	6
Column total	13	15	28

Calculated chi-square =15.11 Critical chi-square =5.99

Degrees of freedom =2 Contingency coefficient 0.59

Calculated chi-square of 15.11 was greater than the critical chi-square of 5.99 at 0.05 level of significance. The null hypothesis stating that there is no significant relationship between the condition of learning facilities in the school and students' performance in KCSE was therefore rejected. Contingency coefficient was also calculated and found to be 0.59. This figure indicates a strong relationship between the condition of learning facilities and students' performance in KCSE. The observation was consistent with Coleman's(1966),Eshiwani's(1982), Heynemann and Loxely's(1983) and Posteithwaite's (1983) findings. Such findings tend to indicate that school facilities play a significant role in either lowering or raising the standards of academic achievement. This view is supported by Ayot (1984) who postulates that people retain 50percent of what they see and hear in comparison to 20 percent what they see only.

KCPE entry marks

The hypothesis formulated for this part was:

Ho_7: There is no significant relationship between KCPE entry marks and students' performance in KCSE. To test this hypothesis, data was collected concerning each school's intake. The data was subjected to a chi-square analysis to test for a possible relationship between the students KCPE entry marks and their performance KCSE. The findings are shown in Table 37.

Table 37: **Analysis of the relationship between KCPE entry marks and students' performance in KCSE in selected secondary schools in Nairobi and Central provinces**

Primary school Background	**Students' performance**		
	Schools of Mean grade C+ and above	**Schools of Mean grade below C+**	**Row Total**
Poor primary school background	0	13	13
Good primary school background	13	2	15
Column total	13	15	28

Calculated chi-square =21.06

Critical chi-square = 3.84

Degrees of freedom =1

Contingency coefficient =0.66

Calculated chi-square of 21.06 was greater than the critical chi-square of 3.84 at 0.05 level of significance. The null hypothesis stating that there is no significant relationship between KCPE entry marks and students' performance in KCSE

examination was therefore rejected. Contingency coefficient was also calculated and found to be 0.66. This figure indicates a strong relationship between KCPE entry marks and students' performance in KCSE examination. Similar findings were reported by Eshiwani(1983), Sewell and Hauser (1986) in Avalos, and Lunalo(1983). In his study with students from 10 secondary schools in Western Province for example, Lunalo's results indicated that in general, CPE was a fairly good and efficient predictor of the EACE performance. Lunalo found some positive linear relationship between CPE and EACE results. Muthungu (1986) had a similar finding. He found a positive relationship between primary school background factors and KCE results.

Students' socio-economic background

Fathers' occupation was taken to be an indicator of students' socio-economic background. The hypothesis formulated for this part stated:

$H0_8$: There is no significant relationship between students' socio-economic background and their performance in KCSE examination. To test the above hypothesis data was obtained concerning the occupations held by the students' parents. The researcher further categorized these occupations into professional and non-professional. Results are shown in Table 38.

Table 38: **Analysis of the relationship between fathers' occupations and students' performance in KCSE examination in selected secondary schools in Nairobi and Central provinces.**

Fathers' occupation	Students' performance		
	Schools of Mean grade C+ and above	Schools of Mean grade below C+	Row Total
Professional	181	133	314
Non-professional	92	138	230
None	40	47	87
Column total	313	318	631

Calculated chi-square =17.25

Degrees of freedom =2

Critical chi-square =5.99

Contingency coefficient =0.163

Calculated chi-square of 17.25 was greater than the critical chi-square of 5.99 at 0.05 level of significance. The null hypothesis stating that there is no significant relationship between students' socio-economic background and their performance in KCSE examination was therefore rejected. Contingency coefficient was also calculated and found to be 0.16. This figure indicates a weak relationship between students' background and their performance in KCSE examination. Similar findings have been reported by other researchers such as Prewitt(1970), Somerset(1972), Gakuru(1977), Kinyanjui(1979) Heinemann and Loxely(1983), Avalos(1986), Jamison and Lockheed(1987), Dimuzio(1989) and Caldas and Bankston III(1997). For example, Caldas and Bankston III (1997) found that of the great number of inputs

used to estimate learning effect, learner socioeconomic status stands very significantly.

Summary

This chapter analyzed and interpreted data regarding the possible factors that influence performance in selected secondary schools in Nairobi and Central Provinces. The analysis of the data was reported in the following parts: the questionnaire return rate, the demographic data of headteachers, teachers and students, analysis of selected factors using descriptive statistics and testing of hypothesis using chi-square test which was accompanied by contingency coefficient to show the strength of relationships.

Frequencies for demographic data was presented on tables and explanations were provided where possible. All statistical tests were done at 0.05 level of confidence. A hypothesis was therefore accepted or rejected based on the 0.05 level of significance.

CHAPTER FIVE

SUMMARY, CONCLUSIONS, RECOMMENDATIONS

Summary of the study

A lot of stress has been laid on KCSE as this is a major criterion for selection into jobs, courses of further studies or vocational training. Every year there are many students who sit for this examination. It is regrettable that only a few of those who sit for the examinations are admitted to institutions of higher learning (Republic of Kenya, 1997). A controversy exists among experts in scholarstic achievements as to the factors that contribute jointly in determining academic performance.

The purpose of this study was to investigate the factors that influence performance in KCSE in selected secondary schools in Nairobi and Central Provinces. The choice of the factors was based on assumptions and backed by other researches that there could be certain factors that influence performance in KCSE. In addition, the study sought to establish the role played by headteachers, teachers, parents and students in KCSE performance.

The study was expected to be significant to Kenyan education because of a number of considerations, such as the large sums of money invested in secondary school education which would be a heavy loss if students continue to fail in their examinations. The study was limited by a number of factors beyond the control of the researcher. Firstly, there could be unreliability in KCSE ranking of schools. Secondly, the study involved headteachers, teachers and students and left out equally important personnel in the learning institutions like the Ministry of Education officials and TSC officials. In pursuit of this study, the researcher assumed that

KCSE was an acceptable measure of academic performance. It was also assumed that the rankings of schools using their arithmetic mean was an accurate method of determining the actual position of each school in terms of performance.

Literature review was organised into four subheadings: effect of school related factors on academic performance, effect of non-school factors on academic performance, effect of student related factors on performance and effect of motivational factors on performance. From the literature review, a conceptual framework was developed. The study was an ex post facto design and the target population consisted of 32 headteachers, 575 teachers and 773 students. The researcher used the survey method of data collection. Three sets of questionnaires were developed as follows: The first questionnaire was designed to collect data from the secondary school headteacher. This questionnaire had 19 items which were designed to elicit headteachers' personal background, the school facilities and the headteachers' leadership style in the school.

The second questionnaire was designed to elicit information from secondary school teachers. This questionnaire had 17 items which were designed to elicit the teachers' academic and professional qualifications, ways in which they were motivated and their relationship with students and the headteachers.

The last questionnaire was designed to elicit information from the students. This questionnaire had 25 items which elicited students' background information and school related factors which may significantly influence performance. The three sets of questionnaires contained items of two types: structured and unstructured. In the structured form, several options were provided from which the respondents were to

indicate the one that referred to their case. In the unstructured form, respondents were asked to respond to the questions on a space provided.

The instruments were validated by three lecturers in University of Nairobi, experts in the area of educational administration. A pilot study was conducted to determine the reliability of the instruments. This was done using 41 respondents randomly selected from the public secondary schools. The findings of the pilot study indicated 0.89 reliability for the headteachers' questionnaire, 0.84 and 0.93 reliability of the teachers and students' respectively. The questionnaires were then administered to the selected groups in 32 public secondary schools in Nairobi and Central Provinces. The questionnaire return rate was 93.35 percent, 63.48 percent and 89.13 percent for headteachers, teachers and students respectively. The analysis of the data was reported in three parts: the demographic analysis of respondents, analysis of selected factors using descriptive data (frequencies and percentages) and testing of hypotheses using chi-square test and each of which was accompanied by a contingency coefficient.

Research findings

The research findings showed that factors that had some influence on performance included: headteachers' frequency of holding staff meetings, teachers' academic qualification, teachers' workload, conditions of learning facilities, students' KCPE entry marks, students' socio-economic background, headteachers' involvement of teachers in decision making, the method used to solve teachers' problems, frequency of holding meetings with form four students, teachers' attendance of in-service training, and promptness of payment of school fees.

Conclusions of the study

From the findings of the study, conclusions were made. Some conclusions were made within the framework of the limitations of this study as stipulated in chapter one. The conclusions were also made from the analysis of the data and testing of the stated hypotheses. The first conclusion to be deduced from the study was that headteachers who had frequent staff meetings were likely to get better results than those who did not. A possible explanation for this relationship is that in these staff meetings, problems affecting the school are discussed and perhaps sorted out.

Teachers' academic qualification also stood out as a factor that influences performance in KCSE. A possible explanation for this finding is that lower academic qualification could imply a low mastery of their subject matter. This could consequently cause students' poor performance. It was also found that teachers' high workloads had a negative effect on students' performance. It was therefore concluded that a big workload made it difficult for teachers to prepare students adequately for their KCSE.

The other conclusion made was that it is important to improve the conditions of learning facilities in every school if performance is expected to be upgraded. This is due to the fact that poor learning facilities were associated with poor performance in this study. It was also concluded that those students who had performed poorly in KCPE were likely to perform poorly in KCSE. This could be due to the same underlying factors that caused poor performance in KCPE and unless the underlying

factors were addressed, the same wastage of time and money would continue. It was also found that students from poor socio-economic background tend to perform poorly in KCSE. A possible explanation for this is that they are likely to be sent home often to look for school fees. This causes them to miss lessons. Another possible explanation could be that parents who had non professional jobs, most of whom are of low socio-economic status, had little or no formal education and hence are not able to assist their children in their endeavour to achieve high marks.

Another significant finding in this study was that headteachers' involvement of teachers in administrative decision making was found to have a positive correlation with performance. It was therefore concluded that teachers' morale was boosted when they were involved in decision making. Such involvement made them feel as part and parcel of the school and therefore worked hard to assist students to get high marks in KCSE. The method used in solving teachers' problems also correlated positively with performance. In schools where dialogue was used, students performed better than where warning of teachers was preferred. Other conclusions made were that teachers' attendance of in-service training was important. It was assumed that the teachers' attendance of in-service courses could improve students' performance as the teachers would be able to communicate to the students the latest information using the latest methods of instruction. Promptness of payment of school fees also correlated positively with performance. A possible explanation was that when school fees is paid in time, absenteeism is reduced and hence good performance.

Factors that were not found to be statistically related to KCSE performance were teaching of extra hours and reinforcement by parents. It was therefore concluded that most students who were given extra hours of teaching through tuition were overworked which could explain their poor performance. Teachers were also likely to waste a lot of time-tabled lessons in the hope of recovering the same during tuition. A possible explanation for the negative correlation between students' performance and reinforcement by parents was that too much prodding by some parents could cause worry and anxiety to the child which consequently could lead to poor performance.

Recommendations

On the basis of the findings of this study, and conclusions, the following recommendations were pointed out which may work towards improving the students' performance in KCSE.

1. There is need for headteachers to hold frequent staff meetings in which problems and progress of the school can be discussed. This is likely to improve school performance as the problems affecting the school are likely to be sorted out in these meetings.
2. There is need to have an active policy of providing bursaries to students who come from low socio-economic background. This would reduce absenteeism, which is a likely cause of poor performance.
3. There is need for headteachers to use participative methods (dialogue) in solving teachers problems as this could boost teachers' morale and consequently students' performance.

4. There is need for headteachers to involve parents in school activities. Parents/school interaction is likely to harmonise school/home policies toward school and this is likely to improve performance.
5. There is need to consider conversion of day schools into boarding schools as the latter were found to perform relatively better than the former.

Suggestions for further research

1. There is need to replicate the present study using other statistical methods (parametric statistics like student t test and ANOVA) to establish if similar findings will be arrived at.
2. There is need to carry out further research on other personnel like the Ministry of Education officers and TSC personnel to establish their possible effect on performance.
3. There is need to replicate this study in other provinces in order to validate its claims as well as to ascertain the reliability of the findings.

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APPENDIX A

KCSE PERFORMANCE RANKINGS FROM 1997 DOWNWARDS TO 1993

(a)1997

SCHOOL	PROVINCE
1. Precious Blood Riruta	NAIROBI
2. Starehe Boys Centre	NAIROBI
3. Kianda School	CENTRAL
4. Alliance High School	CENTRAL
5. Strathmore School	NAIROBI
6. Precious Blood Kilungu	EASTERN
7. Mang'u High School	CENTRAL
8. Loreto High School Limuru	CENTRAL
9. St. Annes Secondary School, Lioki	CENTRAL
10. Moi High School Kabarak	RIFT VALLEY

8 out of the 10 best schools were from Nairobi and Central provinces.

(b) 1996

SCHOOL	PROVINCE
1. Precious Blood Riruta	NAIROBI
2. Kianda School	NAIROBI
3. Starehe Boys	NAIROBI
4. Strathmore School	NAIROBI
5. Alliance High School.	CENTRAL
6. Precious Blood Kilungu	EASTERN
7. Alliance Girls High School	CENTRAL
8. Bishop Gatimu Ngandu girls Secondary School	CENTRAL
9. Mang'u High School	CENTRAL
10. St. Mary's School, Yala	NYANZA

8 out of the 10 best schools were from Nairobi and Central provinces.

(c)1995

SCHOOL	PROVINCE
1.Starehe Boys	NAIROBI
2.Strathmore School	NAIROBI
3.Alliance High School	NAIROBI
4.Precious Blood Riruta	NAIROBI
5.Alliance Girls High School	CENTRAL
6.Mang'u High School	CENTRAL
7.Kianda School	NAIROBI

8.Bishop Gatimu Ngandu Girls Secondary School	CENTRAL
9.Loreto High School Limuru	CENTRAL
10.Precious Blood Kilungu.	EASTERN

9 out of the 10 best school were from Nairobi and Central provinces

(d) **1996**

SCHOOL	PROVINCE
1. Starehe Boys	NAIROBI
2. Strathmore school	NAIROBI
3. Man'gu High school	CENTRAL
4. Alliance Girls High School	CENTRAL
5. Precious Blood Riruta	NAIROBI
6. Bishop Gatimu Ngandu Girls Secondary Schools	CENTRAL
7. Loreto High school Limuru	CENTRAL
8. Precious Blood Kilungu	EASTERN
9. Njiris High school	CENTRAL
10. St. Marys School, Yala	NYANZA

8 out of the 10 best schools are from Nairobi and Central provinces.

(e) 1997

SCHOOL	PROVINCE
1.Precious blood Riruta	NAIROBI
2.Starehe Boys	NAIROBI
3.Alliance High School	CENTRAL
4.Strathmore School	NAIROBI

5.Alliance Girls High School	CENTRAL
6.Bishop Gatimu Ngandu Girls Secondary School	CENTRAL
7.Precious Blood Kilungu	EASTERN
8.Mangu High School	CENTRAL
9.Kianda School	NAIROBI
10.Loreto Limuru High School	CENTRAL

9 out of the 10 best schools are from Nairobi and Central provinces.

Source: Kenya National Examination Council 1993-1997 Examination Analysis

APPENDIX B

LETTER TO PARTICIPANTS

ANNE NDIRITU

UNIVERSITY OF NAIROBI

P.O. BOX 30197

NAIROBI.

Dear Participant,

The purpose of this letter is to inform you that I am carrying out a research on factors that influence performance in Kenya Certificate of Secondary Education among secondary schools in Nairobi and Central provinces in Kenya. I will appreciate if you kindly answer the attached questions as truthfully as possible. The information you will give is confidential and will be used solely for the purpose of this study.

Thanking you for your cooperation.

Yours faithfully,

ANNE NDIRITU

Postgraduate Student

APPENDIX C

HEAD TEACHERS QUESTIONNAIRE ON FACTORS THAT INFLUENCE PERFORMANCE.

INSTRUCTIONS

Two types of questions are given in this questionnaire; structured questions and unstructured questions. In the structured questions, several answers are given. Please tick

( ) the choice you have made . e.g.

How long have you been teaching?

Under 1 year ☐

1-3 years ☐

4-6 years ☐

over 7 years ☐

If you have taught for 2 years, please tick ( ) as shown above. In the unstructured questions, write your answers in the blank spaces provided.

1.Name of your school _____

2. How long have you served as a headteacher?

Under 1 year ☐

1-3 years ☐

4-6years ☐

7 -9 years ☐

over 9 years ☐

3. What is your highest academic achievement?

M.Ed degree ☐

M.A ☐

B.Ed degree ☐

B.Sc degree ☐

Diploma ☐

Any other (please specify)_____

4. When was your school started? _____

5. How many streams do you have per class? _____

6.What is the total number of students in your school? _____

7.How many teachers do you have who have the following qualifications?

M.Ed_____

M.A_____

B.Ed_____

B.A_____

B.Sc _____

PGDE_____

Diploma in Education_____

S1_____

Others(please specify)_____

8. What were the minimum and maximum KCPE grades of children that were admitted in your school for the last 5 years?

	Minimum	Maximum
1997	_____	_____
1996	_____	_____
1995	_____	_____
1994	_____	_____
1993	_____	_____

9. Please indicate the number of students who had the following grades in KCSE for the five years indicated

YEARS	A	A-	B+	B	B-	C+	C	C- and below
1997								
1996								
1995								
1994								
1993								

9 (b) Please indicate the presence and condition of the following school facilities;

ITEM	PRESENT ( ) ABSENT ( )	CONDITION GOOD 3 FAIR 2 POOR 1
Library	_____	_____
Laboratory	_____	_____

Dormitory _____ _____

Classes _____ _____

Dining hall _____ _____

10. How often do you have meetings with the parents?

Weekly ☐

Monthly ☐

Termlly ☐

Never ☐

12. (a) Do you reward teachers for good performance in examinations?

Yes ☐

No ☐

If yes, How do you reward them?_____

13.How often do you meet the form four students to counsel them on performance?

Weekly ☐

Monthly ☐

Termly ☐

Yearly ☐

Any other time(Please specify)_____

14 (a) Do you reward students for doing well in examinations?

Yes ☐

No ☐

(b) If yes, how do you reward them? _____

15. How often do you hold staff meeting?

Weekly ☐

Monthly ☐

Termly ☐

Yearly ☐

Any other time (please specify) _____

16. Are teachers in your school assigned to teach any other subject apart from what they studied in school/college/university?

Not at all ☐

To a very small extent ☐

To a larger extent ☐

Always ☐

17. How often do you consult teachers in making administrative decisions that affect them?

Always ☐

Sometimes ☐

Never ☐

18. How do you solve disagreements in school between students and yourself, students and students and teachers and students.

Through dialogue ☐

Coaxing teachers and students ☐

Other ways (please specify)_____

19. What do you consider to be a major factor that influences performance in the school you are heading?_____

APPENDIX D

HERS QUESTIONNAIRE ON FACTORS THAT INFLUENCE ORMANCE IN KCSE EXAMINATION.

ir/Madam.

pes of questions are given in this questionnaire: structured questions and tured questions. In the structured questions, several answers are given. Please the choice you have made e.g.

s your gender? Male ☐

Female ☐

are male please tick ( ) as shown above. In the unstructured questions, write nswers in the blank spaces provided.

t is the name of the school you are teaching in?_____

hat is your gender?

Male ☐

Female ☐

hat is your highest academic achievement?

M.Ed ☐

M.A ☐

B.Ed ☐

B.Sc ☐

Diploma ☐

Other(Please specify) _____

4. How many years of teaching experience do you have?

Less than 1 year ☐

1-3 years ☐

4-6 years ☐

7-9 years ☐

over 9 years ☐

5. How many years have you taught form four classes?

Less than 1 year ☐

1-3 years ☐

4-6 years ☐

7-9 years ☐

over 9 years. ☐

Never taught ☐

6. What is the average number of lessons that you teach in your school per week?

Less than 10 ☐

10-15 ☐

16-20 ☐

Over 20 ☐

7. How many times have you attended in service courses related to your teaching?

Not attended ☐

Between 1 and 2 times ☐

Over 2 years ☐

8. Indicate the adequacy of teaching aids for the subject(s) you teach in your school

Adequate ☐

Inadequate ☐

Not applicable ☐

9. How often do you use teaching aids?

Use them always ☐

Use them rarely ☐

Never use them ☐

Not applicable ☐

10. (a). If you are a teacher coaching Form 4 in a subject or subjects, are you given concession in form of reduced lessons or exempted from lower classes so as to give you time to maximise your work in examination-classes?

Yes ☐

No ☐

(b) If yes, to what extent? _____

11. (a) Are you rewarded for making your students achieve high marks in the examinations?

Yes ☐

No ☐

(b) If yes, how are you rewarded? _____

12. Do you have sufficient textbooks for your subjects?

Yes ☐

No ☐

13. (a) Are you provided with a house in the school compound?

Yes ☐

No ☐

(b) If not, why?_____

(c) Are you provided with any other benefit without payment e.g. free staff tea?

Yes ☐

No ☐

(d) If yes, please specify_____

_____

14. (a). Do you teach extra hours in this school? e.g. evenings and Saturdays?

Yes ☐

No ☐

(b) Is it compulsory?

Yes ☐

No ☐

(c) Are you remunerated for this?

Yes ☐

No ☐

15. How do you rate the performance of students in the subjects you taught in the KCSE examination?

Good ☐

Average ☐

Poor ☐

16. (a) What does the headteacher do if he discovers that teachers have problems in school for example, coming late or not teaching ?

Dismissing the teacher ☐

Warning the teacher ☐

Ignoring the problem ☐

Holding dialogue ☐

Others(please specify)_____

(b) What in your opinion should the headteacher do if he discovers that a teacher has failed in his/her duties?

Dismiss the teacher ☐

Warn the teacher ☐

Ignore the problem ☐

Advise the teacher ☐

Others (Please specify) _____

17. What do you consider to be a major factor that influences KCSE performance in the school you are teaching? _____

_____

18. (a) If you had a choice, would you remain in this school or transfer?

Remain ☐

Transfer ☐

(b) Please give reason(s) for your answer in 18 (a)_____

_____

19 How did you join teaching profession?

By choice ☐

Had nothing else to do ☐

Other reasons (Please specify) _____

APPENDIX E

STUDENTS' QUESTIONNAIRE ON FACTORS THAT INFLUENCE PERFORMANCE IN KCSE EXAMINATION

INSTRUCTIONS

Two types of questions are given in this questionnaire; structured questions and unstructured questions. In the structured questions several answers are given. Please tick ( ) the choice you have made. For example,

What is your age?

10-14 □

15-19 □

20 and above □

Any other .....

If your age is 17, please tick ( ) as shown above. In the unstructured questions write your answers in the blank spaces provided.

1. What is the name of your school?_____
2. When did you join this school?_____
3. What is your gender?

   Male □

   Female □

4. What is your age?

   Under 15 years □

   Between 15 and 20 years □

   Over 20 years □

   Any other □

5. What is your father's occupation?_____

6. What is your mother's occupation_____

7. (a) Is your school fees paid in time?_____

Yes ☐

No ☐

(b) If not, why? _____

(c) How does this affect you?_____

8.(a) Do your parents/guardians complain when you are not doing as well as expected?

Yes ☐

No ☐

(b)What causes your poor performance?_____

9. Do your parents/guardians commend you when you improve in the school examination results?

Yes ☐

No ☐

10. Do your teachers give you extra assignments when you do not do well in school?

Yes ☐

No ☐

11.Do your teachers reward you when you perform well in school?

Yes ☐

No ☐

12.How often do you have internal examinations?

Weekly ☐

Monthly ☐

Termly ☐

Yearly ☐

13 (a) Are students' examination results displayed on the school notice board?

Yes ☐

No ☐

(b) If your answer to 13 (a) is No, for which classes are results displayed on the school notice board?

(c) What other ways are results communicated?_____

14. Do you consult your teachers after classes in case you did not understand a concept he/she taught in class?

Yes ☐

No ☐

(b) If your answer to 17 is No, why not?_____

_____

15. (a) Are you free to consult the students' counselor at any time in case you have a problem?

Yes ☐

No ☐

There is no counselor ☐

(b) If not, why? _____

16. Are you free to consult the headteacher at any time in case of any problem?

Yes ☐

No ☐

17. Do teachers revise tests in your class?

Some ☐

All ☐

18. (a) How long is the prep time in the evening?

1-2 hours ☐

over 2 hours ☐

(b) Is it compulsory?

Yes ☐

No ☐

(c) Can you extend the prep if you so wish?

Yes ☐

No ☐

19. Are games compulsory in your school?

Yes ☐

No ☐

20. Is it compulsory for a student to join at least one club or society in school?

Yes ☐

No ☐

21. (a) What occupation would you like to have when you leave school?_____

_____

(b)Give reasons_____

22. What grade do you expect to get in your forthcoming examinations?

A or B ☐

C or D ☐

Below D □

23. Do you allocate yourself time everyday for your revision of work already done

Yes □

No □

24. Given a choice, would you rather transfer to another school or remain in this one?

Transfer □

Remain □

No response □

(b) Give reasons_____

25. (a) What do you consider to have influenced the school's performance in last year's KCSE examinations? _____

_____

(b) Suggest ways of making the performance better _____

_____

APPENDIX F

SAMPLED SCHOOLS

Schools from Nairobi Province

1. Aquinas High School.
2. Dagorretti High School
3. Huruma Girls Secondary School
4. Kayole Secondary
5. Kenya High School
6. Moi Forces Academy
7. Nairobi School
8. Pumwani Secondary School
9. Precious Blood-Riruta Secondary School
10. Uhuru Secondary School

Schools from central province

1. Alliance Boys School
2. Gitweku Secondary School
3. Kahuhia Girls Secondary School
4. Kijabe Girls Secondary School
5. Koimbi Secondary School
6. Kutus Secondary School
7. Loreto Limuru Secondary School
8. Limuru Girls School
9. Mang'u High School
10. Mary Hill Secondary School

11. Murang'a High School

12. Bishop Gatimu Ngandu Girls School

13. Njambini Boys School

14. Ng'araria Girls School

15. Nyahururu Boys Sschool

16. Nyeri High School

17. Olkalou Secondary

18. Rungiri Secondary School

19. Rurii Secondary School

20. Tumutumu Girls School

APPENDIX G

Sampling Table

Population size	Sample size	Population size	Sample size
10	10	250	162
20	19	300	169
30	28	400	196
40	35	1500	306
50	44	2000	322
60	52	3000	341
70	59	4000	351
80	66	5000	357
90	73	10,000	370
100	80	20,000	377
150	108	50,000	381
200	132	100,000	384

Abstract from Krejcie and Morgan's table(reproduced in Mulusa 1990,107)