

**FACTORS INFLUENCING STUDENTS' PERFORMANCE IN
THE KENYA CERTIFICATE OF SECONDARY EDUCATION
EXAMINATION IN PUBLIC SECONDARY SCHOOLS IN
GATANGA DIVISION, THIKA DISTRICT**

**UNIVERSITY OF NAIROBI
EAST AFRICANA COLLECTION**

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**BY
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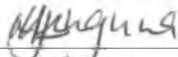
**A Research Project Report Submitted in Partial Fulfillment for the
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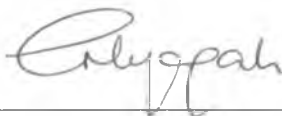
DECLARATION

This research project report is my original work and has not been presented for a degree in any other university.



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



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DEDICATION

This work is dedicated first to my husband John N. Njuguna and children, Judith, Flora, James and Joe. May they live to cherish education and find fulfillment in love for one another. God bless them in a mighty way.

ACKNOWLEDGEMENTS

It is with heartfelt appreciation that I wish to acknowledge the following people whose input made it possible for this study to be a success.

Dr. Grace Nyagah, my supervisor, without whose guidance, encouragement and commitment, the study would have been difficult to undertake. Thanks for the new insights and ideas, and for the commitment and patience which were my inspiration and enrichment in this academic endeavor.

I wish to convey my gratitude to the University of Nairobi and in particular the Department of Educational Administration and Planning for affording me the chance to pursue this degree.

My sincere gratitude goes to the Kenya National Examinations Council, for the immense support that made me realize my long time dream that I'll live to remember. My KNEC colleagues too for giving encouragement, may God Almighty bless them.

My dear friends, Doro (little one), Elizabeth, Charity, and Angeline, who selflessly accorded me unforgettable company and support, may the Almighty bless them.

Thanks to the teachers in the schools that I visited in Gatanga Division for the cooperation in providing me with the information that I used to compile this volume.

Above all, I thank the Almighty God, Father of all wisdom, power, glory and knowledge without whose grace, mercy and favour, this task would not have been accomplished.

ABSTRACT

This study set out to investigate into the factors influencing students' performance in KCSE Examination in Gatanga Division in Thika District. The division was chosen after comparing its KCSE results with the results of the four other divisions in the district during the period 1999 to 2003. According to the Kenya National Examinations Council (KNEC) order of merit records for the five years, Gatanga had a mean score of D-, ranking last among the five divisions.

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The study investigated the availability of school facilities and teaching/learning resources, availability of teachers and the extent to which school-based curriculum monitoring was carried out in the schools. It also explored whether the time allocated by the Ministry of Education for syllabus coverage was adequate and the extent of parents' participation in school affairs. Based on these factors, five objectives were formulated for the study.

Ten (10) questionnaires were administered to headteachers and 75 others to a randomly selected sample of form four teachers. Those returned dully completed were 8 from headteachers and 73 from teachers, an overall return rate of 95.3%. Data was analyzed mainly through descriptive statistics. Chi (χ^2) square test was applied to establish the relationship between availability of the teaching/leaning resources and performance in KCSE examination.

The findings of the study indicated that schools had enough teachers. However, students' performance in KCSE examination was poor. Some of the factors found to have a negative impact on the performance were:-

- i) inadequacy of some teaching/learning resources
- ii) Lack of efficient school-based curriculum monitoring
- iii) Inability by the teachers to complete the syllabuses in time
- iv) Students' characteristics such as indiscipline, poor entry behavior and frequent absenteeism
- v) Inadequate parents' participation in school affairs mainly due to poverty.

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Based on these findings, the study recommends the following measures for improvement in KCSE performance in the schools:-

- The schools through the support of the Ministry of Education to raise funds through donor assistance, funds drive or ministerial budgetary allocation to equip the schools with facilities.
- The headteachers and teachers to attend relevant courses in order to improve skills in school-based curriculum monitoring.
- MoEST to re-examine the syllabuses with a view to reducing their scope without compromising what students ought to learn.
- PTAs and BoGs to organize forums for sensitizing the parents on the need to be committed to their children's school work.

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ABBREVIATIONS

ARSPI	-	All Round Standard Performance Indicators
ASESP	-	African Social and Environmental Studies Programme
BA	-	Bachelor of Arts
BoG	-	Board of Governors
BSC	-	Bachelor of Science
CBE	-	Curriculum-Based Establishment
CPE	-	Certificate of Primary Education
CRE	-	Christian Religious Education
DEO	-	District Education Office
KACE	-	Kenya Advanced Certificate of Education
KCE	-	Kenya Certificate of Education
KCPE	-	Kenya Certificate of Primary Education
KCSE	-	Kenya Certificate of Secondary Education
KESI	-	Kenya Education Staff Institute
KIE	-	Kenya Institute of Education
KNEC	-	Kenya National Examinations Council
MLA	-	Monitoring Learning Achievements
MoEST	-	Ministry of Education Science and Technology
MPET	-	Master Plan on Educational Training
PGDE	-	Post Graduate Diploma in Education
PTA	-	Parents'/Teachers Association

SACMEQ	-	Southern African Consortium for Monitoring Educational Quality
TSC	-	Teachers' Service Commission
UNESCO	-	United Nations Educational, Scientific and Cultural Organization
UNICEF	-	United Nations International Children's Emergency Fund

CHAPTER ONE

INTRODUCTION

Background to the Study

Education is an investment whose returns are highly valued throughout the world. Worthen and Sanders (1987) observe that in most advanced nations, education is increasingly viewed as a primary means of solving social problems. For instance, the quality of education in the United States of America (USA) in the late 1970s was so worrying that a National Commission on Excellence in Education was set up in 1983 to investigate the state of education. Following the investigations, the Commission panel had this to say; ‘The educational foundations of our society are being eroded by a rising tide of mediocrity that threatens our very future as a nation and a people’ (Worthen and Sanders, 1987:3).

According to Kenya’s National Development plan (2002) education is a fundamental strategy for human resource development. Significant resources have been invested in it over the years by the government and other stake holders in order to expand and improve it at all levels. Pratt (1994), notes that a school shapes the social life, the self-concept and the occupational future of the youth. This explains why nations invest large sums of money in education. Developed nations such as the US, United Kingdom and Australia provide free elementary and secondary education and highly subsidizes the tertiary

education. For instance in 1984 the US government spent over three trillion dollars on formal education (Pratt 1994:3).

Lockheed and Verspoor (1991), while supporting the value of education, stated that in the developing nations, adults who have higher levels of education have better paying employment, higher individual earnings, and greater agricultural productivity. They also have better health and nutritional status and more 'modern' attitudes than those with lower educational attainment. According to a paper presented during the National conference on Education held in Nairobi in November 2003, education was described as an important catalyst for national development. The paper emphasized the importance of education in enhancing the development of appropriate skills, attitudes and knowledge necessary for imparting values which enhance integrity and expertise for production. Education prepares the youth to play an active role in the life of the nation. It is for these reasons that education in Kenya is allocated over 30 per cent of the government recurrent voted expenditure, (MoEST 2003).

Some of the objectives of secondary education in Kenya are;

To provide the learner with the opportunity to:

- Acquire knowledge, skills, attitudes for the development of self and the nation
- Build a firm foundation for further education and training
- Develop the ability to enquire critical thinking and rational judgement

- Identify individual talents and develop them (MoEST/KIE 2003).

In an effort to achieve these objectives, MoEST (2003) indicates that the Ministry gives maximum support to education by providing financial and material resources for teacher training programmes, teachers' salaries, supervision and inspection of schools. This ensures that the school environment is appropriate for learning. The Ministry also organises curriculum development and reviewing to ensure that education is focused towards the dynamic social and economic needs of the country. Abagi and Odipo (1997) observe that curriculum reforms undertaken in developing countries are aimed at making education a vehicle for national development.

One of the means of judging academic achievements is through examination results. MoEST (2003) observes that internationally, pupils' scores in examinations are accepted as a proxy of achievement in education. Kyalo and Kithuka (1992) states that the certificate awarded to successful candidates must not only certify that such a candidate has fulfilled the requirements of the examining board but also that their attainment compares favourably with that of a similar cohort elsewhere.

In Kenya, public examinations are regarded with much reverence, and every candidate is awarded a certificate which is usually regarded as a licence to secure a future, (Wamai 1991). Their results are waited for with a lot of

anxiety because of the meaning they carry for the future of the student. *The East African Standard*, (26th February 2000:13), while reporting on the release of KCSE examination results described the ex-candidates and the teachers as being very anxious because of the judgement they were waiting for. On the importance of examinations, Somerset (1981) notes that job opportunities usually go to those with the best results. Wamai further states that examination results are taken as a valid measure of a pupil's educational achievement, and that Kenyans regard examinations as a trustworthy instrument for categorising students into groups of achievers and non-achievers.

The education structure in Kenya allows 8 years for primary, 4 years for secondary and a minimum of 4 years of university education, (8-4-4). At the end of the primary cycle, pupils sit for the Kenya Certificate of Primary Education (KCPE) examination. This examination is used to select those who would proceed to the secondary cycle and those to join vocational training institutes, (Republic of Kenya 1984). It also helps identify those whose performance necessitates repeating while there are those who terminate their education at this level.

The secondary cycle is the transitional stage, during which students are prepared to join higher education and training and thereafter, the world of work, (Republic of Kenya 1984). The value attached to this level of education is reflected in the attention it receives from the government, parents and the

public in general. For instance, according to MoEST (2003) the government expenditure in secondary education in 2002 was Kshs. 12.6 million. In 1963, when Kenya gained political independence, the country had only 151 secondary schools with a total of about 30,000 students. By 2003, number had risen to 3,891 schools with over 850,000 students.

From the heavy investment by the government, the parents and the community, good examinations results are expected from students as individuals and the schools in general. The students' achievement at the secondary level is measured using the Kenya Certificate of Secondary Education (KCSE) examination. KCSE results are used to select those who would proceed to universities and other institutions of higher learning.

Candidates' results in the KCSE examination are graded from the highest grade, (A) to the lowest grade (E) on a 12-point scale, (KNEC, KCSE Regulations and Syllabuses, 2002-2003). Most courses offered at the institutions of higher learning require that a candidate scores a mean grade of C+, which is equivalent to 7 points on the 12-point scale. This is in addition to good performance in the cluster of the subjects required for the particular course. C+ is an indicator that a student has the capability to advance to the next level on the education ladder.

Places in the public universities are limited and very competitive. Most of the candidates who score C+ and better are left out during the selection for admissions to these institutions. For instance, the *Daily Nation*, (30th August 2004: 22) reported that the six public universities were to admit 10,872 out of about 50,000 candidates who had attained C+ and above in 2003. Similarly, the same paper, (20th August 2003: 48) reported that in 2002 only 10,872 out of 42,721 who had qualified got places in the public universities. It also had reported that about 30,000 candidates who had attained C+ and better in 2001 missed places at the public universities (*Daily Nation*, 1st December, 2001:3). Although public universities in Kenya offer parallel degree programmes, only a few of the remaining qualified students are able to join this programme because students are expected to meet the full cost of their education at this level. Some of the students who attain C+ and miss places at the universities join middle level colleges such as the national Polytechnics, Diploma Colleges, and Primary Teacher Training colleges.

The KNEC KCSE results records show that every year there is a large number of students that attain grades lower than C+. For instance, according to the KNEC national order of merit analysis for 2000 the total KCSE enrolment was 178,738 candidates out of which 30,000 attained C+ and better. This means that 148,738 students had attained C plain and below. The 2001 list shows that the enrolment was 192,563 out of which only 42,721 attained C+ and better. This means 149,842 students had scored lower than C+.

KNEC national order of merit analysis shows that some schools have been performing well in the KCSE examinations. However, there are those that continue to perform poorly every year. Among them are some schools in Thika District. The national order of merit list shows that out of 104 schools from the district, only three schools appear among the top 100 schools in the country. For instance in 1999, Mang'u High School was placed 4th, St Francis Mang'u 64th and Mary Hill School was 75th in the National order of merit. In 2003, Mang'u was placed 8th, Mary Hill 47th and St. Francis Mang'u, position 76th. This means that students from that district cannot successfully compete for the few places available in the institutions of higher learning, and later the world of work. Table 1 below shows the KCSE performance in mean scores and mean grades in Thika District in the period 1999 to 2003.

Table 1: Thika District KCSE Performance Results, 1999-2003

Year	Mean score	Mean grade
2003	4.06	D+
2002	3.92	D
2001	3.91	D
2000	4.08	D+
1999	4.01	D+

Source: Performance analysis list, DEO's Office, Thika.

On the average, the district's performance is far below the required mean grade of C+, which is a necessity for a student to be admitted to institutions of higher learning. What this means is that those who attained this grade were so few that they could not influence the district's mean score positively. This is a worrying situation considering the financial and material investment and sacrifices made by parents, the government and other stake holders to provide education to the children in the area.

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According to Eshiwani (1983), poor performance leads to undesirable wastage through drop-outs and repeaters. It also denies pupils the continuation of schooling through formal system of education. He goes on to point out that if any region of the country lags behind either in number of pupils who attend school or in the number of pupils who pass important national examinations, that region cannot efficiently participate in the democratization of education. Poor results jeopardise the student's opportunities for future job placement and thus reduces his/her chances of meaningfully participating in national development.

Gatanga Division, which has the lowest scores in Thika District as shown in table 2, has been selected for this research. There are a total of twenty-seven (27) schools in the division Twenty-two (22) of them have presented candidates for KCSE examination in the last five years. The division is divided into three zones, namely Kihumbuini zone with eight (8) schools, Gatanga zone

with ten (10) schools and Kariara zone with nine (9) schools. Generally, these schools recorded poor performance during the period in question.

Statement of the Problem

Secondary schools are expected to provide students with ideal learning opportunities in order for them to achieve the set educational objectives. The Ministry of Education carries out regular inspection and supervision of schools to ensure that the environment is ideal for curriculum delivery. Some schools are able to deliver effectively as evidenced by the good KCSE examination results they achieve at the end of the four years of students' secondary education. However, from the results obtained by some schools, it is evident that many students leave school without achieving or having only partially achieved the said objectives. Many schools in Thika District particularly in Gatanga Division fall into this last category.

Table 2 shows performance in the KCSE examination in Thika District per division during the period from 1999 to 2003.

Table 2: Thika District KCSE Performance per Division, 1999-2003

Year	Division				
	Gatanga	Kiamwangi	Catundu	Ruiru	Kakuzi
1999	2.99	3.83	3.59	5.34	4.26
2000	2.93	4.01	3.92	5.47	4.65
2001	3.12	3.83	3.87	4.83	4.52
2002	3.01	4.02	4.01	4.65	4.24
2003	2.84	4.28	3.91	5.22	4.52
Overall mean	2.96	3.99	3.86	5.10	4.44
Overall mean grade	D-	D	D	C-	D+

Source: DEO's Office Thika

Table 2 indicates that in each of the five years, the district performed way below the C+ mean grade. This is an indication that most schools were performing poorly, influencing the overall mean score downwards. The table also shows that the best overall division was Ruiru whose mean score was 5.10. This translated to an overall mean grade of C-. Kakuzi division was second with a mean score of 4.44, translating to a D+. Kiamwangi came third with a score of 3.99, while Gatundu was fourth with a mean score of 3.86. Gatundu and Kiamwangi had a mean grade of D plain, while Gatanga Division was last with a mean score of 2.96 and a mean grade of D-.

This study therefore intended to investigate the factors that influence KCSE examination performance by students in Gatanga division, Thika district. The researcher found it necessary to carry out this investigation because the KCSE examination results in that division in the period 1999-2003 had been discouragingly poor. The results implied that few or no students were able to compete favourably for places in the institutions of higher learning and elsewhere where good examination results are a necessity.

Purpose of the study

The purpose of this study was to investigate the factors that influenced students' performance in the KCSE examinations, in Gatanga Division, Thika District.

Objectives of the study

The study sought to achieve the following objectives:

1. To assess the availability of teaching/learning facilities and resources in secondary schools in Gatanga Division
2. To establish the availability of teachers in the secondary schools in Gatanga Division.
3. To establish the extent of school-based curriculum monitoring in secondary schools in Gatanga Division.

4. To establish the adequacy of the time allocated by the Ministry of Education for syllabus coverage.
5. To determine the extent of parents' participation in school affairs in the secondary schools in Gatanga Division.

Research Questions

The following research questions were developed to facilitate the achievement of the purpose of the study.

1. How adequate are the teaching/learning facilities and resources in the secondary schools in Gatanga Division?
2. What is the staffing situation of the teaching personnel in the secondary schools in Gatanga Division?
3. What is the extent of school-based curriculum monitoring in secondary schools in Gatanga Division?
4. How adequate is the time allocated by the Ministry of Education for secondary school syllabus coverage?
5. To what extent do parents in Gatanga Division participate in school affairs?

Significance of the study

The findings of this study may be significant in a number of ways. Firstly, the study will provide stakeholders in education an opportunity to have a better understanding of the factors that influence performance in the KCSE

examinations. This may provoke the need to carry out similar research in other areas of the country. Secondly, the findings may provide leads to facilitate interventions towards improving performance in examinations. Thirdly, the findings may provide a useful feedback to the educational policy makers, curriculum developers, implementers and other stakeholders. Finally the findings could provide a springboard for further research into the area of examination performance in Gatanga division, Thika district in particular and in Kenya in general. It will also contribute to the existing knowledge on the factors that influence performance in examinations. Future researchers could also use the findings of this study to identify priority areas in which to carry out more research on matters of examination performance.

Delimitations of the study

The study was conducted only in Gatanga Division of Thika District. This is a predominantly rural division hence the findings should be generalized to urban areas with caution. The study was conducted only in public secondary schools that had presented candidates for KCSE examination for the years 1999-2003. Recently established schools and private schools were excluded.

Respondents of the study included the headteachers, form four class teachers and subject teachers. All other members of the school community were excluded though they were potentially able to provide useful information. It also excluded the parents/ guardians and other individuals with interest in the

schools. There were varied factors that influenced student' performance in examinations, however, this study sought to establish the effect of factors related to the school environment.

Limitations of the study

The study adopted an ex-post facto design whereby the manifestations of the variables had already occurred and hence could not be manipulated by the researcher. This design was preferred as appropriate for studying factors influencing examination performance as they cannot be tested through experimentation. The method is however limiting in that it is not possible to determine the specific effect of the factors with any degree of certainty.

The study used questionnaires despite other instruments' ability to yield in-depth information. For instance, interviewing the respondents would enable probing for purpose of clarification. Similarly, an observation schedule would enable the researcher to establish what exists and what does not. There are many factors that influence performance in examinations and it was not possible for the researcher to explore all of them due to limitation of time.

Basic assumptions

In conducting this research, it was assumed that:

- Examinations were an acceptable measure of candidates' achievements, and were appropriate for differentiating between the good, average and less able candidates.
- The examination data obtained from KNEC was reliable.
- The respondents would give honest and reliable information as they responded to the items in the questionnaires.

Definition of Significant Terms

- Category of school:** Refers to either co-educational or single sex school.
- Mean Grade:** Refers to the average grade derived from the mean score based on the KNEC 12-point grading scale.
- Mean score:** The score obtained by adding all the candidates' scores and dividing by the number of candidates.
- Performance:** The level of achievement a student attains in the examination.
- Public Secondary schools:** Post primary schools established and sustained using public funds.
- Teaching/learning resources:** Materials such as text books, reference books, teachers' guides, stationery and all other materials that are used to facilitate the process of teaching and learning in a school.

Organization of the study

The study is organized into five chapters. Chapter One comprises the background to the study, the problem statement, purpose of the study, objectives, research questions, significance, delimitations and limitations, and the basic assumptions of the study. At the end of the chapter, operational definitions of various terms used in the study are provided.

Chapter Two presents literature review derived from relevant studies carried out on factors that influence students' academic achievement. At the end of the chapter is a conceptual frame work depicting the relationships among factors that influence students' performance in KCSE examination.

Chapter Three comprises of the research methodology applied in the study. It covers the research design, target population, sample and sampling procedures, research instruments and data collection and analysis procedures employed in the study.

Chapter Four outlines data analysis and interpretations of the findings of the study. Chapter Five presents a summary of the findings, conclusions and recommendations and also gives suggestions for further research.

CHAPTER TWO

LITERATURE REVIEW

Introduction

In this chapter, relevant literature on factors that impact on the academic achievement of a learner as gauged through public examination results were reviewed. The factors were divided into two broad categories. These are, factors related to the home background and those related to the school environment. The factors that relate to a student's home background include provision of food and study facilities and participation of the parent/guardian in the affairs related to the students' education. The school-based factors include the type of school, availability and quality of teachers and availability of teaching/learning resources.

A General Overview of Factors that Influence Achievement in Examinations

Basically, KCSE is a form of summative evaluation which measures the outcome of the learning process rather than the process itself. What is deemed as fail or falling below a set standard is a reflection of a disadvantaged educational process (Indongole, 1987). Learning environments differ widely and depending on their quality, impact positively or negatively on the final examination performance. Indongole further observes that factors that affect candidates' performance in an examination can be cognitive, socio-

psychological or environmental in origin. In addition, Carron and Chau (1996) argue that it is difficult to generalize the factors and there is certainly not one single factor or few factors in isolation which explain the differences in performance between one learner and another.

Studies conducted by Osman (1984), Said (1989), UNESCO (2001), Ayoo (2002) and Simiyu (2003) to establish the factors that influence candidates' performance in examinations have revealed many factors with which a learner interacts over the period he/she is undertaking a course in preparation for the examination. Shiefelbein and Simons (1981) quoted by Eshiwani (1983) categorise the factors into three groups as follows:- (i) Factors related to school resources such as text books, libraries and laboratory facilities, (ii) Teacher characteristics such as training level, experience and professional commitment and (iii) Students' traits such as social background and previous school experience. The factors exert their influence on students during the process of teaching/learning and also during the examination time.

Home background

According to UNESCO (2000), there is sufficient evidence from both developed and developing countries that quality of education requires strong support from the home of the learner. The home background characteristics and conditions, to a large extent determine the learner's performance in the final examination. The capacity of the learner to concentrate and obtain maximum

value from the school experience is severely reduced if the learner does not receive adequate food intake, (UNESCO 2000). Studies carried out in Mali, Uganda and Zambia by Monitoring Learning Achievement (MLA) project of UNESCO found that children who had no regular meals achieved much lower than those who had two or more meals per day.

Carron and Chau (1996) carried out similar studies in China, Mexico and Guinea and their findings concurred with those of MLA in that children from poor rural zones were found to be unable to take full advantage of the education offered to them because among other problems, they had little or no food most of the time. Lockheed and Verspoor (1991) reporting on similar findings of a survey carried out by World Bank in India state that students who were well nourished got higher scores in tests than the undernourished. This implies that the quality of diet and how regularly or irregularly a student feeds has an effect on the mental development and ability of a student. This translates to poor or good performance in tests.

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The home environment should be secure and supportive for the learner's school work. It should provide essential furniture, proper study room, services like water and lighting, an atmosphere of encouragement and guidance, (Carron and Chau, 1996). In their studies in Mexico, China and Guineas, they found out that most children from poor rural homes lived in single rooms shared with the entire family. The pupils were not able to effectively do any studies at home

including their homework because of lack of appropriate study environment. Such pupils were found to perform poorly in tests compared to their counterparts from well endowed homes.

Parents' involvement in the school affairs of their children is major factor influencing learner's performance in examinations. Parents should not only provide study facilities but also ensure that children are disciplined and their performance in tests, assignments and homework is followed up, (UNESCO, 2000). UNESCO (1991) cites the overall illiteracy of the Sub-Saharan population as major hindrance to quality education for many children. The publication cites examples from Mozambique where peasants were not only unable to provide material resources for study at home but also did not intervene even when their children were mistreated in school because they did not feel competent enough to take action. They also felt incapable of generating useful information towards the improvement of the schools. Schools located in environments dominated by such parents performed dismally in the final examinations.

Tyler (1977), while supporting the theory of 'good home,' advances the argument that students whose parents are educated live in homes that provide an environment that stimulates education. They are also encouraged by their parents to study and are supplied with relevant books and literature which stimulate and motivate the students. Such students stand better chances of

performing well in tests and public examinations compared to those whose parents have no education.

UNESCO (2000) supports the view that the education level of the parents has great influences in the education of their children. UNESCO observes that parents with higher levels of education are predisposed to support the learning development of their children and have greater confidence in their capacity to support their children at psychological level. 'Parental education level has constantly been found in most educational surveys to be a decisive factor affecting learner performance.' (UNESCO 2000:37).

According to Carron and Chau (1996) studies carried out in Mexico established that children whose parents were illiterate were not assisted in their school work because the parents could not understand the language of instruction. Less than 30% of the parents interviewed had not met or discussed their children's school work with the teachers. Similar studies in Guinea revealed that learner absenteeism was very high especially among girls. The girls were helping with domestic chores and lacked parental encouragement to go to school. Children from deprived homes attended low cost schools with meagre learning facilities. Consequently they performed poorly in examinations even when their academic potential was high. Those from well-up homes attended more expensive and better equipped schools which boosted their academic achievements.

Ayoo (2002), in her study in Maseno Division, Kisumu district, found out that a large percentage of students from schools that performed poorly perceived participation in household chores as affecting their learning. For instance, 83% of students from a poor performing school perceived participation in washing and general cleaning at home as affecting their learning process, compared to 37.7% from good performing schools.

Swainson (1995) quoted in Ayoo (2000), in his study on constraints to education in Malawi established that both boys and girls were involved in various duties at home but there was gender difference in the participation of these duties. Girls were found to be involved in these duties more than boys. It was also found that their school attendance was irregular. Swainson concluded that girls' concentration in class was affected by exhaustion from involvement in household chores.

Similar findings are reported by Duncan (1989) from her studies conducted in Botswana in which it was established that cultural views, values and expectations affected performance of students in examinations. It was found that the socialization of girls in many communities was geared towards preparing them for marriage. In addition, cultural values were reflected in the school structure where girls and boys had specific roles. Teachers' behaviours and expectations, gender stereotyping in text books and roles regarding school duties placed girls in a more disadvantaged position. This made the girls have

lower educational aspirations and would achieve lower scores in tests and examinations.

Lockheed and Verspoor (1991) state that parental encouragement is one of the main factors that account for improvement of children's test scores. They go on to note that favourable parental attitude and social class lead to high attainment of examination results. However, the findings of studies carried out in Uganda by Heyneman (1976) in Indongole (1987) showed that there was a weak relationship between socio economic background and achievement in the national examinations Heyneman carried out a study in 67 schools with a total of 23,624 candidates. He gathered information on education level of parents, occupation and number of household possessions, and developed a socio-economic scale which he correlated with the examination scores obtained from the examining board. The results showed a weak relationship between socio-economic background and academic achievement. He concluded that performance by students in public examinations was influenced by the type of schools they attended rather than the social class of the parents.

Ayoo (2002) established that fees affordability by parents influenced the choice of school that students attended. More than half (53%) of the respondents from mixed schools most of which performed poorly indicated that they chose the schools because the fees charged were low. 30% of students from well performing single sex schools which charged higher fees than mixed

schools indicated that their parents chose the schools. This is an indication that the parents could afford the fees charged by boarding schools.

Lockheed and Verspoor (1991) suggest that parents' visit to their children's school is perceived by the teachers as an indicator that the parents have interest in the children's education. This motivates the teacher to give more attention to the child's work and in the long run enables the child to perform well in the examinations.

The positive effects of parents interest in their children's school work were also identified through studies carried out in France where it was established that parents' pressure for good academic achievement, their aspirations, the amount of information they possess, and the kind of rewards they gave to their children had a significant influence on the children's performance in tests in school (Gage and Berliner 1979). Kapila (1976) as cited by Ndiritu (1999) also established a positive relationship between parents' participation in the children's school work and academic performance.

Osman (1989) contends that poor performance in KCPE in North-Eastern Province established that among other factors, children performed poorly in the examinations because most parents were not supportive at all. Simiyu (2002) also supports the view because in his study on the attitudes of students towards CRE and its effect on performance he established that though students were

positive towards the subject, their performance was affected by absenteeism due to lack of school fees and parents' non-involvement in school affairs. Other factors noted were laziness on the part of the learners, poor mastery of English language and poor teacher student relationship.

School Environment

The school environment has many factors that may have effects on the quality of education and consequently the learners' performance in the final examination. Some of these characteristics include the type of school, availability and quality of teachers and availability of teaching/learning resources and facilities. Others are the style of the school administration and student-related characteristics.

Different schools have their unique characteristics that exert positive or negative influence on the academic achievement of the students. Some schools are high cost as opposed to low cost ones, a factor which determines the type of facilities they have. Others are mixed while some are single sex schools. Some schools are day while others have boarding facilities. Somerset (1971) carried out a study based on Uganda elementary schools and observed that variations in performance among schools are due to differences in quality of the school despite the articulated educational objectives and set curriculum. He noted that the kind of school attended could affect performance in examination

In Kenya, examinations results of many high cost and well established schools are always better than those of low cost schools. Most low cost schools are poorly equipped with learning resources and facilities and in most cases they do not attract the best teachers. For instance, from the KNEC 2003 national order of merit analysis, well established schools such as Alliance, Kenya High school and high cost schools such as Strathmore and Kianda Schools, appear at the top of the list in the KCSE examination results while such schools as Kikuyu Day Secondary school or Uthiru Girls Secondary school are at the bottom of the list.

Studies conducted by the Wamahiu, Opondo and Nyaga (1992) quoted in Ayoo (2002) support this view in that their findings established that poor learning environments in the former *harambee* schools in which the curriculum was restricted, laboratories hardly existed and if they did they were poorly equipped. Most members of the teaching staff were unqualified and the schools had markedly poor examination results.

The Population Council of Kenya (1997) had similar findings in a study that sought to establish the effects of material inputs on performance in examinations. The results indicated that mixed schools most of which were formerly *harambee* were poorly equipped while single sex schools were better equipped and recorded good results in examinations.

Mutea (2000) reports that provincial and district schools in Kenya have been said to perform poorly in KCSE perhaps because of the government policy that requires that 85% of all students enrolled in a provincial school be from the district where the school is located, and 100% of all students enrolled in a district school be from that district. Mutea concludes that this contributes to poor performance particularly in English because students use their mother tongue and Kiswahili relegating English to a second or third place.

It is also notable that most single sex schools perform better than mixed schools in KCSE examinations. Njuguna (1998) found out that it was more difficult handling students of both sexes in the same school than it was handling students of single sex in the administration of the schools. Njuguna also noted that headteachers in single sex schools found it easier to give direction and had more concern of the welfare of the teachers than in mixed schools. Njuguna concluded that the difficulties experienced in the administration of the mixed schools to a large extent contributed to poor performance in the KCSE examinations.

The government through the ministry of education recognizes the poor state of most of the existing public schools in the country. According to Kenya's National Development Plan 2002-2008, the government plans to improve education during the plan period by giving priority to improving access,

quality, relevance and management of schools through among other ways expanding and rehabilitating the existing schools to improve their physical quality.

Availability and Quality of Teachers

The quality of the learning environment at school depends to a large extent on the quality of the human resource capacity available. Teachers are the most important human resource and remain the backbone of any educational system. (UNESCO 2000). One of the key factors in determining examination results is the availability and quality of teachers. Trained teachers represent a significant social investment and their levels of motivation and career commitment is of concern to policy makers (UNESCO 2000)

According to Abagi and Odipo (1997) teacher quality depends on their qualification, experience and level of discipline which in turn determines the level of commitment. Helinger (1995) asserts that the quality of the headteacher is very crucial in determining examination outcomes in a school. Helinger argues that the school principal is the most important influential individual in a learning institution and his/her managerial skill set the benchmark, direction, tone and tempo and the school learning climate. He/she ensures proper management of school time and other resources. A headteacher ought to ensure that curriculum is effectively implemented in order for the school to achieve its goals, the main one being academic excellence. The

school activities should be well coordinated and teachers and students disciplined. It is the responsibility of the headteacher to ensure there exists cordial relationship among members of the school community

Somerset (1981) in a report prepared for World Bank noted that there was a strong correlation between the quality of administration and student's performance in the Certificate of Primary Education (CPE). Proper management to some extent has a positive influence on how teachers display their quality. It does not only ensure coordination and guidance of teachers but also motivates and encourages them to effectively perform their roles. This in turn influences students' academic achievement.

Creamer (1994) notes that the roles of a teacher include organizing the instructional environment, setting time framework and carrying out the instructional process. Lack of teachers result in classes being left unattended and sometimes the teachers who are present take up extra load to make up for the absentee teachers. This leads to inconsistency and ineffective teaching, and sometimes to loss of valuable time. Thus, students may not adequately cover the syllabus and effectively prepare for examinations.

One of the leading problems in education in Africa as cited by UNESCO (1991) is persistent shortage of both qualified and properly trained teachers. This has a negative impact on the academic achievement of the children.

Osman (1989), in his study on poor performance in KCPE in North Eastern province noted that poor performance was mainly a result of unequal distribution of teachers. There was understaffing in most schools and teachers rarely attended in-service courses.

Kathuri (1984) quoted by Nyaga (1997) concurs with Osman regarding the effect that teacher quality has on the educational achievement of children. In a study on the factors that influence performance of pupils in the Certificate of Primary Education (CPE) Kathuri established that the quality of teachers contributed to the nature of pupils' performance. He also cites efficient use of teaching methods and good administrative set up as a reflection of teacher quality and as important factors in examination performance by pupils.

Simiyu (2002) established that teachers who were involved in marking of CRE at KCSE level produced better results in the subject than those who were not. Marking of KCSE examination is a form of training. It helps teachers improve their understanding of the subjects as well as learning how to interpret examinations questions. Such teachers are able to model their teaching along the examination line and their students stand a better chance of performing well in the final examinations.

On the quality of teachers, Eshiwani (1983) established that 40% of teachers in the primary schools in Western province were untrained and this had a negative

effect on the performance in the final examinations. Eshiwani further established that 60% of the teachers in the schools he visited were not serious with homework. Some students were not given any homework and for those who were, there was no serious follow up. These schools had poor results in the public examinations.

Pearson (1988) notes that in-service training is an important aspect of alleviating teachers' ineffectiveness. The courses should be geared towards the improvement of teaching skills and making teachers aware of any changes in the curriculum. Pearson further points out that in-service training also helps teachers to use the available teaching resources more effectively and efficiently. Ndiritu (1999) concurs with Pearson as he notes that it is important to train teachers, whether through the formal training or through in-service courses. Ndiritu's study in Nairobi established that teachers' attendance of in-service training and their desire to stay in the same work station influences performance in examinations.

According to the Republic of Kenya (1998) and the Economic Survey (2004), by 1995 there were large numbers of untrained teachers in the country but the number has been slowly declining. Table 3 below shows how the situation was between 1995 and 2003.

Table 3: Number of trained and untrained teachers in secondary schools in Kenya between 1995 and 2003

Year	Trained teachers	Untrained teachers	Total
1995	33,443 (81%)	8,041 (19%)	41,484
1996	34,923 (85%)	6,357 (15%)	41,280
1997	38,427 (87%)	5,951 (13%)	44,378
1998	40,438 (92%)	3,257 (8%)	43,694
1999	39,423 (96%)	1,359 (4%)	40,782
2000	38,997 (97%)	1,093 (3%)	40,090
2001	43,090 (96%)	1,853 (4%)	44,943
2002	44,094 (96%)	1,897 (4%)	45,991
2003	44,792 (96%)	1,653 (4%)	46,445

Source: Economic Survey 2004

The table shows that the number of untrained teachers was slowly declining and in 1999 it dropped to 1,359. This is because that year, the government discontinued the recruitment of untrained KACE, KCE and KCSE certificate holders as untrained teachers. The intention was to have no untrained teachers at all. The number therefore continued to decline but in 2002, due to the shortage of teachers in sciences, mathematics and economics, the TSC authorized headteachers to recruit untrained Bachelor of Science (BSC) and Bachelor of Arts (BA) Economics graduates to make up for the shortfall. As a result in 2002 the number was 1,897 but in 2003 it went down to 1,653 and further down to 586 in 2004.

Considering the conclusions made by researchers who have conducted studies on the effects of untrained teachers on performance in examinations, it is regrettable that the country still had such a large number of untrained teachers. Five hundred and eighty six (586) is a large number considering that each teacher handles a class with an average of forty students, and teaches two or more classes in a school. If the competence of these teachers is below the expected, it means that all those students risk performing poorly in examinations.

Lockheed and Verspoor (1991) observe that the status of teachers in developing countries is low and continues to decline. This is aggravated by low pay package, poor working conditions and uncertain career path. They continue to note that the profession is unattractive and many practicing teachers often leave the job, causing teacher shortages.

Carron and Chau (1996) conducted studies in Guinea and Mexico and established a similar situation as noted by Lockheed and Verspoor, that stability of teachers in a school is an important factor in the quality of education. Lack of stability and the desire by teachers to change their career hinders full commitment to the job leading to low attainment in education by the children.

Heyneman (1983) concurs with Lockheed and Verspoor when he asserts that the rising cost of education, 90% of which is spent on salaries, has led to recruitment of young unqualified teachers whose salary demands are low. With little or no teaching experience, the result is low quality education.

Studies carried out by World Bank in Haiti showed that teachers were frequently absent from school especially on market days as they engaged in other activities to subsidize their salaries. This led to loss of teaching time and affected the coverage of the syllabus (Lockheed and Verspoor 1991). Teacher absenteeism means time stipulated for syllabus coverage is wasted. Without teachers, students are unlikely to use time appropriately. Teacher absenteeism therefore represents a major threat to the continuity of learning especially where it occurs frequently. When some teachers are absent, their colleagues who are called upon to take up the extra teaching load while other times the classes are left unattended. This leads to under utilization of teaching time and inadequate coverage of the syllabus. Eventually the students perform poorly in examinations.

In recent years, the impact of HIV/AIDS has negatively affected the education system particularly as it leads to chronic teacher absenteeism. According to UNESCO (2003), twenty to thirty teachers die each month in Nyanza province. This is not a unique phenomenon in that province but common countrywide. UNESCO reports that for every ten deaths in hospitals in the country, two are

teachers. The *Daily Nation*, 10th December 2001:7 reported that up to eighteen teachers were dying every month from AIDS-related complications. The chronically ill and the dead teachers cannot be sufficiently replaced due to the freezing of teacher employment since 1998 (UNESCO 2003:7). The report notes that recent surveys indicated that 75% of school headteachers reported that they had staff with suspected HIV/AIDS absenteeism. Either they were sick or a family member was sick or they were involved in funerals.

On teacher commitment, Wamai (1991) argues that the low salaries paid to teachers in Kenya compel them to engage in other income generating activities. He asserts that these teachers' allegiance is more on their personal businesses rather than the teaching job, and that they are often absent or ill-prepared for teaching. They are not able to adequately prepare their students for examinations because they are unable to utilize the learning time properly. He further argues that many trained teachers in Kenya opted for the teaching profession after failing to secure other courses and are therefore always on the look out for opportunities elsewhere. They are ill-motivated and uncommitted and in most cases their students perform poorly in examinations.

Eshiwani (1983) established that teachers tended to waste a lot of valuable teaching time at the beginning and end of school term when students are engaged in non-learning activities. It is not possible to make up for lost time and this affects syllabus coverage which in turn leads to poor examination

results. Eshiwani further notes that teacher transfers affected performance in the final examinations in Western province. He noted that teachers are often transferred before they can take a class from form one to form four. This usually affects students' performance in that change of teachers after a short period of time causes inconsistency in learning. Obonyo (1987) established that teaching was affected by teachers' transfers and teachers leaving the teaching profession for other jobs. This had a negative effect on learning in the schools in Kisumu Municipality and led to poor examination results.

A survey carried out by Abagi and Odipo (1997) on the efficiency of primary education in Kenya established that stipulated teaching/learning time in schools is not utilized efficiently, leading to need for extra tuition in order for pupils to attain better examination results. They cite various non-teaching activities that pupils are engaged in. These include long morning assemblies and daily cleaning which takes up some of the teaching time, over and above the loss of time during the first week of the term. Time is also wasted at the beginning of every first lesson in the morning, after break and after lunch.

Teacher training is a key input in improving the quality of teaching. MoEST (2003) observes that the quality of the graduate teachers from Kenya's public universities is worrying because the class sizes of the faculties of education are too large for a lecturer to pay special attention to methodology. Tutorial and micro-teaching lessons cannot be conducted with such large numbers. As a

result, the graduate teachers acquire little knowledge on teaching methodology. The ministry also notes that many students take education courses for lack of alternatives. Thus, their commitment to teaching is questionable. Schools to which these teachers are posted are disadvantaged and in most cases perform poorly in KCSE examinations.

Freezing of recruitment, retirements and resignation of teachers has led to an acute shortage of teachers in the country. A report in the *Daily Nation* on March 18th 2002:18 in an article entitled “Experts alarmed over shortage of teachers” the Nation Reporter notes, ‘since the government froze teacher recruitment in 1998, schools continue to lose staff through deaths, retirement and resignation without replacement. The paper further notes that shortage of teachers continued to bite threatening the provision of quality education.

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Every year, a large number of teachers reach their retirement age and when they leave, majority are not replaced. According to the Teachers’ Service Commission (TSC) Retirement Record (2004), on 1st January 2004, a total of 912 teachers retired. On 1st May, another 662 followed. On 1st December, 4,000 teachers were expected to leave the profession through retirement. The then TSC employment policy allowed the commission to employ only a quarter of the number required in a given region or district. This has a negative effect in the pupils’ attainment in education as reflected in poor examination results in many of the understaffed schools.

Availability of teaching/learning resources and facilities

UNESCO (2000) notes that the availability of a range of teaching and related equipment, supplies, furniture and various forms of printed media for teachers and learners is critical in facilitating the processes of teaching and learning world wide. The report further notes that access to a range of resources and services enable teachers to enrich the teaching environment. The report also notes that developing countries incur high recurrent expenditure on teachers' salaries, which severely restricts the funds available to improve classroom and teacher resources by the governments.

According to the Republic of Kenya (1988), school resources should be properly planned and utilized in an effective manner for efficient provision of quality and relevant education. Carron and Chau (1996:114) emphasises the central role that learning material play towards the quality of education. They state that '...the material condition of education, given the impact on the work and motivation of teachers and pupils, undoubtedly constitute an important factor in academic success.'

In Kenya, the cost sharing policy introduced by the government in 1988 placed the burden of providing the teaching/learning resources and facilities in public secondary schools in the hands of the parents, while the government paid the teachers' salaries. (Republic of Kenya 1988). MoEST (2003) reporting on the

findings of the 1997 Economic Survey states that 46.8% of Kenyans live below poverty line and this is one of the main reasons why most parents are unable to invest in their children's education. With the high levels of poverty in the country, many parents are unable to meet their financial obligations to the schools, making the schools deficient of the learning equipment, resources and facilities. This affects the quality of learning and performance in examinations.

Lockheed and Verspoor (1991) point out that the learning environments in many schools in the developing countries are poor. To improve learning, they suggest that resources be availed be well managed. They single out text books as the most important instructional materials at all levels of training because they reflect and deliver the curriculum. They report on studies carried out in Malawi and Guinea Bissau which established that teachers lacked essential teaching materials such as teacher's guides and other pedagogical documents to accompany the textbooks. Also lacking were teaching aids such as the globe, wall maps and laboratory equipments. Some schools had no proper classrooms. The schools offered low quality education leading to low academic achievement and poor performance in examinations.

Neumann (1980) quoted by Wamai (1991) states that text books and allied materials are the most important consistent factor in upgrading academic achievement especially in schools with less qualified teachers. This view is supported by MoEST (2003) which points out that text books, whether

designed for use in activities led by teachers or independently by pupils, offer the most explicit instructed design formats. However, some text books as Wamai argues, are not detailed enough since they are written by authors whose motive is to make profits. Such books have inadequate content that requires subsidizing using library references. This implies that schools ought to have well stocked libraries if students have to rip full benefits of education.

Heyneman (1990) notes that a school library is significant in influencing learners' academic achievement. He argues that a library is a repository for reference titles which may not be available elsewhere. Similar findings were made by Ayoo (2002). She noted that schools that had adequate facilities recorded satisfactory or good performance, while those with inadequate facilities performed poorly.

Kyalo (1984) established that lack of teaching equipment in most rural schools discouraged the teachers from doing their best. He concluded that if schools were well equipped, it would motivate the teachers to facilitate learning. However, Kyalo noted that most teachers were not innovative enough and failed to utilize and improvise from the resources available in the school environment to improve their teaching. A survey by UNESCO (2000) in selected African countries indicates many schools lacked teachers' houses. A high percentage of teachers residing outside the school reported that their work was affected by the time spent walking to and from school.

Teaching resources enhance retention of about 80% of what is learned ASESP (1994). Obonyo (1987) concurs with this theory as he notes that instructional materials such as text books, visual and audio materials not only enhance communication between the teacher and the learners but also facilitate child-centred learning and learning through discovery. They motivate and encourage participation by the learner in the learning process, and help clarify concepts and add meaning to the texts. However, he argues that teaching/learning resources can only facilitate learning if they are compatible with the instructional objectives.

Obonyo further noted that better performance in national examinations was realised in schools that had adequate physical facilities, textbooks and where learning resources were widely used. Schools that were poorly equipped performed poorly. He interviewed the headteacher of Maseno School, one of the best performing schools in the area and learnt that one reason why the school performed well was the wide use of teaching aids by the teachers.

The issue of availability of resources is viewed differently by Kathuri (1984) in Nyaga (1997) when he argues that it is not just the availability of teaching resources but rather how these resources are made use of by the teachers. What this means is that a school may have excellent facilities but if teachers do not make proper use of them, then the students cannot benefit from them.

Said (1989) conducted a study in Mombasa on performance in KCPE and established that some of the worst performing schools lacked essential facilities. They lacked proper staffroom chairs and tables for teachers to use as they prepare for lessons. Some schools had congested classes where pupils shared desks in threes and fours. He noted that pupils did not enjoy learning due to lack of comfort, and teachers were not able to give attention to individual pupils.

Wamai (1991) concurs with Said in that overcrowding is detrimental in effective teaching/learning. He observes that there is over enrolment in some public schools which disregards the existing physical facilities. This disadvantages the learners who have to share these resources. Some learners hardly access these resources. Such schools rarely excel in national examinations. Wamai further contends that topics for which teaching/learning resources are not available are either avoided or are poorly covered. If examination questions are drawn from such topics, the candidates will most likely perform poorly.

According to MoEST (2003), studies carried out by World Bank in Kenya show that 70% of the schools visited had no libraries. Similar studies carried out in Kenya by the Southern African Consortium for Monitoring Educational Quality (SACMEQ) in 1999 revealed a critical shortage of text books and

physical facilities in many schools. MoEST agrees with the findings and attributes poor examination performance in many schools to this situation.

According to Kenya's Development Plan (2002, the government plans to improve the quality of education by among other ways, instituting the following measures;

- Having regular reports made to MoEST on quality of education at national, provincial and district school levels.
- Identifying education institutional needs for improvement
- Monitoring performance of teachers and educational institutions in accordance with All Round Standard Performance Indicators (ARSPI).
- Ensuring equitable distribution of teachers by working out curriculum-based establishment in secondary schools and class-based establishment in primary schools.

Summary of the literature review

This section has dealt with the various factors that influence performance in public examinations not only in Kenya but also in other parts of the world. Two broad categories of factors have been examined, namely, those related to home background and the factors associated with the school environment. Among the home related factor, the review has looked at the effects of nutritional nourishment, parental moral, material and financial support, learner involvement in family and household chores, the economic status of the family

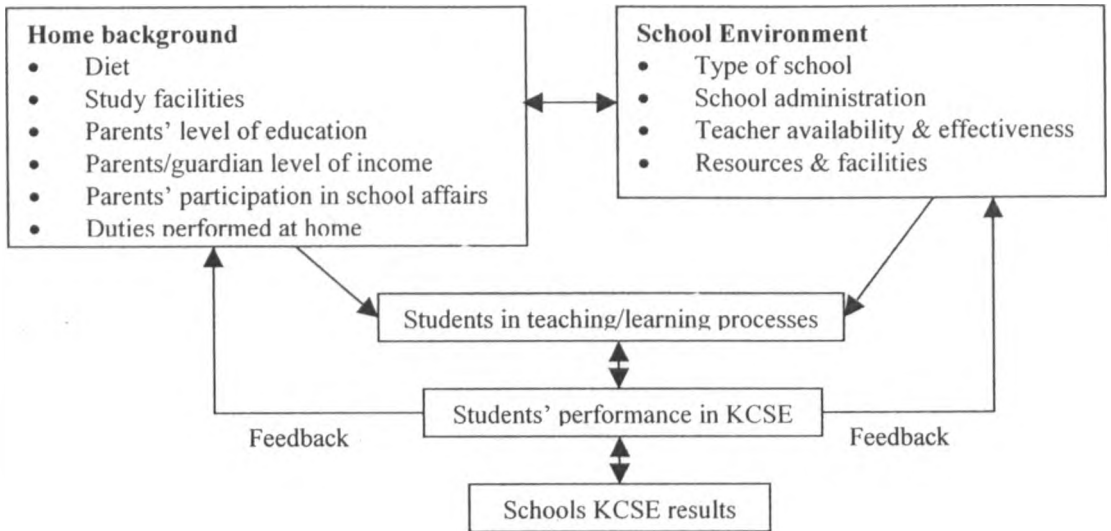
and to a small extent, the influence of cultural values and practices. Three major school related factors have been discussed, these are; the effect of the type of school attended whether mixed or single sex, the quality and availability of teachers and the availability of teaching/learning resources and facilities.

The relationships of the factors discussed and how they relate to a student and to a school are summarized using the following conceptual framework,

Figure 1.

Conceptual Framework

Figure 1: Home-based and school-based factors and how they relate to students' examination performance



In this study, students' performance is conceptualized as an outcome of interrelated factors associated with the home background and the school environment. The two environments play a major role in the academic outcome of a learner. The inter-relationship of the factors is indicated by the two-sided arrow connecting the two sets of factors. As students go through the teaching/learning process, they are under the influence of the two sets of factors. This influence is indicated by the arrows that start from the two sets of factors towards the teaching/learning process.

The effectiveness (or ineffectiveness) of the teaching/learning process determines students' performance in the KCSE examination. Students performance as well as the general school results in the examination also influence the teaching/learning process, hence the two sided arrows between these three boxes.

The performances of students in a school constitute the schools' KCSE results. The schools' KCSE results are relayed back to the home and school environments. This may encourage improvements at home and at school. The arrows therefore show that the processes are closely interlinked.

CHAPTER THREE

RESEARCH METHODOLOGY

Introduction

This chapter looks at the research design, the target population, the sample and sampling procedures, research instruments and data collection and analysis techniques.

Research Design

This study was conducted using the ex-post facto design. According to Gall and Borg (1989) ex-post facto or causal-comparative design is a type of research that seeks to discover possible causes and effects of behaviour pattern or personal characteristics by comparing individuals in whom it is present with individuals in whom it is absent. The causes are studied after they have exerted their effect on another variable and the relationships cannot be manipulated by the researcher. The design was chosen because it would be used to investigate conditions or factors that the researcher had no control over and could not manipulate. These were the factors influencing performance in KCSE in Gatanga Division, Thika District.

Target Population

The study targeted all the public secondary schools in Gatanga Division of Thika District. The division had a total of twenty two (22) secondary schools that had presented candidates for the KCSE examination in five consecutive years, (1999-2003). It had a total of thirty five (35) form four classes and one hundred and fifty (150) teachers taking those classes. The respondents were drawn from the twenty (22) headteachers and the 150 form four teachers.

Headteachers were suitable as respondents since they were the coordinators and facilitators of the learning activities in the schools. Form four class teachers and subject teachers were suitable because they were constantly in touch with the students in their classes. They were therefore the best placed to give reliable information about the factors that influenced students' performance in the KCSE examinations.

Sample and Sampling Procedure

According to Cooper (1998), how large a sample should be is a function of the variation in the population parameters under study and the estimating precision needed by the researcher. Based on these guidelines, the researcher sought information from a total of ten (10) out of twenty two (22) schools. This represented 45.5% of the accessible population. The sample was considered large enough to serve an adequate representation.

To select this sample, proportionate stratified sampling procedure was applied. This is a procedure where each stratum is properly represented so that the sample drawn from it is proportionate to the stratum share of the total population. Since Gatanga Division is divided into three zones and has three categories of schools, the researcher applied the sampling procedure stated above to ensure proportionate zonal and gender representation.

Table 4 below shows the distribution of the different categories of schools in Gatanga Division per zone.

Table 4: Categories of schools in Gatanga Division per Zone

Zone	Category			Total
	Girls only	Boys only	Mixed	
Kihumbuini	-	-	5	5
Gatanga	2	1	6	9
Kariara	1	1	6	8
Total	3	2	17	22

Source: DEO's Office, Thika

The sample of schools included the three girls' schools in the division, one of the two boys' schools, and two mixed schools randomly selected from each zone. This gave a total of ten schools. The random sampling involved assigning

each school a number, writing each number on a piece of paper and placing them in a container from where the required number was picked at random.

There were a total of eighty five (85) sampled respondents. Ten (10) of them were the headteachers of the sampled schools, ten (10) were form four class teachers and the remaining sixty five (65) were form four subject teachers.

The sample constituted 49% of the target population. This sample was proportionally selected to ensure that each school was appropriately represented.

Research Instruments

There were two questionnaires for this study, one for headteachers and the other for form four teachers. Each questionnaire comprised two sections, A and B. The headteachers' questionnaire had eight items in section A which was to be used to solicit demographic information such as gender, age academic and professional qualifications. Section B had twelve items intended for use in soliciting information such as availability of teachers, facilities and teaching resources and participation of parents in schools' activities. Three items were based on Likert Scale Rating System; two were open ended while the rest were closed ended. The teachers' questionnaire was similar in structure to that of the headteachers. However, it had a total of sixteen questions, five of them in section A and eleven in B.

Pre-testing of the Instruments

The validity and reliability of the instrument was determined through piloting of the questionnaires in two schools in the neighbouring Kiamwangi Division. The assumption was that schools in Gatanga and Kiamwangi divisions had similar experiences and so the outcome of their responses would be fairly similar. Since the schools used for piloting were from a different division, the respondents would not be involved during the final administration of the questionnaires.

Piloting helped establish if the instruments were able to measure what they were intended to measure and whether the respondents would find the items easy to respond to. It also helped the researcher to establish whether the instruments were comprehensive enough to elicit the intended information exhaustively and whether the language used was appropriate for the respondents. After piloting, the items were revised appropriately and some were left out all together.

An instrument is reliable when it can measure a variable accurately and consistently if used under similar conditions. To establish the reliability of the instruments, the split-half method was applied. The questions were organized into two sets, an odd number set and an even numbers set. The two sets were correlated using Pearson Product Moment correlation coefficient to give the

estimate reliability. In order to get a more accurate value, Spearman-Brown prophecy formula was used, that is,

$$r_{xx_1} = \frac{2ro_e}{1+ro_e}$$

Where: r_{xx_1} = reliability of original instrument

ro_e = reliability coefficient obtained by correlating the scores of the odd number items with the scores of the even number items.

The items were 0.97 (97%) reliable.

Data Collection Procedure

The researcher sought permission from the Office of the President to conduct the research. The researcher then visited the District Education Office Thika to inform that office of the intended study, and to meet the Zonal Inspectors through whom the information was to be conveyed to the headteachers. The researcher then personally visited each school and began by establishing a rapport with the headteachers who were then issued with the questionnaires. Through the headteachers, questionnaires were passed over to the form four teachers. The respondents filled the questionnaires and returned them to the researcher, some on the same day and others the following day. Some information was gathered through informal discussions with the headteachers.

Data Analysis Techniques

The process began with examining the questionnaires to establish if there were wrongly answered items or some that were unanswered. Data was then organized into different categories. Descriptive statistics which involved calculating frequencies and percentages were used to analyse the research questions. Chi square test (χ^2) was further used in question 1 to test the significance of selected school facilities and resources on KCSE performance. To enable the application of the χ^2 , the Likert type three-point scale was assigned numerical values which were cross-tabulated with performance variables for the χ^2 value to be calculated. Data was manually analysed with occasional use of the excel computer package to work out percentages.

CHAPTER FOUR

DATA ANALYSIS AND INTERPRETATION

Introduction

This chapter dealt with data analysis and interpretations of the findings of the study. The first part of the chapter deals with the demographic information of the respondents. The second part presents the findings on the factors influencing students' performance in KCSE examination in Gatanga Division. The findings are organized according to the questions that guided this research.

Questionnaire Return Rate

Two sets of questionnaires were used to collect data for this study, the headteachers' and teachers' questionnaires. The researcher distributed a total of seventy five (75) questionnaires to form four teachers and ten (10) to school headteachers. The questionnaires received back dully filled were seventy three (73) from the teachers and eight (8) from headteachers. This represents 97.3% and 80% return rate respectively. On the average therefore, 95.3 % was the total return rate. This was a high rate and was considered adequate for the study.

Demographic Data Analysis

It was necessary to gather data on the teachers' background because, according to UNESCO (1999: 39), 'the characteristics of the teaching force in terms of age, gender, qualification and experience directly and indirectly influences the teaching and learning process and consequently learners' performance in examinations.'

The demographic information of the respondents is summarized in tables 5-11.

Table 5: Distribution of Respondents by Gender

	Headteachers		Teachers		Total	
	N	%	N	%	N	%
Female	3	37.5	38	52.1	41	50.6
Male	5	62.5	35	47.9	40	49.4
Total	8	100.0	73	100.0	81	100.0

N = Number of headteachers/ number of teachers

Table 5 shows that the number of participants for this study was fairly gender balanced. Out of 81 respondents, 50.6 % were female and 49.4% were male. However, while male headteachers constituted 62.5%, female headteachers constituted 37.5%. This was a true reflection of the gender distribution of the headteachers in Thika District where out of 96 headteachers, 63 were male while 33 were female. (TSC staffing records 2004). The respondents were

drawn from a sample of schools selected using stratified random sampling per zone and by gender. Gender was considered important due to the fact that learners view the teachers as role models. Absence of a given gender among teachers may have a negative influence on the performance of students of the same gender.

Table 6: Distribution of Headteachers by Age

Age category in years	Male		Female		Total	
	N	%	N	%	N	%
25-34	1	20.0	-	-	1	12.5
35-44	2	40.0	2	66.7	4	50.0
45-54	2	40.0	1	33.3	3	37.5
Total	5	100.0	3	100.0	8	100.0

N = Number of headteachers

Table 6 shows that majority (87.5%) of the headteachers were aged between 35-54 years. This could be attributed to the fact that teachers below 25 years are usually fresh from college and therefore would rarely be appointed to head schools. The headteachers' age was a positive attribute towards performance in KCSE examinations. Generally, older teachers who have served for long in the profession are more likely to produce better examination results. UNESCO (2000) notes that the age of the headteacher is important as it provides the general measure of the amount of experience that one has in education

assuming that he/she has not spent some time in another profession. In addition, teachers' experience is an indicator of their capacity to interpret and implement the curriculum.

Table 7: Distribution of teacher respondents by age

Age category in years	Male		Female		Total	
	N	%	N	%	N	%
Below 25	2	5.7	1	2.6	3	4.1
25-34	11	31.4	21	55.3	32	43.8
35-44	18	51.4	14	36.8	32	43.8
45-54	4	11.5	2	5.3	6	8.3
Total	35	100.0	38	100.0	73	100.0

N = Number of teachers

Table 7 shows that an overwhelming majority of the teachers (87.6 %) were within 25 – 44 years of age. Three (3) were below 25 years while six (6) were above 45 years of age. The varying ages of teachers meant that they had varying experiences which enhanced their ability to dispense their professional duties. Like the headteachers, the teachers were within their prime age when their ability to perform their duties is at the optimum level. However, contrary to what would be expected, the performance in KCSE in the division was below average as indicated in table 1 on page 7. This implies that the factors

that impacted negatively on performance were not related to teachers' age and experience.

Table 8: Academic qualifications of the respondents

Academic level	Headteachers		Teachers		Total	
	N	%	N	%	N	%
Masters degree	-	-	4	5.5	4	4.9
B.Ed	6	75.0	46	63.0	52	64.2
PGDE	-	-	2	2.7	2	2.5
BA/BSC General	-	-	-	-	-	-
S1/Diploma	2	25.0	21	28.8	23	28.4
Total	8	100.0	73	100.0	81	100.0

N = Number of respondents

Table 8 shows that majority of the respondents (64.2%) were Bachelor of Education degree holders and no headteacher had attained a masters' degree level. The table also shows that no respondent was an untrained teacher, an indication that Gatanga Division has few or no untrained teachers. According to UNESCO (2000) teacher training is a key input in the quality of teaching. The quality of the teachers who participated in this study was ideal for yielding good KCSE examination results.

Table 9: Gender of teachers against the category of school

Category of school	No. of schools	Male		Female		Total	
		N	%	N	%	N	%
Mixed	6	13	37.1	25	65.8	38	52.0
Girls only	3	12	34.3	9	23.7	21	28.8
Boys only	1	10	28.6	4	10.5	14	19.2
Total	10	35	100.0	38	100.0	73	100.0

N = Number of teachers

According to Table 9, there was a random gender distribution of teachers in the schools. For instance, 12 out of 21 teachers in the girls' schools were male while there were more female than male teachers in the mixed schools. Through informal discussions with the headteachers, the researcher established that the headteachers did not seem to mind the gender of the teachers posted to their schools as long as they were qualified to teach. This may suggest that the headteachers did not consider there to be any relationship between students' performance and the gender of the teachers, hence had no reason to accept or reject a teacher on the basis of gender.

To find out the teaching experience of the headteachers and the teachers, both groups were asked to indicate the number of years they had in the teaching profession. This information is indicated in the table below.

Table 10: Respondents' teaching experience

No. of years	Headteachers		Teachers		Total		Cumulative %
	N	%	N	%	N	%	
Less than 1 year	-	-	2	2.7	2	2.5	2.5
1-2 years	-	-	2	2.7	2	2.5	5.0
3-5 years	-	-	9	12.4	9	11.0	16.0
6-10 years	1	12.5	27	37.0	28	34.6	50.6
More than 10 years	7	87.5	33	45.2	40	49.4	100.0
Total	8	100.0	73	100.0	81	100.0	

N = Number of respondents

Table 10 reveals that all the headteachers and an overwhelming majority (82.2%) of the teachers had been in the teaching profession for a minimum of 6 years. Only 16.0% had taught for 5 years and below. Teachers whose teaching experience is 5 years and above would be able to guide students appropriately in preparation for examinations and hence produce good results in the KCSE examinations. The headteachers were asked to indicate the number of years they had worked as school administrators. The responses were as shown in the table below:

Table 11: Headteachers' administrative experience

Number of years	Past experience		Experience in current school	
	N	%	N	%
1-5	-	-	1	12.5
6-10	3	37.5	3	37.5
11-15	2	25.0	1	12.5
16-20	2	25.0	2	25.0
Over 20	1	12.5	1	12.5
Total	8	100.0	8	100.0

N = Number of headteachers

Table 11 above reveals that the headteachers' administrative experience ranged mainly from 6 to 20 years. A headteachers' experience is an indicator of his/her ability to interpret and implement the national educational policies and develop the appropriate administrative systems to enable the school produce good examination results. It is also noteworthy from the table that the headteachers with 6-10 and 16-20 years of experience had been in their current stations since their appointment as headteachers. Similarly, one (1) out of the two (2) with 11-15 years had been in the current stations since appointment to headship. According to UNESCO (2000) the length of stay in one station is an indicator of stability of leadership in that station. However, while stability may be an

advantage regarding examination performance, it could also be a disadvantage if leadership is ineffective.

KCSE performance in the sample schools

To determine the KCSE performance by the sample schools, the schools' average KCSE results for the years 1999 to 2003 was calculated. The average mean scores were then awarded grades based on the KNEC grading system in which grade values are as follows:

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<u>Grade</u>	<u>Points</u>	<u>Grade</u>	<u>Points</u>	<u>Grade</u>	<u>Points</u>
A =	12	B- =	8	D+ =	4
A- =	11	C+ =	7	D =	3
B+ =	10	C =	6	D- =	2
B =	9	C- =	5	E =	1

Table 12 below shows the average KCSE performance by the sample schools for the period 1999 to 2003.

Table 12: KCSE Performance by the sample schools (1999 - 2003)

School	School category	Performance					Mean Scores		Mean grade
		Year					Average		
		1999	2000	2001	2002	2003			
School 1	Girls	6.03	6.44	6.41	7.29	7.27	6.68	C	
School 2	Boys	4.65	5.83	5.91	5.59	6.02	5.60	C-	
School 3	Girls	4.59	4.36	3.82	4.15	4.14	4.21	D+	
School 4	Mixed	3.62	3.82	4.09	4.27	4.99	4.16	D	
School 5	Mixed	3.19	3.50	3.42	3.84	3.95	3.58	D	
School 6	Mixed	4.34	3.91	4.03	3.81	3.68	3.95	D	
School 7	Mixed	3.86	3.82	4.06	4.01	4.95	3.90	D	
School 8	Girls	3.59	3.82	3.79	3.83	4.48	3.90	D	
School 9	Mixed	2.98	3.02	3.21	2.68	2.97	2.97	D-	
School 10	Mixed	2.96	3.15	2.50	3.01	3.18	2.95	D-	

It is evident from the table above that the ten sampled schools performed poorly in the KCSE examinations during the period 1999 to 2003. Other than schools 1 and 2 which had attained a mean grade of C- and above, the rest had D and below. Noteworthy therefore is the fact that the schools had a performance below grade C+ which is used as the cut off point for admission to tertiary institutions of learning. This implies that very few students from the sampled schools proceed to the tertiary level of education.

Generally, single sex schools, performed better than the mixed schools. Table 12 shows that the single sex schools 1, 2 and 3 attained an overall mean grade D+ and better during the five year period while mixed schools scored grade D and below. The poor results recorded by the mixed schools could be attributed to a myriad of factors. Njuguna (1998), whose study focused on headteachers' leadership styles concluded that the difficulties experienced in the administration of mixed schools to a large extent contribute to poor performance in KCSE examinations.

Data Analysis Based on Research Questions

The main purpose of this study was to establish the factors that influence students' performance in KCSE examinations in Gatanga Division, Thika District. To realize the objective, the researcher formulated five research questions whose answers were to be sought through administering questionnaires to teachers who interacted directly with form four students as class teachers and subject teachers, and the headteachers as the overseers of the curriculum implementation process in the schools. The findings are therefore summarized based on the research questions.

In order to establish the adequacy of the teaching/learning facilities and resources in the schools, both the headteachers and teachers were asked to indicate whether the facilities in their schools were adequate, satisfactory or inadequate. The responses by the teachers are tabulated below.

Tale 13: Adequacy of selected school facilities as given by teachers

Facility	A		S		I		Total	
	N	(%)	N	(%)	N	(%)	N	(%)
Staffroom	35	46.6	23	31.5	116	21.9	73	100.0
Classrooms	35	48.0	35	48.0	3	4.0	73	100.0
Library	5	6.9	15	20.5	53	72.6	73	100.0
Science Labs	17	23.3	18	24.7	38	52.0	73	100.0
Teachers' houses	8	11.0	22	30.1	43	58.9	73	100.0
Games fields	9	12.3	18	24.7	46	63.0	73	100.0
Dining hall	21	28.8	20	27.4	32	43.8	73	100.0
Electricity	38	52.1	20	27.4	15	20.5	73	100.0
Water	28	38.4	30	41.1	15	20.5	73	100.0
Food	37	50.7	27	37.0	9	12.3	73	100.0

N = Number of respondents

A = Adequate

S = Satisfactory

I = Inadequate

From the findings of the study as indicated in Table 13, a fair percentage of the teachers considered staffroom classrooms, electricity, food and water as fairly adequate. (All the day schools provide lunch to students.) However, many (72.6%), reported inadequate libraries, science laboratories (52.0%), games fields (63.0%), teachers' houses (58.9%) and school dining halls (43.8%). Headteachers' responses were similar to those of the teachers in that out of the eight (8), 87.5% reported adequate classrooms and 75% adequate food. All the

headteachers reported that their schools had inadequate staff houses while a high percentage (87.5%) reported inadequate libraries. When a school lacks sufficient essential facilities, it negatively affects the effectiveness of the teaching/ learning process. For instance, inadequate science laboratories mean that students have little or no opportunity to effectively learn science subjects, (chemistry, physics and biology). Lack of school libraries leave students without any other reference materials other than text books. This affirms the observation by Heyneman (1990) that a school library is significant in influencing learners' academic performance because many text books have inadequate content and therefore require subsidizing by use of library references.

The study also revealed that many schools in Gatanga Division lacked teachers' houses. This meant that teachers resided away from the schools and therefore were not able to perform their after school duties effectively. Duties such as preparing the teaching notes, marking learners' work, remedial teaching and attending school related meetings are more effectively performed if teachers reside in the school. A survey carried out in selected African countries indicated that a high percentage of teachers residing outside the schools reported that their work was affected by the time spent travelling to and from school (UNESCO 2000). This affects the quality of teaching and consequently students perform poorly in examinations. This may have been

one of the factors contributing to poor performance in KCSE examinations in the division.

The researcher also sought to establish the adequacy of selected teaching/learning resources in the schools by asking the respondents to indicate whether they considered the resources as adequate, satisfactory or inadequate. The teachers' responses are tabulated below.

Table 14: Adequacy of selected teaching/learning resources as given by teachers

Resource	A		S		I		Total	
	N	(%)	N	(%)	N	%	N	(%)
Teachers' ref.	30	41.1	23	31.5	20	27.4	73	100.0
books								
Text books	15	20.5	18	24.0	40	54.8	73	100.0
Maps and charts	10	13.7	19	26.0	44	60.3	73	100.0
Lab. chemicals	21	28.8	25	34.2	27	37.0	73	100.0
Library books	7	9.6	17	23.3	49	67.1	73	100.0
Chalk & chalk boards	44	60.3	24	32.9	5	6.8	73	100.0
Other stationery	33	45.2	29	39.7	11	15.1	73	100.0

N = Number of teachers

A = Adequate

S = Satisfactory

I = Inadequate

Table 14 reveals that many schools had fairly adequate teachers' reference books (41.1%), chalk and chalk boards (60.3%) and other stationery (45.2%). However, as shown earlier in Table 13 many teachers indicated that schools lacked libraries implying that they also lacked library books, as revealed in Table 14. Teachers also reported inadequate text books (54.8%), maps and charts (60.3%) and laboratory chemicals (37.0%). Responses from the headteachers tallied with those given by teachers. Out of the 8 headteachers, 62.5% reported that reference books, text books, and laboratory chemicals were fairly adequate in their schools. A larger percentage, (87.5%) reported adequate chalk while 62.5% indicated that library books were inadequate

Provision of physical facilities and teaching/ learning resources in schools require strong financial support. According to the Economic Survey (2004) most parents in Gatanga Division depend on subsistence agriculture implying that the division experiences widespread poverty. This is despite the fact that the cost sharing policy places the burden of equipping schools on parents. The information on Tables 13 and 14 reflect inability by parents to provide most of the facilities and resources adequately. Table 13 reveals that an average of 23.3 respondents considered the listed facilities adequately available in their schools as opposed to an average of 37 who indicated that their schools were inadequately equipped. Similarly, Table 14 has an average of 22.9 reporting that their schools had all the listed items adequately available while an average of 28 respondents considered their schools inadequately equipped.

According to MoEST (2003), the availability of educational materials has a major bearing on educational outcome. MoEST cites unavailability of text books and other related learning materials as the most constraining factor in educational quality. The situation reflected by the two tables may have been a major factor that contributed to poor KCSE results in Gatanga Division.

To verify the significance of the relationship between availability of selected teaching/learning resources and performance in KCSE, the chi square (χ^2) test was applied. The Likert type three-point scale was assigned numerical values as follows: Adequate – 3, satisfactory – 2 and inadequate – 1. Table 12 which shows the average KCSE performance by the sample schools was used to group the schools into two performance levels. The schools whose grades were D and above were put in one group and those at D- in the other. For each teaching resource, the two variables were cross tabulated as shown in Tables 15.1 to 15.5 below. The χ^2 value was then worked out and compared to the critical value to establish if the relationships were statistically significant.

Table 15.1: Relationship between performance and adequacy of classrooms

Facility	Performance				
	Observed value				Expected Value
	School grade				
Classrooms	D & above	D- & Below	Total		
A	33	9	42	34.2	7.8
S	31	5	36	29.3	6.7
I	2	1	3	2.4	0.6
Total	66	15	81	$\chi^2 = 2.58$	

df = 2 χ^2 critical = 5.99 at 0.05 significant level

Table 15.2: Relationship between performance and adequacy of library books

Facility	Performance				
	Observed value				Expected Value
	School grade				
Library books	D & above	D- & Below	Total		
A	5	2	7	5.1	1.9
S	15	5	20	14.6	5.4
I	39	15	54	39.3	14.7
Total	59	22	81	$\chi^2 = 4.29$	

df = 2 χ^2 critical = 5.99 at 0.05 significant level

Table 15.3 Relationship between performance and adequacy of text books

Facility	Performance					
	Observed value				Expected Value	
School grade						
Text books	D & above	D- & Below	Total			
A	19	3	22	17.4	4.6	
S	20	4	24	19.0	5.0	
I	25	10	35	27.7	7.3	
Total	64	17	81	$\chi^2 = 2.2$		

df = 2 χ^2 critical = 5.99 at 0.05 significant level

Tables 15.1 to 15.3 show that the calculated values of χ^2 for classrooms, library books and text books were lower than the critical value of χ^2 (5.99) at the level of significance of 0.05 and 2df. This meant that the relationship between classrooms, library books and text books and KCSE performance was not significant. For significance to be registered, other factors such as those related to teachers, school environment and students' characteristics have to be considered.

Table 15.4: Relationship between performance and adequacy of laboratory chemicals

Facility	Performance			Expected Value	
	Observed value				
	School grade				
Laboratory Chemicals	D & above	D- & Below	Total		
A	22	2	24	19.6	1.9
S	20	10	30	24.4	5.4
I	24	3	27	22.0	14.7
Total	66	15	81	$\chi^2 = 6.86$	

df = 2 χ^2 critical = 5.99 at 0.05 significant level

Table 15.5: Relationship between performance and adequacy of teachers' reference books

Facility	Performance			Expected Value	
	Observed value				
	School grade				
Reference books	D & above	D- & Below	Total		
A	30	2	32	26.1	5.9
S	22	6	28	22.8	5.2
I	14	7	21	17.1	3.9
Total	66	15	81	$\chi^2 = 6.32$	

df = 2 χ^2 critical = 5.99 at 0.05 significant level

The calculated values of χ^2 for adequacy of laboratory chemicals and teachers' reference books as shown in Tables 15.4 and 15.5 were greater than the critical value, denoting their significance in influencing KCSE performance. This could mean that KCSE performance in the schools which had inadequate laboratory chemicals and teachers' reference books was negatively affected while the schools that had sufficiency of these resources performed relatively better.

Inadequacy and poor state of certain school facilities and teaching resources in Gatanga Division could be as a result of parents' inability to afford them. The division had an absolute poverty level of 48.4%. This was because it had a population density of 446 persons per square kilometre leading to subdivision of land into small uneconomical units, thus creating poverty in many households whose main source of livelihood was agriculture (Republic of Kenya, 2004). Unfortunately, the burden of providing teaching/learning resources and facilities in public secondary schools in Kenya has been to a large extent the responsibility of the parents since the introduction of the 8-4-4 system of education in Kenya, (MoEST 2003). Therefore, the inability of the parents in Gatanga Division to provide adequate facilities and teaching resources appeared to be a major factor impacting negatively on KCSE performance in the division.

To establish the staffing situation of teachers in the schools, the indicators used were, teacher-student ratio, teachers' workload and subjects taught in relation to those that teachers were trained for. Headteachers were asked to indicate the average teacher/student ratio in their schools. The results were as tabulated below, with the interval based on the ratio options given in the questionnaire.

Table 16: Teacher - student ratio

Ratio (x)	N	%	Nx
1:20	5	62.5	100
1:30	-		-
1:40	2	25.0	80
1:50	1	12.5	50
Total	8	100.0	230

N =Headteacher respondents

Table 16 indicates that the average teacher-student ratio in the schools that participated in the study was 1:29, obtained by dividing 230 by 8. Other than one headteacher who reported a teacher-student ratio of 1:50, the rest reported a ratio ranging from 1:20 to 1:40, which was within the ministry's recommendation of 1:40.

Class size is a factor that influences the capability of a teacher to deliver quality teaching. This is echoed by MoEST (2003) which states that low

teacher-student ratios are associated with better performance in examinations. However, although the teacher-student ratio in Gatanga Division was low, KCSE performance in the schools was poor. This implies that other factors contributed to the poor performance.

To gather more information on availability of the teaching personnel, teacher respondents were asked to indicate their teaching workload and their response pattern was as shown in Table 17 below.

Table 17: Number of lessons per teacher per week

No. of lessons	N	%	MPT (x)	Nx
Less than 20	22	30.1	17	374
20-24	36	49.3	22	792
25-29	14	19.2	27	378
30 and above	1	1.4	32	32
Total	73	100.0		1576

N = Teacher respondents

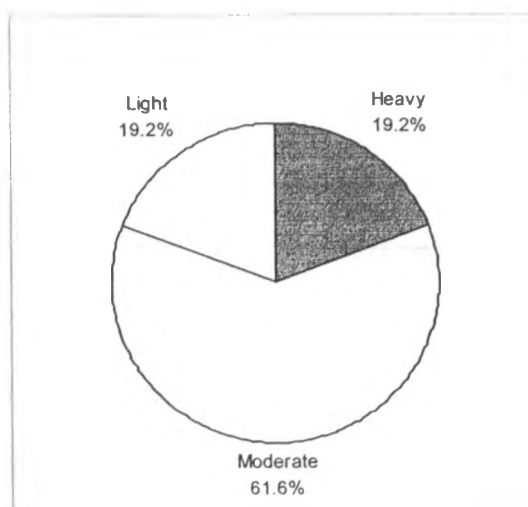
MPT = mid -point

Table 17 reveals that generally, teachers' workload was manageable (on average, 22 lessons per week obtained by dividing 1576 by 73). To compliment the teachers' responses, headteachers were asked to indicate the workload of the teacher. All of them reported that the average workload for teachers in their schools was 20-24 lessons per week. When asked the extent of teacher

shortages in their schools, only one headteacher indicated a need for two more teachers. This means that the poor KCSE results recorded by most schools in Gatanga Division were neither a result of heavy teaching workload nor inadequate teaching staff in the schools. With few lessons per week, a teacher has sufficient time to adequately prepare for the next lessons, monitor students' progress and undertake other activities necessary in preparing students for examinations. Therefore, it is likely that there were other teacher-related factors such as absenteeism and negative attitude towards their work, as cited by Abagi and Odipo (1997). Such a situation could have a negative effect on the performance.

The researcher probed further concerning the perceptions that teachers held about their workload. The findings are as shown in the pie chart below.

Fig 2: Pie chart showing teachers' perceptions on their workload



Majority (61.6%) of the respondents perceived their teaching load as moderate. A further 19.2% considered it heavy. This means that most teachers did not feel overworked and should have therefore been able to perform their teaching duties well and produce good examination results. However, this was not the case as most of the schools in Gatanga Division registered poor KCSE results.

To probe further on the staffing situation, teachers were asked to indicate whether they were assigned to teach subjects they were not trained for as an indicator of understaffing. Majority (80.8%) indicated that they taught only the subjects they were trained for. These findings therefore portray an appropriate Curriculum-Based Establishment (CBE) as recommended by MoEST (2003). It is apparent that poor KCSE performance in Gatanga Division would not be attributed to unavailability of the teaching personnel.

To establish whether headteachers and teachers were effectively carrying out school-based curriculum monitoring, the indicators used were; teacher preparation of some necessary records, frequency of checking of these records by the headteachers and how frequently staff meetings were held in the schools. Other indicators were; the rate at which teachers gave assignments to students and whether students were able to complete the assignments. Also investigated was how often teachers attended in-service courses to be equipped with the skills necessary for effective school-based curriculum monitoring

The teachers were asked to indicate whether they prepared some selected school records through which a teacher monitors the progress in the teaching/ learning process. Table 18 below shows the response pattern on preparation of the records.

Table 18: Documents/records prepared by teachers

Document prepared	N	%
Schemes of work	62	84.9
Lesson plans	27	37.0
Records of work	63	86.3
Student progress record	66	90.4

N = 73 Teacher respondents

Table 18 shows that most teachers prepared schemes of work (84.9%), records of work (86.3%) and students' progress records (90.4%). However, most teachers rarely prepared lesson plans other than a minority (37.0%) who indicated to have been preparing them. All the headteachers reported that teachers in their schools prepared schemes of work, records of work and students' progress records. Three (3) headteachers indicated that teachers prepared lesson plans.

The records listed in Table 18 are important because they are the documents that headteachers and other external supervisors and inspectors use to monitor

the teaching and learning progress in the schools. Supervisors for instance use the records to monitor what areas of the syllabus a teacher has covered or intends to cover and the progress of students in their academic work. Based on what the supervisor finds, the necessary support and guidance is given to ensure teachers are doing their best in preparing students for examinations.

To obtain more information regarding the said records, teachers were also asked to state how frequently the headteachers made follow-ups to ensure the records were prepared. In addition, headteachers were also asked to indicate how frequently they checked the records. The response pattern for both groups of respondents was as shown in the table below.

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Table 19: Frequency of records' follow-up by headteachers

Frequency of follow-up	Headteachers		Teachers		Total	
	N	%	N	%	N	%
Once a month	4	50.0	6	8.2	10	12.4
Once a term	1	12.5	36	49.3	37	45.8
Twice a term	3	37.5	8	11.0	11	13.7
Fortnightly	-	-	2	2.7	2	2.6
Irregularly	-	-	21	28.8	21	25.9
Total	8	100.0	73	100.0	81	100.0

N = Number of respondents

From Table 19, 50% of the headteachers reported to have been checking the records once a month while 37.5% checked them twice a term. However, a fairly large number of teachers (49.3%) reported that the records were checked once a term. Some (28.1%) reported that the records were checked at irregular intervals. A minority (2.6%) said that the records were checked every two weeks. This could mean that the follow-up by the headteachers was not satisfactorily done and could have a negative impact on performance in KCSE examination.

From the responses in Table 19, it is evident that generally the rate of checking of the records is rather low yet one of the administrative duties of a headteacher is to ensure that teachers are systematic in covering the various topics in the syllabus. Furthermore, students' performance should be closely monitored to ensure they are given the necessary remedial work if needed. This process, if strictly followed, contributes to good examination results. Checking of records kept by teachers is described by UNESCO (2000) as the support for teachers through which observations by a supervisor are made and it is a determinant for success in examination performance. UNESCO further points out that monitoring provides an essential feedback on the teaching/learning process to ensure acceptable levels of accountability in the teaching force. The observations presented above indicate that the low rate of curriculum

monitoring could be one of the causes of poor performance in KCSE examination in Gatanga Division.

To further seek information on school-based curriculum monitoring, headteachers were asked to indicate how frequently they held staff meetings in their schools. Half of them (50%) indicated that they held staff meetings twice a term, 12.5% once a month and 37.5% once a term. It is noteworthy that staff meetings enable headteachers to monitor the performance of the teaching staff and are necessary in helping improve examination results. This is because among other things, curriculum issues such as syllabus coverage, examination performance, availability of resources and other issues geared towards improving examination results are discussed. From these discussions, the headteacher is able to monitor the progress of both the teachers and the students. In addition, during such meetings, teachers cite the problems they may be experiencing and remedies are discussed. Therefore failure to hold regular meetings, at least three times per term, as observed above may be one of the impediments to good KCSE performance in the area of study.

Moreover, the researcher sought to establish how frequently teachers attended in-service courses. To obtain this information, headteachers were asked to indicate how frequently teachers attended these courses. Through in-servicing, teachers' capacity to carry out school-based curriculum monitoring is enhanced. The headteachers' response pattern was as follows:

Table 20: Frequency of teachers' attendance of in-service training

Frequency of attendance	N	%
Very often	-	-
Often	2	25.0
Rarely	6	75.0
Total	8	100.0

N = Number of headteachers

According to Table 20 above, a large percentage of the headteachers (75%) reported that teachers rarely attended in-service courses. In-servicing increases the teachers' capacity to interpret the curriculum and become more effective in school-based curriculum monitoring. Pearson (1988) argues that in-service is an important aspect in alleviating teachers' ineffectiveness, improving teaching skills and making teachers aware of any changes in the curriculum. He further states that in-servicing also enables teachers to make use of the available resources more effectively. In-servicing therefore helps improve performance in examinations. On the contrary, the results in Table 21 above show that most schools in Gatanga Division rarely sent their teachers for in-service courses. This may have been one of the factors impacting negatively on performance in the KCSE examinations.

Teachers were then asked whether they considered attending in-service courses as essential in boosting students' performance. Out of 73 teachers, an overwhelming majority (82.7%) answered on the affirmative. As stated earlier,

when teachers attend in-service courses, they are motivated to perform their duties with more commitment.

To probe even further on school-based curriculum monitoring, teachers were asked to indicate how frequently they gave assignments/ home work to students. The findings are as shown in Table 21 below

Table 21: Frequency of teachers giving assignments

Frequency of giving assignments	N	%
Daily	36	49.3
Once a week	20	27.4
Twice a fortnight	4	5.5
Once a month	2	2.7
Others	11	15.1
Total	73	100.0

N = Number of teachers

From the table above, 49.3% of teachers, mainly those who taught mathematics and languages indicated that they gave assignments on daily basis. Those who indicated giving assignments once a week constituted 27.4%. Others (15.1%) gave assignments after every sub-topic or major topic. Since some topics may take more than three weeks to complete, some teachers indicated that the schedules for giving assignments were irregular. Even where the assignments

were given regularly, teachers lamented lack of time to mark them. They also indicated that they lacked sufficient time to give feedback and revise the assignments with the students. This was contrary to what would be expected since the teacher-student ratio was also low, (table 16 page 73) and the teachers' workload was also low as indicated in Table 17 page 74.

As UNESCO (2000) notes, the quality of teaching is influenced by the extent to which teachers are engaged in a process of evaluation. One form of evaluation is through assignments, which enables a teacher to monitor students' progress and plan for remedial work promptly. This places weaker students in a position to perform better in examinations. It is apparent that teachers in Gatanga Division were not able to effectively make use of assignments as a means of school-based curriculum monitoring process. This may have had a negative effect on performance in the KCSE examination.

Teachers were further asked to indicate whether students completed their assignments as expected. Out of the 73 teachers, 37% answered in the affirmative and 63% in the negative. Possible reasons that students gave for failing to complete assignments were probed into. The responses were as shown in Table 22 below

Table 22: Reasons for Students' failure to complete assignments

Reasons	N	%
Lack of adequate time	12	16.4
Too much homework	8	11.0
Lack of text books	40	54.8
Work too difficult	5	6.8
Others (laziness)	8	11.0
Total	73	100.0

N = Number of teachers

From the table above, 54.8% of the respondents cited lack of textbooks, yet textbooks are described by Wamai (1991) as the most important consistent factor in upgrading academic achievement. Lack of textbooks may have been a major factor in the poor quality of KCSE examination results in the division. Other factors listed in Table 23 above include lack of time and too much work, which were cited by a minority of the teachers. In addition, the table reveals that some students were lazy. In an open-ended question, laziness emerged as a major hindrance to students' academic achievements. Lazy students were said to give various excuses for not completing assignments.

Probed further on why students did not complete assignments, out of 73 teachers, 52.4% reported that day scholars were involved in domestic chores after school. Involvement in domestic chores took much of the time that

students would otherwise spend completing assignments. Other information derived from the open-ended question regarding assignments indicated that students' attitude towards school work was a major challenge since they did not regard homework as consequential to their performance. It is therefore apparent that for various reasons, students from secondary schools in Gatanga Division did not take assignments seriously, a factor that may have contributed to poor performance in KCSE examinations in the division. Failure to take assignments seriously means that students lost the opportunity to practice answering questions and internalise concepts that may later be tested in the KCSE examination

To find out the adequacy of the time allowed for syllabus coverage, teachers were asked to indicate when they normally completed the syllabuses in their subject areas before the examinations. The responses were as indicated in Table 23.

Table 23: Time when teachers completed the syllabus

Completion of syllabus	N	%	Cumulative %
3 months before exams	3	3.7	3.7
A month before exams	21	28.8	32.5
Just in time for exams	31	42.5	75.0
Never completes	18	25.0	100
Total	73	100.0	

N = Number of teachers

The table reveals that 25% of the teachers had their students sit for the KCSE examination before completing the syllabus. Moreover, 75.0% of them were able to complete a month before or just in time for the examination. These findings suggest that teachers were left with little or no time to do revision work, which is essential for students to refresh their memories especially on topics that were covered earlier in the programme. Among the teachers who hardly completed the syllabus were those teaching mathematics, chemistry, biology, geography and the languages. They cited the wide scope of the syllabi as the main reason for this state of affairs.

To delve deeper into adequacy of time, teachers were asked whether they considered the time allocated for syllabus coverage adequate or inadequate. Out of the 73 teachers, 21.9% indicated adequate while 78.1% said it was inadequate. Those who said it was inadequate were asked to give reasons and

65.3% cited that most topics in the syllabus were over detailed. Others (32.4%) claimed that most of the students were too slow in grasping facts, others are lazy while others are disinterested in learning. For these reasons, the teacher was forced to progress slowly through the topics.

These findings confirm the earlier results in Table 23 where the majority of the teachers indicated they did not complete the syllabus in time. Therefore, it is apparent that the time allocated to cover the syllabus was considered by the majority of the respondents as inadequate and may have been one of the factors that contributed to poor KCSE performance in the area under study.

To establish the extent to which parents participated in school activities, teachers were asked to rate whether good, satisfactory or poor, parents' participation in selected school activities. The responses are summarized in the table below.

Table 24: Parents participation in selected school activities

Activity	Rating							
	Good		Fair		Poor		Total	
	N	%	N	%	N	%	N	%
Paying fees in time	2	3.7	36	49.3	35	48.0	73	100.0
Attending PTA meetings	20	27.4	40	54.8	13	17.8	73	100.0
Discussing students' academic work with teachers	18	24.7	19	26.0	36	49.3	73	100.0
Contributing to school development	17	23.3	36	49.3	20	27.4	73	100.0

N = 73 teacher respondents

Table 24 reveals that many parents did not pay school fees in time as indicated by a total of seventy one (71) teachers who rated the payment as fair or poor. The headteachers gave similar responses with 75% of them rating fee payment as fair while the remaining 25% rated it as poor. Failure by parents to pay fees in time led to frequent student absenteeism from school as they were sent away to go and ask their parents to bring the fees.

Probed further through an open ended question, a large number (69.2%) of the respondents indicated that parents were not giving sufficient moral and material support to their children, especially paying school fees and guiding students to avoid indulging in habits that may jeopardize their school work. Consequently, many students would be sent away from school causing them to

miss out on classes and unable to catch up. Thus, absenteeism was one of the factors that impacted negatively on performance in KCSE examination in the division.

Concerning parents' attendance to PTA meetings, 27.4% of the teachers rated it as good, while the majority rated it as fair or poor. However, headteachers were of the opinion that parents' attendance to PTA meetings was good (62.5%). None rated it as poor. This means that most parents attended school meetings, which was a positive attribute. Attending PTA meetings is important because these are the fora where parents deliberate on matters that affect students' performance with an aim of improving examination performance. However, as indicated in Table 1 page 7, Schools performed poorly in KCSE, an indication that other factors override the fact that parents play their part in attending meetings.

In regard to discussing students' academic work, parents' participation was rated as good by a minimal 24.7% of the teachers while the remaining 75.3% indicated otherwise with a higher percentage (49.5%) rating it as poor. Parents are expected to show interest and concern on how their children are performing academically as this is one of the ways they can give the children encouragement. It is also an indicator of how seriously parents take their children's school work. Discussing students' performance with the teachers enables the parents to identify the students' weaknesses and provide the

necessary help. This would have a positive impact on performance in examinations. This is affirmed by Kapila (1976) cited by Nderitu (1999), who established a positive relationship between parents' participation in the children's school work and academic performance.

Contribution towards school development by parents involve paying building fund and other monies needed for equipping the school and giving other forms of support to provide an ideal environment for learning. This participation was rated as good by only 23.3% of the teachers while 49.4% rated it as fair. This response shows that a fair number of parents was concerned about school development. School development provides suitable learning environment which in turn leads to good performance in examinations.

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The rating of parents' participation in all the listed school activities was generally below average as rated either fair or poor by most of the teachers and the headteachers. Lack of commitment by parents to supporting the students and the school would have a negative impact on KCSE performance. For Gatanga Division, parents appeared to have had a role to play in the poor performance in KCSE examination.

Other than the factors stated directly in the questionnaire items, respondents were asked to indicate any other factors they considered as key in examination

performance. They cited the following as having a negative influence on examination results:-

Table 25: Other factors influencing KCSE performance

	Factor	N	%
i)	Low morale among teachers	52	63.7
ii)	Indiscipline among students (drug abuse)	36	44.6
iii)	School tradition	33	40.9
iv)	Poor choice of questions during exams	26	31.8
v)	Students poor entry behaviour	22	27.3
vi)	Students perpetual use of vernacular language	21	25.9
vii)	Influence of local environment	18	22.4

N = 81 respondents

Table 25 above summarises some of the factors that respondents cited as affecting performance in the area of study. Over and above the factors discussed earlier in this chapter, teacher morale came out strongly as a factor contributing to poor KCSE results in Gatanga Division. The low morale may have contributed to apathy, an attitude that impacts negatively on the quality of teaching and consequently poor performance.

One characteristic of the students that featured in the responses was indiscipline among students, a factor that disrupts smooth running of a school

consequently affecting the performance. Respondents also cited schools' tradition of performing poorly in examination and students' entry behaviour as factors that impacted negatively on examination performance yet teachers could do little to change them.

Summary

This chapter attempted to statistically establish whether the variables under study influenced KCSE performance in Gatanga Division. Data analysis established that some schools in Gatanga Division lacked essential teaching/learning facilities and resources. It also revealed that schools had adequate teachers and that the teachers prepared the required documents but the headteachers were not making sufficient follow-up. Teachers in the division rarely attended in-service courses. Also established was that teachers gave homework but students were not taking their work seriously.

In addition, the study showed that most teachers considered the time allocated by the Ministry of Education for syllabus coverage as inadequate. It also established that parents' attendance to PTA meetings was fairly good. However they were rated as poor in discussing the students' academic work with the teachers and paying school fees in time. They were also rated poor in contributing to schools development.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This chapter presents the summary of the study, conclusions made from the findings and recommendations for improvement and for further research.

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Summary of the study

The main aim of the study was to establish the factors influencing performance in KCSE examination in Gatanga Division, Thika District. The main drive behind the study was the persistent poor performance in KCSE examination recorded in the division compared to the other divisions in the same district, given that on the average most schools in the district experience similar social, economic and environmental conditions. The researcher reviewed related literature on home-based and school-based factors influencing academic achievements by students. The factors were summarized in a conceptual framework that showed the interrelatedness of the factors in question.

The study used an ex-post facto design. Using proportionate stratified sampling method, a sample of 10 out of 22 schools was selected from the three zones in the division. Information was collected using questionnaires administered to eight (8) headteachers and seventy three (73) form four teachers. Data was analyzed using mainly descriptive statistics particularly frequencies and percentages. The significance of the relationship between selected

teaching/learning facilities and resources and performance in the KCSE examinations was analyzed through chi square test. Responses from headteachers and teachers enabled the objectives of the research to be realized.

Findings of the study

The following are the findings of the study, based on each of the research questions:-

- The study established that schools lacked adequate libraries and library books, science laboratories and laboratory chemicals, teachers' houses, and text books. Inadequacy of these resources was attributed to poverty among the parents. The Economic Survey (2004), reports that most parents in the division depend on subsistence agriculture. However, schools were found to have fairly adequate teachers' reference books, staffrooms, classrooms, chalk and chalkboards.
- Information given by both the headteachers and the form four teachers revealed that schools in Gatanga Division had adequate teaching staff. Based on the teacher/student ratio, whose average was 1:27, number of lessons per week per teacher whose average was 22 and the fact that teachers were not assigned to teach subjects they were not trained for, most schools were found to have no teacher shortages.

- Although both the headteachers and form four teachers were found to be professionally qualified and experienced, the study revealed that there lacked quality and consistent school-based curriculum monitoring procedures in the schools. Despite teachers preparing the necessary records, headteachers were not regular in checking these records and holding staff meetings. Furthermore, while a large number of teachers gave assignments to students, lack of text books as reported by 54.8% of the teachers, among other factors, made it difficult for many students to complete the assignments.
- It was also established that most teachers rarely attended in-service training as reported by 75% of the headteachers. Attending in-service courses would have kept teachers up-dated with new curriculum demands and make them more effective in school-based curriculum monitoring. Lack of in-service training among teachers may have been a hindrance to quality teaching.
- The study revealed that 67.5% of the teachers were not able to complete the syllabus in their subject areas within the available time. Teachers who reported being unable to complete the syllabus were those teaching languages, mathematics, chemistry biology and geography. They reported that the syllabuses were too long. However some (32.4%) blamed the students for being either slow or unwilling to learn, thus

slowing down the teaching process. Those who reported being able to complete the syllabus (32.5%) had little or no time left for revision.

- Parents' attendance to PTA meetings and contributing to school development was found to be fair. However, 97.3% of the teacher rated fee payment by parents as fair or poor. This made students to be sent away from school, causing a high rate of absenteeism. Parents' involvement in discussing students' academic work with the teachers was rated as poor by 49.3% of the teachers.

Conclusions of the study

From the findings of the study, several conclusions were arrived at:

Firstly, poor performance was attributed to inadequate teaching/learning facilities and resources such as science laboratories and laboratory chemicals, libraries and library books, text books and teachers' houses. Inadequacy of these facilities was traced back to the poor economic background of the parents who to a large extent were responsible for equipping the schools.

Secondly, the schools were found to be well staffed with qualified and experienced teaching personnel. However, KCSE performance was below expectations, an indication that poor performance was not as a result of inadequate staffing.

Thirdly, despite the fact that teachers prepared the necessary records, headteachers were found to be inconsistent in checking these records and also in holding staff meetings. This situation could mean that headteachers were not receiving regular feedback on the teachers' work. In addition, it was established that teachers rarely attended in-service courses thus they were not adequately equipped to undertake effective school-based curriculum monitoring. This had a negative effect on examination performance.

It was further noted that teachers gave assignments regularly. However, students failed to complete these assignments, thus, they lacked the opportunity to practice how to answer questions and master concepts tested in the final examinations. Given that school-based curriculum monitoring was inconsistently done, it could have been one of the reasons why schools performed poorly in the examinations.

Fourthly, the time allowed for syllabus coverage was found to be inadequate for some subjects especially languages, mathematics and sciences. Teachers reported inability to complete the syllabuses in time which left them with little or no time for revision. Failure to cover the syllabus limits a student's choice of questions during the examination while lack of revision limits the students' ability to remember facts, especially those taught early in the programme, thus negatively affecting their performance in examinations.

Lastly, although parents attended PTA meetings and contributed to school development, the study found out that they did not pay fees in time, causing students to be sent away from school frequently. This absenteeism is likely to have had a negative effect on examination performance. In addition, parents did not adequately discuss students' academic work with the teachers, a factor that may have impacted negatively on KCSE results.

In a nut shell, there is no one factor that can exclusively be accountable for the nature of performance in an examination. From the findings of this study, it is evident that there is a strong interrelatedness among the factors. Indeed none of the factors should be relegated to the periphery if good examination results have to be realized.

Recommendations of the study

From the findings and conclusions, the study recommends the following in order for the schools to improve their performance:-

1. The government through the Ministry of Education and other stakeholders should come up with plans to relieve parents from poor localities from the burden of equipping schools with facilities and resources since most of them have low income. Funds could be raised through mobilization of local communities to fund raise, through donor assistance or through ministerial budgetary allocation. Moreover, the headteachers,

PTAs and Boards of Governors (BoG) should liaise with the Constituency Bursary Committees to ensure that bursary allocation is streamlined so as to benefit the many deserving cases of students who miss school due to lack of school fees.

2. To enhance school-based curriculum monitoring, headteachers should ensure they attend the management courses organised by the Ministry of Education through Kenya Education Staff Institute (KESI) and use the managerial skills learned to set the right direction for the teachers. They should also ensure that they identify teachers' shortcomings then allow them to attend the relevant courses some of which are also organised by the Ministry of Education, KIE and other organisations with educational interests. This will ensure teachers are equipped with better teaching and curriculum monitoring skills and are updated with the current demands of the curriculum.
3. Schools should devise means of encouraging the students so that they take their school work more seriously. Such strategies as awarding the best performing and the best improved students, and those with the lowest absentee records among others could be tried.
4. The headteachers, in conjunction with the PTAs and BoGs should organise forums where parents are sensitized and encouraged to pay

school fees in time to avoid students being sent away for fees. In the same forums, parents can be encouraged to constantly monitor their children's school work and give all the necessary support to school developments.

5. The Ministry of Education should re-examine the curriculum and recommend further review of the syllabuses where necessary, with a view to looking into those subject areas whose scope is rather too wide and finding a way of reducing the content without compromising what students are expected to learn. However, since curriculum review could take sometime to be done, schools should organize forums where their teachers meet with those from well-performing schools and learn how those schools overcome the problem of syllabus coverage among others.

Suggestions for further research

1. It is apparent that performance in specific subjects is affected by different factors. It is therefore recommended that research be carried out to establish the factors that affect performance in specific subject as this research was on general factors. This may shed light on the specific problems and strengths that individual subjects' experience and give the teachers specific guidance on possible ways of improving performance in their subjects.

2. A study on students' attitude towards education should be conducted in Gatanga Division. This would explore further and provide an insight into the issues that were reported regarding students' behaviour towards their school work. The findings could assist the teachers to better their ways of handling the students and assist them to improve performance in examinations.

3. There is need to carry out a comparative study in a different division within Thika District as this would confirm the findings of this study as well as shed light on any other factors that cause poor performance in KCSE in the district.

4. A similar research should be conducted in an area such as an urban centre where more schools perform well in KCSE examinations. It would be useful to find out how and whether the same factors influence KCSE performance in better performing schools. It would also enable teachers from Gatanga Division to borrow ideas from well-performing schools to improve the performance in the division.

REFERENCES

- Abagi, O. and G. Odipo, (1997). Efficiency of Primary Education in Kenya: Situational Analysis and Implication for Education Reform. Nairobi: Institute of Policy Analysis and Research.
- African Social and Environmental Studies Programme. (1994). Social Studies Curriculum and Teaching Resource Book for Africa. Nairobi: ASESP/KIE.
- Asuga, G. N. (2002). Factors influencing Kenya Certificate of Primary Education (KCPE) performance in Mbogoini Division, Nakuru District. Unpublished M.Ed project, University of Nairobi.
- Ayoo, S. J. (2002). Factors affecting students' performance in Kenya Certificate of Secondary Education examination in public secondary schools in Maseno Division, Kisumu District. Unpublished M.Ed project, University of Nairobi.
- Ayot, H. O. (1979). New Approach in History Teaching in Schools. Nairobi: Kenya Literature Bureau.
- Best, J. and J. Kahn, (1998). Research in Education. Boston: Allyn and Bacon.
- Bett, J. (1986). A survey of factors that influence performance in KCE examination in Kericho District. Unpublished Doctorate thesis, Kenyatta University.
- Borg, W. R. and M. D. Gall, (1989). Educational Research: An Introduction. (5th ed.) New York: Longman.

- Carl, A. (1995). Teacher Empowerment Through Curriculum Development, Theory into Practice. Cape Town: Zebra Publications.
- Carron, G. and N. Chau, (1996). The Quality of Primary Schools in Different Development Context. Paris: International Institute for Educational Planning.
- Creamer, B. P. M. (1994). The Effective Classroom. London: Cassell.
- Cooper, D. R. (1998). Business Research Methods. (6th ed.). New Delhi: McGraw-Hill.
- Duncan, N. W. (1989). Studies in Comparative and International Education. no.16 Engendering School Learning Science Attitudes and Achievements among Boys and Girls in Botswana. Stockholm: Nalkas Boken Forlag.
- Education Reporter. (26th February 2000). Kenya's worst KCSE Schools. The Standard, p. 13
- Eshiwani, G. S. (1983). Factors Influencing Performance Among Primary and Secondary pupils in Western Province. A policy study. Nairobi: Bureau of Educational Research, Kenyatta University.
- Gage, N. L. and D. C. Berliner. (1979). Educational Psychology. (2nd ed). Chicago: Rand McNally College Publishing Co.
- Hendrikz, E. (1986). Introduction to Educational Psychology. London: Macmillan Publishers.
- Herlinger, P. and R. Heck, (1995). Exploring the Principals' Contributions to School Effectiveness. Boston: Greenfield Allyn and Bacon.

- Heyneman, S. P. (1990). Economic Crisis and the Quality of Education. International Journal of Educational Development vol. 2/3.
- Indongole, C. J. P. (1987). The new 8-4-4 Education system and its implications for educational policy and practice in Kenya. Unpublished MA (Education) Dissertation. University of Lancaster.
- Kerlinger, F. N. (1970). Foundations of Behavioral Research. New York: Holt Reinehart and Winston.
- KNEC. (2002). KCSE Regulations and Syllabuses 2002-2003. Nairobi: KNEC.
- Kiragu, M. W. (2002). The Impact of cost sharing on university education. A case study of the regular undergraduate students of the College of Education and External Studies. Unpublished M.Ed project, University of Nairobi.
- Kyalo, F. (1984). Factors that Affect the Teaching of Science in Changuithya Location, Kitui District. Unpublished Thesis, Kenyatta University.
- Kyalo, F. and M. Kithuka. (1992). Curriculum Evaluation, the Role of KNEC. A paper presented a seminar organized by centre for curriculum studies in Africa at Kenyatta University on 5th June 1992.
- Lockheed, M. E. and A. M. Verspoor. (1991). Improving Primary Education in Developing Countries. Washington DC: Oxford University Press.
- Lowe, P. (1988). Responding to Adolescent Needs: A Pastoral Care Approach. London: Cassel Educational Limited.
- MoEST. (2003). Report of the Sector Review and Development. Nairobi: Government Printer.

- MoEST/ UNESCO. (2001). The quality of Education: Some policy suggestions based on a survey of schools. Nairobi: UNESCO.
- Mugenda, O. M. and A. G. Mugenda. (1999). Research Methods, Quantitative and Qualitative Approaches. Nairobi: Acts Press.
- Mukundi, K. (1986). A survey of factors that influence performance in KCE examination in Kericho District. Unpublished M.Ed project, Kenyatta University.
- Mutea, Z. K. (2002). An analysis of performance in English at KCSE Examination. An Unpublished M.Ed Project, University of Nairobi.
- Mutua, L. L. W. (2002). An Investigation of factors affecting Kenya Certificate of Primary Education performance. A case study of Mutito Andei Division, Makueni District. An Unpublished M.Ed Project, University of Nairobi.
- Nation Reporter. (18th March, 2002). Experts Alarmed over Shortage of Teachers. Daily Nation. P. 18.
- Ndiritu, W. A. (1999). A study of factors which influence performance in KCSE in selected public secondary schools in Nairobi Province. Unpublished M.Ed project, University of Nairobi.
- Ngugi, P. (30th August 2004). Way out for locked out students. Daily Nation. P. 22.

- Njuguna, F. W. (1998). A study of headteachers' leadership styles and students KCSE performance in public secondary schools in Nairobi Province. Unpublished Doctorate thesis, University of Nairobi.
- Nuttal, D. L. and A. S. Willmot. (1972). British Examinations: Techniques of analysis. London: NFER.
- Nyaga, G.M. (1997). Pupils' Performance and Attitudes towards Art and Craft in Kenya's 8-4-4 Education System in Embu District. Unpublished PhD Thesis, University of Nairobi.
- Obonyo, N. L. (1987). The impact of teaching aids in secondary schools' performance in KCE and KACE examinations. A case study of selected government and private schools in Kisumu municipality. Unpublished M.Ed project, Kenyatta University.
- Osman, A. O. (1984). Poor performance in KCPE in North-Eastern Province: A case study based on some schools in Wajir and Garissa districts. Unpublished PGDE project, Kenyatta University.
- Pearson, H. (1988). The Teaching of Language Skills: Listening, Reading, Writing. Nairobi: Oxford University Press.
- Population Council and Republic of Kenya. (1997). Schooling and Experience of Adolescent Girls in Kenya. Nairobi: Population Council of Kenya.
- Pratt, D. (1994). Curriculum Planning: A Handbook for Professionals. Philadelphia: Harcourt Brace College, Fort Worth.

- Reilly, D. H. (1995). How to have successful schools. What parents and teachers need to know to improve children's learning. New York: University Press of America Inc.
- Republic of Kenya. (1984). 8-4-4 system of Education. Nairobi: Government Printer.
- Republic of Kenya. (1988). Presidential Working Party on Education and Manpower Training for the next decade and beyond. Nairobi: Government Printer.
- Republic of Kenya. (1998). Master Plan on Education and Training (1997-2010). Nairobi: Government Printer.
- Republic of Kenya. (2002). Economic Survey 2002. Nairobi: Government Printer.
- Republic of Kenya. (2002). National Development Plan 2002-2008. Nairobi: Government Printer.
- Republic of Kenya. (2002). Thika District Development Plan (2002-2008). Nairobi: Government Printer.
- Republic of Kenya. (2003). Economic Survey 2004. Nairobi: Government Printer
- Rono, R. C. (1991). The effects of peer pressure on educational achievements, aspirations and occupational aspirations of form 4 students in Kericho district. Unpublished thesis, Kenyatta University.

- Said, A. (1989). A survey of factors influencing KCPE performance in Primary schools in Mombasa District. Unpublished M.Ed project. Kenyatta University.
- Simiyu, P. C. (2002). Students' performance in CRE in the Kenya Certificate of Secondary Education and attitudes towards CRE in Lelan Division, West Pokot District. Unpublished M.ed project, University of Nairobi.
- Siringi, S. (1stDecember, 2001). Cut-Off Points Raised for University Admission. Daily Nation, p. 3.
- Siringi, S. (10th December 2001). Teachers to receive free HIV/AIDS lessons. Daily Nation. p. VII.
- Siringi, S. (20th August, 2003). State Varsities Shut Out 32,000. Daily Nation. p. 48.
- Somerset, H. C. A. (1981). Examination Reform: The Kenya experience. A report prepared for World Bank, Nairobi.
- Thompson, A. R. (1981). Education and Development in Africa. An introduction to the study of the role education plays in national development. London: Macmillan Press Ltd.
- Tyler, W. (1977). The Sociology of Educational Inequality. London: Methuen.
- UNESCO. (1972). Initiatives in education. A world profile for 1971-1972. Geneva: International Bureau of Education.
- UNESCO. (1991). Strengthening Educational Research in Developing Countries. Stockholm University: Institute of International Education.

- UNESCO. (2000). MLA project. Quality Education for All. Pretoria: Human Sciences Research Council.
- UNESCO. (2002). The impact of HIV/AIDS on Education and Institutionalizing Preventive Education. Paris: International Institute for Educational Planning.
- UNESCO. (2003). HIV/AIDS and Education. Nairobi: UNESCO.
- UNESCO/UNICEF/MoEST. (2001). Report on Monitoring Achievement, A survey project. Ministry of Education: Botswana.
- Wamai, O. M. (1991). Scratching the surface: Results of the first secondary examination under the new curriculum in Kenya. Unpublished M.Ed Long Essay. School of Education, University of Leeds.
- Worthen, B. R. and J. R. Sanders. (1987). Educational Evaluation. Alternative Approach and Practical Guidelines. New York: Longman.

APPENDICES

APPENDIX I

Letter to the headteachers

Lucy M Njuguna
University of Nairobi
Department of Educational Administration and Planning
P.O Box 92
KIKUYU

The Headteacher,
_____ Secondary School

Dear Sir/ Madam,

REF: FACTORS INFLUENCING PERFORMANCE IN KCSE
EXAMINATION IN GATANGA DIVISION. THIKA DISTRICT

I am a post graduate student at the University of Nairobi, currently carrying out a study on the above stated subject in Gatanga Division, Thika District.

Your school has been selected to take part in the study. I kindly request your permission to gather the required information from you and the form four teachers through questionnaires.

The questionnaires are specifically meant for this research and the responses will be treated with strict confidentiality. Therefore no name of respondent or that of the school will be required.

Your assistance and support will be highly appreciated.

Yours sincerely,

LUCY NJUGUNA

APPENDIX II

Letter to the respondents

Lucy M Njuguna
University of Nairobi
Department of Educational Administration and Planning
P.O Box 92
KIKUYU.

Dear Respondent,

REF: FACTORS INFLUENCING PERFORMANCE IN KCSE
EXAMINATION IN GATANGA DIVISION, THIKA DISTRICT

I am a post graduate student at the University of Nairobi, currently carrying out a study on the above stated subject in Gatanga Division, Thika District.

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

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

Thank you for your co-operation.

Yours sincerely,

LUCY NJUGUNA

APPENDIX III

Headteachers' Questionnaire

This questionnaire is divided into two sections, A and B. Please complete each section according to the instructions. Do not write your name or the name of your school to ensure complete confidentiality. Please respond to all the questions.

Section A

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

1. Please indicate your gender
 - a) Male []
 - b) Female []

2. Which is your age bracket?
 - a) Below 25 years []
 - b) 25-34 []
 - c) 35-44 []
 - d) 45-54 []
 - e) Over 54 []

3. What is your highest academic qualification?
 - a) Masters degree []
 - b) B.Ed []
 - c) PGDE []
 - d) BA/BSC general []
 - e) S1/Diploma in Education []
 - f) Others (specify) _____

4. Indicate the subjects you are trained to teach
 - 1 _____
 - 2 _____

5. For how long have you been in the teaching profession?
 - a) 1-5 years []
 - b) 6-10 years []
 - c) 11-15 years []
 - d) 16-20 years []
 - e) Over 20 years []

6. For how long have you been a headteacher?

- a) 1-3 years []
 - b) 4-6 years []
 - c) 7-10 years []
 - d) 11-15 years []
 - e) Over 15 years []
7. For how long have you been the headteacher in your current school?
- a) Less than 1 year []
 - b) 1-2 years []
 - c) 3-5 years []
 - d) 6-10 years []
 - e) Over 10 years []
8. What is the category of your school?
- a) Mixed []
 - b) Boys only []
 - c) Girls only []

Section B

For each of the questions in this section, read the responses carefully and put a tick [✓] against the appropriate response.

9. What is the average teacher-student ratio in your school?
- a) 1:30 []
 - b) 1:40 []
 - c) 1:50 []
 - d) 1:60 []
 - e) Any other (specify) _____
10. What is the average number of lessons per teacher per week?
- a) Below 20 lessons []
 - b) 20-24 []
 - c) 25-30 []
 - d) Over 30 []
11. a) Please indicate whether teachers in your school prepare the following documents. Tick as many as appropriate.
- i) Schemes of work []
 - ii) Lesson plans []
 - iii) Records of work []
 - iv) Student progress records []
- b) How often do you make a follow-up to ensure that these documents are prepared as required?
- i) Once a month []

- ii) Twice a month []
- iii) Once a term []
- iv) Twice a term []
- v) Any other (specify) _____

12. (a) Are teachers in your school assigned to teach subjects they were not trained for?

- i) Yes []
- ii) No []

b) If your answer to 12 (a) is yes, give reasons

13. (a) Does your school have a shortage of teachers currently?

- i) Yes []
- ii) No []

(b) If your answer in (a) is yes, indicate by how many.

- ii) One []
- iii) Two []
- iv) Three []
- v) More than three (specify) _____

(c) If your answer in (a) is yes, indicate the affected subject areas

14. How often do you hold staff meetings in your school?

- a. Once a month []
- b. Once a term []
- c. Any other (specify) _____

15. How often have teachers in your school been attending in-service courses in the last three years?

- a. Very often []
- b. Often []
- c. Rarely []
- d. Any other (specify) _____

16. a) Please indicate with a tick [✓] your opinion on parents participation in the following activities

Activity	Good	Fair	Poor
Paying school fees inn time			
Attending PTA meetings			
Discussing students' academic performance with teachers			

Contributing towards school development			
---	--	--	--

17. Please indicate with a tick [✓] the adequacy of the following facilities and resources in your school in the tables provided below.

The alternative choices are as follows:

Adequate = A

Satisfactory = S

Inadequate = I

A. School facilities		A	S	I
1.	Staff room			
2.	Classrooms			
3.	Library			
4.	Science laboratories			
5.	Teachers' houses			
6.	Playing fields			
7.	School dining hall			
8.	Electricity			
9.	Water			
10.	Food			

B. Teaching/learning resources		A	S	I
1.	Teachers' reference books & guides			
2.	Students' text books			
3.	Wall maps & charts			
4.	Laboratory chemicals			
5.	Library books			
6.	Chalk boards & chalks			
7.	Other stationery			
8.	Time allocated for syllabus coverage			

18. Please indicate with a tick [✓] your opinion on the following factors that may influence students' performance in examinations.

The alternative choices are as follows:

Strongly agree = SA

Agree = A

Undecided = U

Disagree = D

Strongly disagree = SD

		SA	A	U	D	SD
a)	In-servicing teachers boosts students' performance in examinations					
b)	Motivating teachers boosts students' performance in examinations					

c)	When parents are involved in school affairs, student performance improves					
----	---	--	--	--	--	--

19. a) How do you rate the school's academic performance?

- i. Above average []
- ii. Average []
- iii. Below average []

b) What in your opinion can be done to maintain or improve this performance?

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

Thank you for your co-operation.

APPENDIX IV

Teachers' Questionnaire

This questionnaire is divided into two sections, A and B. Please complete each section according to the instructions. Do not write your name or the name of your school to ensure complete confidentiality. Please respond to all the questions.

Section A

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

1. Please indicate your gender
 - a) Male []
 - b) Female []

2. Which is your age bracket?
 - a) Below 25 years []
 - b) 25-34 []
 - c) 35-44 []
 - d) 45-54 []
 - e) Over 54 []

3. What is your highest academic qualification?
 - a) Masters degree []
 - b) B.Ed []
 - c) PGDE []
 - d) BA/BSC general []
 - e) S1/diploma in Education []
 - f) Others (specify) _____

4. Indicate the subjects you are trained to teach
 - 1 _____
 - 2 _____

5. What is the category of your school?
 - a) Mixed []
 - b) Boys only []
 - c) Girls only []

Section B

For each of the questions in this section, read the responses carefully and put a tick [✓] against the appropriate response.

6. a) Please indicate whether you prepare the following documents by ticking as many as appropriate.

- i) Schemes of work []
- ii) Lesson plans []
- iii) Records of work []
- iv) Student progress records []

b) How often does the headteacher make a follow-up to ensure that these documents are prepared as required?

- i) Once a month []
- ii) Once a term []
- iii) Twice a term []
- iv) Any other (specify) _____

7. a) What is your current teaching work load per week?

- i) Less than 20 lessons []
- ii) 20-24 []
- iii) 25-30 []
- iv) More than 30 []

b) How do you rate this work load?

- i) Heavy []
- ii) Moderate []
- iii) Light []

8. a) Are you ever assigned to teach subject(s) that you were not trained for?

- i) Yes []
- ii) No []

b) If your answer in (a) above is yes, give reasons _____

9. How would you rate the parents/guardians participation in their children's academic work?

- a) Good []
- b) Satisfactory []
- c) Poor []

10. a) How often do you give students assignments/homework?

- i) Daily []
- ii) Once a week []
- iii) Once a fortnight []
- iv) Once a month []
- v) Others (specify) _____

b) Do students complete their assignments/ homework as required?

- i) Yes []
- ii) No []

c) If your answer to (b) above is no, put a tick (✓) against the reasons that students give for not completing the work?

- i) Lack of adequate time []
- ii) Too much homework/assignments []
- iii) Lack of text books []
- iv) Work is too difficult []
- v) Any others, specify) _____

11. a) Please indicate with a tick [✓] your opinion on parents participation in the following activities

Activity	Good	Fair	Poor
Paying school fees inn time			
Attending PTA meetings			
Discussing students' academic performance with teachers			
Contributing towards school development			

12. a) When do you normally complete the syllabus for your subject(s)?

- i) 3 months before exams []
- ii) A month before exams []
- iii) Just in time for exams []
- iv) Never completes []
- v) Any other (specify) _____

b) Do you consider the time allowed for the coverage of the syllabus in your subject area adequate?

- Yes []
- No []

If your answer is no, give reasons _____

13. Please indicate with a tick [✓] your opinion on the following factors that may influence students' performance in examinations.

The alternative choices are as follows:

- Strongly agree SA
- Agree A.
- Undecided U
- Disagree D
- Strongly disagree SD

		SA	A	U	D	SD
a)	In-servicing teachers boosts students' performance in examinations					
b)	Motivating teachers boosts students' performance in					

	examinations					
c)	When parents are involved in school affairs, student performance improves					

14. Please indicate with a tick [✓] the adequacy of the following facilities and resources in your school in the tables provided below.

The alternative choices are as follows:

Adequate A
 Satisfactory S
 Inadequate I

A. School facilities		A	S	I
1.	Staff room			
2.	Classrooms			
3.	Library			
4.	Science laboratories			
7.	Teachers' houses			
8.	Playing fields			
9.	School dining hall			
10.	Electricity			
11.	Water			
12.	Food			

B. Teaching/learning resources		A	S	I
1.	Teachers' reference books & guides			
2.	Students' text books			
3.	Wall maps & charts			
4.	Laboratory chemicals			
5.	Library books			
6.	Chalk boards & chalks			
7.	Other stationery			
8.	Time allocated for syllabus coverage			

15. a) How do you rate the school academic performance?

v) Above average []

vi) Average []

vii) Below average []

b) What in your opinion can be done to maintain or improve this performance?

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

Thank you for your co-operation.

APPENDIX V

MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY

Telegrams: "EDUCATION", Nairobi

Telephone: Nairobi 314111

When replying please quote

Ref. No. MOEST 13/001/34C 193/2

Ref. No.



JOGOO HOUSE "II"

HARAMBEE AVENUE

P.O. Box 30040 (0100)

NAIROBI

5th July 2004

Lucy Mwenda Njuguna
University of Nairobi
P.O. BOX 30197
NAIROBI

Dear Sir

RE: RESEARCH AUTHORISATION

Please refer to your application for authority to conduct research on ' Factors influencing students - performance in KCSE Examination in Public Secondary Schools in Gatanga Division, Thika District , I am pleased to inform you that you have been authorised to conduct research in Public Secondary Schools in Thika District for a period ending 31st December, 2004.

You are advised to report to the District Commissioner and the District Education Officer , Thika District before embarking in your research project.

It is noted that the research is a requirement in part fulfilment for the award of M.Ed. Degree by the University of Nairobi.

Upon completion of your research project, you are expected to deposit two copies of your research report to this Office.

Yours faithfully


B. O. ADEWA
FOK: PERMANENT SECRETARY

CC

The District Commissioner
Thika District

The District Education Officer
Thika District