DETERMINANTS OF GIRLS' PERFORMANCE IN KENYA CERTIFICATE OF SECONDARY EDUCATION EXAMINATION (KCSE) IN KIKUYU DIVISION, KIAMBU DISTRICT, KENYA

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DECLARATION

This research is my original work and has not been presented for award in any other university

..... 6th / 12 / 2005

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This Research Project has been submitted for examination with my approval as a University Supervisor.

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DEDICATION

This project is dedicated to my beloved children Irene Gathoni, Everlyne Wambui and Nelly Wanja for the sacrifices made by the family towards supporting me morally and spiritually on this project. Their forbearance of my inevitable absence from them while working on the project was a source of encouragement and determination for me to complete the programme.

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ABSTRACT

The main purpose of this study was to find out the determinants of girls' performance in public secondary schools, in Kikuyu Division, Kiambu District. The research project explored four (4) certain variables thought to be determinants of performance of girls as follows -

i) Socio-economic backgrounds of the girls.
ii) Perception of teachers on girls' abilities.
iii) Facilities and material provisions in the schools attended by girls.
iv) Guidance and counselling services provided in the schools.

The participants chosen for this research project were two hundred and eighty (280) who included; one hundred and thirty four 134 (48%) girls, one hundred and six 106 (38%) boys, thirty two 32 (11%) teachers, eight 8 (3%) head-teachers from eight (8) public secondary school in Kikuyu Division in Kiambu District. The instruments that the researchers used were mainly questionnaires for all the respondents, that is, the boys, girls, teachers and head-teachers. The questionnaires were to solicit information on the school and home environments and their influence on academic performance of the girls. The questionnaires were administered on the respondents with the assistance of the teachers in the respective schools. The results were tabulated and analysed using descriptive statistical method.

It was found that majority of girls came from low socio-economic backgrounds particularly those in co-educational day schools, this was found to have militated against their performances in KCSE examination. Poverty levels led to lack of tuition and thus absenteeism in schools and overburdened with home chores for girls. There was low parental encouragement to their children's academic endeavour where they rarely minded about their progress in school and their school-work. Consequently girls were discouraged and had lower aspirations for higher levels of education than their counter parts the boys.

The research established unequal distribution of learning resources across the different categories of schools where some like the co-educational and day schools had lower levels of key facilities such as libraries, textbooks, games facilities, science

laboratories and workshops while the single sex schools had higher levels of the basic facilities and equipment hence need for re-distributions of learning resources fairly in all schools. This limited the range of subjects that can be chosen from hence failed to meet curricula goals of equipping students with technological know-how for self-reliance

The research noted the preference for boys to girls by their teachers which consequently led to low attention to the girls by their teachers which in turn brought about discouragement of girls in class activities hence low participation. The findings also established that though institutions of guidance and counselling are put in place in the schools, the girls seemed to lag behind boys in attainment of the accrued benefits to such institutions like in academic excellence. Based on the findings of the study, the study therefore recommends that:-

- Government and all other stakeholders give more support to finance the co-educational or day schools to raise the educational standards in these schools, this would be by redistribution of learning resources fairly across the schools to set an equal footing in the learning environment provisions for fair competitiveness amongst schools.
- Intensified guidance and counselling in academic matters to the girls.
- Gender issues in education should be incorporated in the education of teachers, this will make them aware of the importance of the education of girls.

It is therefore useful to specifically address the issues identified in the study in order to improve girls' performance in the district and secondly to arrest the social and educational inequalities observed.

The study also identified the following areas for further research:-

- A similar study could be replicated to a larger sample to establish if similar results could be attained.
- Investigate girls' performance at higher levels like in the universities.

- Investigate the gap in quality of education provided in public. co-educational, single-sex and private secondary schools
- Investigate the enrolment rates of girls in science oriented courses in higher institutions of learning and their performances in the same
- Factors that make some co-educational schools perform better in a district or even nationally.

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ABBREVIATIONS

B.ED	- Bachelor of Education
BOG	- Board of Governors
B.SC	- Bachelor of Science
D.E.O	- District Education Office
GOK	- Government of Kenya
FAWE	- Forum of African Women Educationalists
K.I.E	- Kenya Institute of Education
KCPE	- Kenya Certificate of Primary Education
KCSE	- Kenya Certificate of Secondary Education
KNEC	- Kenya National Examination Council
MA	- Masters of Arts
MD	- Mean Grade
MS	- Mean Score
MSC	- Masters of Science
MOEST	- Ministry of Education Science and Technology
NGO's	- Non Governmental Organisation
PTA	- Parents Teachers Associations
SES	- Socio-Economic Status
SMT	- Science, Mathematics and Technology Subjects

CHAPTER ONE

INTRODUCTION

1.0 Background to the study

The government of Kenya (GOK) has given education priority in the National development plans since her political independence, 1963. The government, the parents and other stakeholders have over the years invested significant resources to expand and improve education at all levels. This is in view of the strong relationship between education and development which ranges from the role of education in enhancing economic growth, reducing poverty, increasing individual earnings, spill over benefits of the society resulting from educating individuals, enhancing democracy and good governance among others (Schulz, 1961; Psacharopoulos, 1973; Haddad, 1991)

There is clear evidence that the total benefits of education multiply when there is increased female participation in schooling (World Bank, 1995) Evidence demonstrates that the returns to female education are high at all levels with the secondary education level recording the highest. According to summers (1992) female education empowers women to bring about necessary changes and helps to break through the vicious cycle of poverty and deprivation. He concludes that "once all the benefits are recognized, investment in the education of girls may be well the highest return investment available in developing world", King and Hill, (1991), go even further to caution that failure to raise women's education to equality with men's impact negatively on productivity, income and quality of life.

Because of historical, environmental, social-cultural reasons, past and present policies there have been inequalities in the distribution of education in Kenya, (Kinyanjui, 1974), these inequalities have taken the form of disparities in access, retention and achievement between the sexes, geographical areas and households. Since 1963, the government has been concerned and has attempted to reduce these inequities in provision of education. Public commissions, development

plans and other policy documents contain recommendations and approaches aimed at reduction of inequity. Inspite of the various actions and inputs by government as interventions by non-governmental organizations (NGO's), religious bodies and international organizations, girls still lag behind boys at all levels of education. They continue to avoid courses that lead to careers in science and technology at middle level colleges and university. As more and more girls under perform at lower levels, fewer and fewer of them make it to subsequent levels, even those who do, only a handful of them ever penetrate the supposedly masculine fields of engineering, medicine and architecture among others. Totally Integrated Quality Education and Training (Koech report), 1999; 77-78 noted that inequality continues to persist in certain areas and that there were persistent constraints that continue to hinder girls from effective participation at all levels. In addition, drop out for girls were still higher than for boys in most areas. Girl's poor performance in primary level continued to affect performance in secondary level and this hindered their entry and effective participation in tertiary institutions. Thus more boys than girls from the industrialized economies of Africa Kenya included, continue to go to school and work their way up the educational ladder (Mueller, 1990)

Since 1985, the education system has been 8-4-4 system, that is, eight (8) years of primary education, four (4) years secondary education and four (4) years of basic University education. According to the Ministry of education master plan, secondary education is very crucial because at the end of the cycle, students take Kenya Certificate of Secondary Education Examination (KCSE Examination). The Kenya national examination council (KNEC) administers KCSE examination to the students who have completed four years of secondary education. KNEC is the national examining body established by an act of parliament (chapter 225A) which commenced on 1st of august, 1980, Laws of Kenya, (The Kenya National Examinations Council Act, chapter 225A, Revised Edition 1981, Government Printer, Nairobi). This body was to administer schools' and post schools' examinations except university examinations.

In Kenya high academic achievement is held in high esteem by learners, parents and the public at large. Examinations are considered to be crucial determinants of future success. Among the many return to heavy investment in secondary education is good performance by student in KCSE examination. Good performance is necessary for selection and placement of students in institutions of higher learning and jobs in various firms. Good performance is also crucial for admission into competitive courses in public universities. KCSE examinations enables teachers, schools and the Ministry of Education Science and Technology (MOEST) and the society at large to evaluate the extent to which secondary schools are succeeding. Most courses require a mean score of a B+ for admission in public universities besides, good grades are required for specific course clusters like medicine, law and architecture among others that commands high esteem and attracts high grades consequently, poor performance in KCSE examination therefore undermines students chances of joining institution of higher learning and consequently jeopardizing opportunities for job placement often reducing active participation in national development. In Kenya, education is highly result-oriented discipline where acquisition of knowledge, skills and attitudes of prospective candidates and employees are judged by grades on their certificates (Okumbe, 1998).

The purpose of this study was therefore to establish the determinants of performance of girls in KCSE examinations in public secondary schools in Kikuyu Division in Kiambu District as the district harbours many co-educational schools which have been performing dismally at KCSE examinations as will be revealed in the later coming up in this data in this on performances in the division as in tables one (1) to three (3). Improving girls' participation in education and their academic performance are the most significant challenges facing sub-Saharan Africa (Gachukia, 1992). However, the economies of these developing regions of Africa makes it more difficult to fund education for their societies, thus they are rethinking their priorities in terms of investment in primary, Secondary

and tertiary education. Increasing children learning has been given a first priority (Lockheed and Verspoór, 1991) thus basic education has taken the lions share of government's investment with reduced funding in secondary education consequently, households are expected to shoulder much of the burden of funding secondary education. Faced with limited resources, preference is often given to boys' education over that of girls as noted by (National committee on education objectives and policies, 1976; Republic of Kenya, 1997a; Mackenzie, 1993)

In many developing countries, schools are not so effective in eliminating learning handicaps that derive from unequal home backgrounds. Coleman, 1966 studies show that even where educational facilities per pupil do not vary much within particular regions, the disparities in performance between regions are largely due to inferior home backgrounds. There is therefore evidence that schools do not offset the learning disadvantages of those with deprived home backgrounds (Douglas, 1984). Poor families may not be able to use those opportunities fully because they often cannot afford to sacrifice much of the labour which their children can provide at home (Court, T.S ,1993).

Girls' performance generally have been poor inspite of efforts by the government in developing countries to improve it. To ensure access and improve the quality of education for girls and women and to remove every obstacle that hampers their active participation is an urgent priority, hence all gender stereotyping should be removed in education (UNICEF, 1999).

This worrying trend hampered by varied and widespread factors working at the disadvantage of the girl-child such as lack of supportive staff, lack of proper parental attitudes, a lot of household chores, uninspired curriculum, gender insensitive materials, equipment and facilities, male and boys harassment on girls, lack of proper career guidance and counselling, lack of role models, poverty among others as outlined by Wango (2001) proves very difficult for the girl child

to work out their full competences resulting to poor academic performance in schools and sometimes discouragement that have culminated to either drop outs or push outs from educational system leading to wastage in education. Fewer girls than boys complete secondary school owing to their dropping out more. For example, in 1997-2000 cohort only 76.8 per cent of the girls completed. The fewer the girls who complete secondary school, the smaller is the pool of prospective higher education entrants nationally (file//A:\Gender%20and %20Higher%20Education.htm)

Performances in one's subject affects your future. The higher your examination scores the more likely you will continue further in education and ultimately find greater employment opportunities. It is therefore likely that if boys have higher examination scores, they are more likely than girls to be accepted to higher institutions of learning.

They will also have more employment opportunities or choice and higher paying jobs hence widening the gender gap. Many factors impede the education of girls and women in education.

The factors pose obstacles which contribute to the resultant poor performance in school consequently, in most cases, girls occupy low status in the socio-economic and political arenas as they fail to acquire higher education which would enable them placement in the lucrative areas of the economy.

These problems are further compounded by teachers attitude and pedagogy (Waweru, 1994; Broack and Cammish, 1991; Graham, Grown, 1991). It has also been established that in a community, girls are forced to grow up differently from boys. This is especially so in Africa where education is acquired by pedagogy of difference inherent in education at home and at school. Fame has further stated that women and girls are marginalized and devalued in most African textbooks

including those used in schools and gender bias feature prominently (Fame. 1990)

These factors have all acted together to militate girls' performance exhibited in the resultant poor performance as discussed. The background thus shows Kiambu District is not excluded in exhibiting this trend on close scrutiny of K.C.S.E examination data (2000).

The report on the data analysis from the District Education Office on the same in Kiambu indicated that in general, most schools recorded a rise from 1999. This however, did not measure up to other districts in the country hence the last 27 schools were among the last 150 in the country most of which were co-educational schools. This is not only sad but disturbing about the status in the region supposedly known to be of high economic potential. With the division harbouring quite a number of these co-educational schools where most girls are known to attend, this poses a great challenge especially where students are not performing well at the secondary level where returns of female education is known to record the highest of the returns. Infact none of the co-educational schools in the year 2000 managed a B+ mean score and above whereas, some unisexual schools for boys and for girls managed a B+ and above at the same regional levels.

This study of determinants of performance of girls in KCSE examination in Kikuyu division was therefore imperative since it was set out to unveil problems in an attempt to find out viable solutions .The choice of Kikuyu Division in Kiambu district for the study was prompted by the girls poor performance in KCSE over the past years in Co-educational public day secondary schools in particular. The division harbours second highest number of public secondary schools after Githunguri division in the district which has about 23 such schools. Co-educational day institutions have been performing dismally in KCSE examination as compared to unisexual schools of which majority are provincial

and National schools This is a cause for concern for many girls are known to attend this category of schools as they fail to acquire a place in the limited provincial and national secondary schools known to be better in performance in the country in a highly selective system through national examination. Indeed, the government of Kenya and UNICEF, 1992) clearly showed that gender is a factor in education, in their report they noted boys as a whole outperform girls in all subjects except English. This is also noted by the Ministry of education science and Technology (MOEST) KCSE results for year 2001 computed from KNEC in the 2003 which demonstrates that girls narrowly outperformed boys only in four subjects namely (English, Kiswahili, Chemistry, and Home science) out of the thirteen subjects with a candidature of ten thousand (10,000) plus. Girls' performance is shown to have been lower than that of boys and particularly in Science, Mathematics and Technological Subjects (SMT) hence girls are not able to compete at an equal footing with the boys for the limited places in higher institutions. However, it's not possible to argue that girls are disadvantaged in all regions and in all schools in the country for evidence reveals areas and some particular schools which perform better than boys as evidenced by Kakonges' research, (2001) of KCSE analysis 1990-1996 KCSE data where girl's attainment in Nairobi exceeded that of boys in 1995 and 1996.

This result may have a more likelihood of a more depressed girls' attainment in the same regional level depending on the categories of schools given the national picture. The situation was suspected to be worst in mixed or co-educational schools and especially day institutions falling under district school category hence, need for such a research to determine the actual situation in the Kenyan context. This was also triggered by the revelation of a scholarly research done in the region Kiambu district which revealed girls low educational and career aspiration in co-educational schools Kibera (1993). This was a cause for concern to go into research where factors seem to be militating against girls' performance rendering educational gains impractical.

The choice of Kikuyu Division was therefore apt for this study for the division has quite a number of such co-educational schools which seem to be contributing to poor performance in the district and in the country as a whole as shown by the tables that follows here below. It is of great concern where KCSE analysis for 1998-2000 Kiambu district education office (MOEST) reveals poor performance in general in co-educational public secondary schools.

Table 1: KCSE Performance in Kikuyu Division in public secondary schools

For the purpose of this study, secondary data on the performance in the KCSE examinations by the eight (8) public secondary schools in Kikuyu Division were obtained from the district education office (DEO's) office, Kiambu District analysed on the basis of Kenya National Examinations Council (KNEC) results. The results were based on the 12-point scale grading System used by KNEC. According to the system, the best grade is an A and the worst is an E while the best mean grade is twelve (12) against grade A, the worst is one (1) against grade E. In order to establish if there was any influence at all of the variables under study on the performance of girls in KCSE examinations in the eight schools for the years 2000-2003, a cross tabulation of the KCSE results from the schools was done as shown in table 1 below.

The table 1 shows that the overall performance in KCSE examinations by schools in the division over the period under study (2000-2003) was low. The mean grade obtained by the majority of schools ranged between (C-) and D which reflects below average score which is a C+ and above. Only 2 (two) schools out of the eight (8) recorded good performance with a mean grade of C+ and above which happened to be single sexual boarding schools known for better performance. Schools 1, 2, 3 and 7 recorded satisfactory performance while the remaining four recorded poor performance with a mean grade of D+ and below. Good and satisfactory performances came from two (2) boys boarding secondary schools, one girls' boarding secondary school and one mixed secondary school which

obtained a mean grade ranging from C- to B+ ahead of most co-educational and day schools that lagged behind with mean grades of between D and D+.

The best results reveal that majority of schools performing dismally are the mixed day secondary schools. Out of the four mixed schools only one obtained a C- grade and all were below average score of a C+ and above while the rest of the schools which showed at least a good and satisfactory performance were the single-sex boarding schools with three (3) out of four (4) obtaining a performance ranging from C- to B+. Other single-sex schools for girls obtained a D plain and happened to be a girls' day school and not quite experienced in KCSE examination. This school was registered for KCSE examinations only two years while the rest have an experience of above 5 years in the KCSE. This is a further revelation that girls do better when in single sexual schools even in such a case where they are day scholars since the school shows better grades than some of the experienced co-educational schools in K.C. S.E examinations. This information is summarised in table I below.

Table 1: Mean score and letter grades attained in KCSE by schools in Kikuyu Division

	School	Year				Overall
		2000 MS	2001 MS	2002 MS	2003 MS	MD
1.	Alliance Boys (Boys boarding)	9.8970	10.2065	10.2289	10.2065	B+ 10.13425
2.	Kirangari Boys (Boys boarding)	4.7980	4.5040	4.4468	4.5040	C- 4.5630
3.	Mary Leakey Girls (Girls boarding)	6.7590	7.6850	6.9076	7.6850	C+ 7.25915
4.	Kanjeru Girls.(Girls day)	0.0000	0.	3.3103	3.3333	D 3.3218
5.	Kanyariri (Mixed day)	2.7190	2.8769	3.1404	2.0189	D 2.95632
6.	Kabete (Mixed day)	2.9530	2.8522	2.7928	2.64712	D 2.81127
7.	Musa Gitau (Mixed day)	4.2220	4.7317	4.7209	4.4792	C- 4.5385
8.	Rungiri (Mixed day)	3.7160	3.8108	3.6437	3.7975	D+ 3.7420

Source: *KNEC KCSE Order of Merit Analysis (2000-2003)*

MS-Mean Score

MD-Mean Grade

This source shows that in the division, there are very high percentages of students who failed to attain a minimum pass in national examination. Many students skewed towards lower scores of below C+ mean score. None of the schools categorized as co-educational managed to register a mean score of a B+ and above necessary for placement in the higher institutions. Further, in reference to the same school grades as shown in the previous table 1, a summary of performance in KCSE by the eight schools in Kikuyu division in terms of range of performance from poor to good was tabulated. A to B grades was categorised as good, B- to C- as satisfactory, and finally D+ to E grades as poor as in the 12 point grading scale used in KCSE examination. This information is contained in table 2.

Table 2: A summary of performance in KCSE by the eight school in Kikuyu Division in terms of range of performance from poor to good.

School Type	Poor	Satisfactory	Good	Total
Girls' Boarding	0	1	0	1
Girls' Day	1	0	0	1
Boys' Boarding	0	1	1	2
Mixed Day	3	1	0	4
Total	4	3	1	8

KEY
GRADE

A to B - GOOD
B- to C- - SATISFACTORY
D+ to E - POOR

The results in table 2 clearly shows the disparities in performance of different categories of schools. From the data shown above, majority boarding single sexual schools (3 out of 3) managed good and satisfactory performance while majority co-

educational day schools (3 out of 4) were in the poor grades thus high and low performing schools respectively in the region. The only Girls' day school obtained a poor grade.

Further nationally and at regional levels, there is an indication of boys' superior performance over girls in KCSE examination in Mathematics and Science subjects. A study that was done by Institute of Policy Analysis and Research (2003) revealed this as per the table 3 below here shows;

Table 3: Gender Percentage Point differentials in KCSE examination performance in National and in certain districts in the year 2000.

			NATIONAL	KIAMBU	BUNGOMA	KISUMU	GARISSA
SUBJECT	BOYS M.S	GIRLS M.S	Gender % Point Diff.	Gender % Point Diff.	Gender % Point Diff.	Gender % Point Diff.	Gender % Point Diff.
MATHS	42.3	26.8	15.5	4.7	9.0	15	8.8
PHYSICS	45.8	41.3	4.5	5.0	8.0	8.8	*NOT REGISTERED*

KEY

M.S - MEAN SCORE

DIFF. - DIFFERENTIAL

% - PERCENTAGE

This research noted that in general in some selected study districts that the student's performance in (KCSE Examination) mathematics and science subjects by sex in some study districts as above Kiambu included in the year 2000 was below 50 per cent. In mathematics for example, the national mean score was 42.3% for females exhibiting gender percentage point of 15.5 in favour of boys.

The differences between girls and boys in mathematics were 4.7% in Kiambu district which harbours Kikuyu division. In physics, the gender percentage gap was 5% in

Kiambu. The same trend was observed in biology and chemistry with different severity in disparities in different districts studied. This scenario was therefore taken with a lot of concern due to the centrality of the subjects in question. It was therefore useful to specifically address the issue of girl's participation and achievement first to arrest the social and educational inequalities observed and second, to improve the overall performance in the district by targeting the worst performing group.

However, it may be unrealistic to try and prove solutions to solve problems whose causes have not been established or ascertained through scientifically collected data. It was therefore imperative to carry out a research and establish the root causes of the problems identified above. This study is therefore set out to find out the determinants of performance of girls in KCSE examination in public secondary schools in Kikuyu division in Kiambu District, the study further under scored girls' performance in co-educational district schools which are day institutions with a view to unveiling factors inhibiting against their performance in KCSE examination and eventually arrive at valid solutions to alleviate this negative trend in girls' education so that the socio-economic benefit of educating girls can be realized. It is against the background that the women play in the society that there is need to address ourselves into the factors that would hinder their chance to enable them acquire educational and lucrative occupations and carry out their roles effectively.

1.1 Statement of the problem

In general terms, the most important manifestation of schooling quality include literacy, greater cognitive abilities and better student performance in examinations. (Deolalikar, 1999) Internationally pupil's examination scores have been accepted and used as a proxy of achievement (Psacharopoulos, 1985)

Kenya certificate of secondary education examination is regarded as an important measure of the quality and effectiveness of secondary education system. Elimu yetu coalition (2003) on reform agenda for education sector in Kenya has made

and documented the observations regarding examination performance in Kenya. First, is the general decline in performance. Second, consistent better performance by boys against girls. Third, better performance by private schools and elite public schools that are invariably patronized by children of elite. Fourth, it is the fact that this trend is consistent in both primary and secondary schools. Fifth, is the fact that science subjects tend to register lower scores than non-science subjects. This observation is an implication that there is a lot to be done to improve examination performance and particularly so for girls. Maranga, (1991) points out that the review of teaching and learning in Kenya reveals that there are replete complaints from public that the general performance in education is still wanting.

This was found to be the situation for Kikuyu division in Kiambu District which in the past few years have produced very few C+ and above mean score in the so called co-educational public secondary schools in Kenya Certificate of Secondary Education examination. In spite of having many of them in the division, majority of them have been performing poorly.

1.2 The Purpose of the Study

The purpose of this study was to find out the determinants of girl's performance in public secondary schools in Kikuyu division in Kiambu District. This was because the division registered low performance in some certain schools at KCSE Examination. In doing so, certain presupposed factors thought to have affected the performance were explored. The influence of school factors such as:-

- teachers attitudes and influence,
- learning facilities, equipment and materials, and
- type of school on performance.

Other factors that were studied included:-

- socio-economic factors in terms of parental level of parents education, parents' ability to buy educational materials, and
- parental attitudes towards education.

1.3 Objectives of the study

The study sought to;-

- Investigate the influence of socio-economic backgrounds of the girls on their performance at secondary level of education.
- Establish the effects of the teachers' perceptions about girls' abilities on their performance.
- Determine the relationship between school facilities, equipment and materials availability on girls' performance at secondary level.
- To establish whether guidance and counseling in career and subject choice by teachers influences performance of girls at secondary level of education.

1.4 Research questions:

This research intended to answer the following questions;-

(i) Do the parents'/guardians' level of education has an effect on performance of girls at secondary level of education?

(ii) Do the teachers' perceptions about girls' abilities influence girl's performance at secondary level of education?

(iii) Do the adequacy and availability of key facilities, equipment and materials provided influence performance?

(iv) Does guidance and counselling on subject choice by teachers influence girls' performance?

(v) Does the type of school attended by girls influence their performance?

1.5 Significance of the study

- The findings of this research may be of paramount importance to the government, policy makers, parents administrators and counselors of schools who may use the information to address the plight of the girl-child in the disadvantaged schools or institutions in terms of coming up with remedial policies and strategies to the problem.
- It will unveil the various areas where more emphasis should be laid in terms of provisions for example, proper guidance and counselling in career and subject choice, proper equipment and materials that are gender sensitive which require to be provided.
- Teachers, parents, educators and administrators and all other stakeholders in education will be sensitized on gender issues hence work together to alleviate factors that inhibit the girl-child performance consequently create a conducive environment to boost their morale thus raise their performance in areas deemed poor like in mathematics , science and technological subjects
- The findings are likely to be used in sensitizing all stakeholders to work together in partnership to raise educational and career aspirations of the girl-child to enable them compete at an equal footing with their counterparts boys in all fields of education and occupations hence bridge the widening gap existing in educational and occupational fields.
- The identification of factors influencing the girls' performance will be useful in improving performance of the individual girl student thereby improving the overall division and district performance as a whole hence, contribute to national improvement in education.

1.6 Scope and limitation of the study

The study was carried out in Kiambu district and it mainly focussed on co-educational public secondary schools in Kikuyu Division of Kiambu District. However, the research included a few unisexual secondary schools for girls and

boys only to facilitate a comparative study of performance in the division. The research also focussed on only the co-educational public secondary day schools, girls and boys only secondary schools in Kiambu District in Kikuyu Division.

1.7 **Definition of significant terms** .The following were the definitions of significant terms as used in the study:-

- **Gender:** This refers to the differences between males and females that is socially and culturally constructed.
- **Gender Disparity**: Differences in males and females status, access to services and resources often institutionalized through social customs.
- **Gender equity**: This refers to fair distribution of resources and benefits between females and males.
- **Gender roles**: Socially determined behaviour, tasks, roles, duties and responsibilities based on socially perceived differences that define males and females. Refers to society's prescription of and attitude to behaviour as masculine or feminine.
- **Gender stereotyping**: Refers to the believe that certain attributes are associated to males while others are associated to female and thus gender differentiation in role division and performance.
- **KCSE Examination:** Refers to a final national examination which is undertaken by students in their final year of secondary education and determines their entry into different courses in tertiary education institutions. It is referred to as Kenya Certificate of Secondary Education examination.
- **KNEC:** Refers to Kenya National examination council. This is an organ in the ministry of education that administers national examinations to all

primary and secondary and other post-secondary public institutions of learning except universities.

- **Mean score:** Refers to an average point showing individual or group achievement in examination performance.
- **Performance:** Refers to the student academic level of achievement. In Kenya, KCSE examination is graded on a twelve-point scale from the lowest E to the highest A.
- **Secondary school:** Refers to a post-primary institution where student undertake regular instruction from form one to four in Kenyan education.
- **Sex:** It is the physical and biological differentiation between male and female.

1.8 The organization of the study

The study was organized in five chapters.

Chapter one contained the background information on the study, the statement of the problem, purpose of the study, objectives of the study. Research questions of the study, significance of the study, Scope and limitations of the study and finally the definitions of significant terms used in the study.

Chapter two presented a literature review related to determinants of girls' performance in Public Secondary Schools. These factors included school-based factors, teachers' attitudes and influence, learning facilities, equipments and materials, guidance and counselling on subject choice by teachers, type of school attended, socio-economic backgrounds of students, and parental attitudes towards education. On basis of literature that was reviewed, a conceptual framework was developed on the factors that determine the academic performance of girls at Kenya Certificate of Secondary examination.

Chapter three consisted of a detailed description of the research methodologies that were used to pursue the study. These comprised of, research design, target population, sample and sampling procedures, research instruments, validity of instruments, reliability of instruments, data collection procedures and data analysis techniques.

Chapter four consisted of data analysis and interpretations.

Finally, chapter five presented the main findings, conclusions, recommendations and suggestions for future research.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

Several authors have written concerning girls' performance and many reasons have been suggested by various scholars to explain the poor performance of girls in secondary schools. It was therefore important to further carry on a research on the same to unveil the situation of the girl-child for with the changing nature of education systems, changes in families environment and dynamic nature of the world of science into space science and technology, there is need to come up with new emerging factors that influence the education of girls in the Kenyan context.

In this chapter I intended to review the literature related to the problem, that is, determinants of girls' performance in KCSE examination on public secondary school with a specific focus on co-educational schools in Kikuyu division in Kiambu District were examined. The main concern to this chapter was to analyse and comment on the ideas given by others on the same problem such that whatever would come out was to shed light on the subject.

Below therefore is a review of some of researches that have been done in the field. In these studies factors affecting girls' performance have been divided into school environmental factors and social and economic factors

2.1 School environmental factors

2.1.1 Teachers' attitude and influence

The teaching force is assumed to be a factor with effects on students' performance. A study by Eshiwani (1985) points out that quality of education depends on the quality of its teaching force in that professional teachers have been trained on best methods of organizing and presenting subject matter to the students. Moreover, they have been trained on how to guide and counsel students who are not taking their studies seriously. This is because such teachers have been

taught techniques on how to capture students' attention and to sustain that interest in learning.

Teachers have a special role of controlling all the instruction and learning environment in the classroom. Kelly, (1987) recognizing the role that teachers in effective teaching warned that "teachers should not assume that methods which are successful with boys will automatically be successful with girls but should be sensitive to sex difference in interpersonal relationships".

Teachers' attitudes behaviour and teaching practices are the most significant implication for female retention in schools (Waweru, 1994). Teacher's attitudes towards their students are a reflection of the broader social biases about the role of women in society and the academic capacity of girls (Brock and Cammish, 1991). In Zimbabwe, there is gender discrimination by secondary school teachers with boys receiving more attention and being given priority in the distribution of school books and other learning materials (Graham- Grown, 1991) Teachers' experience and commitment to students' emerge as key characteristics for successful learning (Waweru, 1994).

Teachers have tremendous influence on students' achievement and consequently on their aspirations and expectations. Rosenthal and Jacobson (1968) supported this and Rist (1970) who confirmed that teachers' assessment and perception of students' potential abilities to succeed in school work turned out to perform as expected by their teachers. The attitudes of teachers thus serve to reinforce girls' self-concept on academic achievement. Munguti (1984) in support of this noted that teachers' positive attitude has been known to attract more students in their classes and hence promote achievements in the subject they are teaching.

Teachers' attitude towards their work and pupils, class management and their interaction with pupils have a great impact on the academic achievement and retention in school of their pupils particularly girls. Abagi (1994) says that few

classroom observations in Kenya, indicated cases where teachers negative attitudes "push" pupils out of school, such pupils are sometimes neglected, abused, mishandled and sent out of class during teaching/lecturing periods. This atmosphere is not conducive to learning and makes some children especially girls hate going to school. Abagi concludes that obvious results of all are absenteeism and poor performance if not non- completion of the education cycle.

It is therefore important that pupil teacher interaction is perfected in schools to improve teaching learning process. Behaviour of some teachers can be contradictory and at times can consciously discourage pupils of certain gender from actively being involved in the learning process for example the languages used in the classroom is very crucial (Wango, 2000). This included such comments as "Accounting and Economics are difficult for girls" it should be noted that subjects are not gender specific.

Another factor is that teachers need to pay attention is on answering of questions in class. Teachers often tend to ignore the slow learners and concentrate on fast learners. Indeed, it appears that teachers, both male and female interact slightly more often and more positively with boys than girls (MOE population council, 1997). The research revealed surprisingly the preference to teach boys strong among female teachers than male teachers.

According to the Forum of African Women Educators (FAWE) biased treatments by women teachers is often more blatant. Secondary School girls in Kenya for example reportedly feel that women teachers discriminate against them more than their male colleagues do. Wamahiu (1997) quotes studies that conclude that female as well as male teachers treat pupils with sex biases.

A number of studies show that teachers do not simply believe in girls' intellectual capabilities. A presentation to a UNESCO seminar in Bangkok describing a sample of Korean teachers revealed their overwhelming belief that boys are

naturally superior to girls in Mathematics and Science. Teacher's attitude, action and words can discourage girls and hamper their progress in school (Niger country report, 1996).

In "Girls African Research and Action to keep girls in school" FAWE (OPCIT) points out that teachers attitudes inflate and deflate girls as less able to learn than boys hence girls are steered towards stereotyped subjects as needlework or cookery rather than science and technology. The views of FAWE agree that curriculum does little to elevate girls to higher positions because of their low confidence, discrimination and attitude instilled in them, hence they drop out of school or perform poorly.

In the late 1970s' a World Bank sponsored study of 32 developing countries established that teachers training make a difference, and the teachers qualification, experience and amount of education and knowledge are positively related to pupils achievement (Hussein, Sahara and Noorman,1978;Comber and Keeves,1973).

2.1.2 Learning facilities, equipment and materials

Studies with a number of African countries have found a strong relations between resources and students' achievements, Fosters, (1980); Heinemann (1984) Laboratory work has been found to determine the performance of students in sciences. Textbooks availability has been shown to be consistently related to achievements in less industrialised countries.

In Kenya recent studies regarding factors influencing academic performance are those carried out by Kathuri (1982); Mwangi (1983); Maundu (1981); Achola (1999); Orodho (1996). Orodho (1996) found that there is a positive relationship between a students' achievement in physics and chemistry and the level of adequacy and science textbooks, laboratories apparatus and chemical, textbooks and exposure to practical exercises.

The provincial working committee on improvement of educational standards in Western Province (1998) found that inadequate supply of learning resources and lack of essential facilities was responsible for falling standards in schools performance in national examination in Western Province. Available evidence demonstrates that education's inputs which includes physical facilities and instructional materials do have an impact on pupils learning and achievements and the best educational programmes can be frustrated by lack of instructional materials (Rosenberg 1998, Lockheed and Verspoor, 1991, Farreh and Heinemann, 1987).

Poor learning environment in developing countries have often been identified as one of the factors that deter girls' participation in schooling (UNICEF, 1993). The poor state of school is evident in the physical state of the institutions of learning apparent in lack of equipment and learning materials. Those facilities available are inadequate and dilapidated often lacking basic amenities like water. In education, among the most important instructional materials that have shown to have significant influence in the teaching learning process are textbooks and other reading material. Studies have pointed to the evidence, particularly in the developing countries that availability of such materials has positive effect on school effectiveness (Farell, 1993, Farrell and Heinemann, 1989, Lockheed and Hanushek. 1988).

The findings of Wamahiu, Opondo and Nyaga (1992) supported this view. These scholars carried out a study on educational situation for the Kenyan girl-child and established that poor learning environment in the unaided (Harambee) schools, restricted curriculum, lack of laboratories and unqualified staff. led to poor performance. by a majority of students in the national examinations in Kenya.

Eshiwani (1983) study on the factors influencing performance among primary and secondary schools in Western Province of Kenya had similar findings. He

established that schools which had the best facilities in the province were among the high achieving schools, while those with inadequate facilities performed poorly in the national examinations. Among facilities Eshiwani considered as important were: libraries, textbooks, classrooms, dormitories, visual aids, electricity, water and play grounds, based on these findings he concluded that, the presence or absence of school facilities distinguished between high achieving and low achieving schools. According to his studies, the environment in which the individual students lives influenced how she/he perceives herself/himself and shapes his/her aspirations, self-esteem and motivation. Therefore the environment can either enhance or hinder a student's learning and education attainments.

Mbithi (1983) pointed out that "... among the many explanation that may be advanced for under representation of girls in science is lack of facilities for science education in girls schools, the schools find it difficult to meet certain requirements to enable them to offer biological and physical science subjects". This in turn does not inculcate confidence in girls in handling laboratory equipment.

A study by Forum for African women educationalists (FAWE) revealed that most girls underestimate their own academic ability and believe boys to be more superior and intelligent than them and therefore capable of handling difficult" subjects like Science, Mathematics and technology boys in turn perpetuate this myth by exhibiting a "macho behaviour" among the school for example by "laying claim" to and dominating most of what they consider to be "masculine zones" such as computer rooms, science laboratories, mathematical and technical equipment, sports and gymnastics areas. Some openly ridicule girls who dare to venture into what they consider "masculine subjects" as they regard girls as dumb, naive and petty and they have no business with things they do not understand. The school and classroom culture define to a great extent the self-image of the girl which in turn influences her performance achievements and level of educational attainment.

The pedagogy of difference undermines the education of girls and will continue to do so as long as gender bias prevails. Women and girls are marginalized and devalued in most African textbooks. Women and girls are mentioned fewer times than men, and boys. When they are mentioned, they are portrayed as passive, dependant, weak, fragile, and even dumb and engaged in poorly paid or less prestigious occupations (Fame, 1990).if girls are given equal opportunities as the male counterparts, it will make girls aware of their potential and hence enable them to realise their abilities to the fullest. This would prepare boys and girls for mutual support roles in school, at home and in their country. They would consider themselves as counterparts who can work together.

2.1.3 Subject choice guidance and counselling role in school and career preference for girls

Guidance and counselling helps strengthen students own abilities to make wise choices and to face problems encountered in the society. "And those who fall by the wayside because of physical, intellectual or emotional inadequacy need special guidance. To provide every student with special information, services and opportunities to enable him/her to develop his/her abilities, aptitudes and capabilities to the fullest (Durojaiye, 1972).

In secondary schools, teachers are involved in career guidance programmes. The Gachathi report (1976) recommended that career guidance in schools for girls be improved. Eshiwani (1985) nine years later made similar recommendations that career guidance programme in the school especially for girls be improved. Although career guidance in schools have generally been improved over the years, emphasis has not been made in girls' schools as recommended above. Many students still select their career totally unaware of what chances exists in areas connected with their study. This was also supported by Keino (1985) who in his report in opportunities for females in technical training in Kenya observed that the formal schooling system predisposes girls to shy away from technically oriented careers and hence the need for strong career guidance and counselling

services in schools to guide girls in the different careers that different subjects lead to.

Crites (1969), Vondrock, Wallace, Boscious and Ospon (1994) say that what influence one to occupational aspirations is exploration, decision making and planning, all these play an important role in adolescent career choices, they say that countries where equal employment opportunities have emerged, explorations of various career factors is critical in adolescent career development. Adolescent often approach career explorations and decision making with considerable ambiguity, uncertainty and stress. Many of the career decisions made by youth involve floundering and unplanned changes. Many adolescent do not adequately explore careers on their own and receive little direction from guidance counsellors at their schools (Fugua Blum and Hertman, 1987, Schulenbserg et al 1988).

The persistent of gender stereotyping within education and thereafter on the labour market has been extensively researched on in recent years, McTeen 1886; Griffin, 1985; Kelly, 1989; Shemesh, 1990; Colley et al. 1994, Light body et Al 1996a). Many studies have shown that, within the school boys, prefer science and technology, while girls tend to prefer language, social studies and humanities (McTeen 1986; Shemesh 1990).A number of explanations have been proposed for this imbalance, including the sex-stereotype of science and technology (Pratt et al 1984; Cockburn, 1985; Whyte, 1986; Culley, 1988; Gati, 1992).It has also been suggested that the "hidden curriculum" within the school actively reinforce gender stereotype that young people have preconceived ideas about careers in science and technology (Fuller, 1991), and that the main influence in subject choice comes from peer pressure which may be towards subjects which are perceived to be gender appropriate (Newton, 1986).

Research shows that both school pupils and further/higher education students continue to regard some subjects including engineering, the physical sciences and mathematics as masculine and others including English, French, Biology,

Psychology and Sociology as feminine (Ancher and Freedman 1989; Radford and Holdstock, 1995). However it should be noted that other studies have suggested a decline in gender-stereotyping of school subjects (Archer and MuCrae, 1991; Archer, 1992).

It is possible that for some female school learners' avoidance of careers in science and technology may not be initiated at a conscious level. Sandra Bem, (1993) proposed that hidden beliefs about sex and gender roles which she labelled "lenses of gender" are so deeply entrenched in society that they are no longer visible, nevertheless, she claimed that their pervasive qualities permeate our entire culture. If teachers are to succeed in encouraging girls to perform well particularly in sciences where they lag behind and subsequently participate in science related courses, they have to make sure that girls are given career guidance in science-related fields. Gender stereotype in subjects has to be removed as both girls and boys can be equally successful in all subjects whether a male of a female makes no difference on how you can perform in different subject area. Results KCSE examination such as Precious Blood Girls Secondary School Riruta, in Kenya in 2003 attest to this view where girls had an exemplary performance in all subjects with the highest mean score of 10.7640 as compared to their counterparts the boys on the same, important factors thus should be skills, abilities and interest and extent to which working conditions and nature of job is acceptable in making decisions on career choice not being a female or male, placing sex biased expectations in career and subject choice only creates limitations on the choices as a boy or girls. Therefore students should be guided in career and subject choices based on their abilities, interests mainly based on what they excel in and what they would want to be.

2.1.4 Type of school influence

There is much commentary on the educational outcomes related to the type of institutions girls have access to, this is, single sex, co-educational, private, government funded or community funded. A study carried out in Kenya found

that girls' performance in examinations was poor in rural areas and twice as likely if the institution was co-educational (MOH / GTZ support Unit, 1988)

Public debates in most countries has been wide-raging as to the merits of single sex as compared to co-educational schools. The experiences of some countries indicates that girls' educational attainment is better when they learn on their own. The same experience occurs when girls are in boarding rather than day schools. The boarding facilities provide a safe environment for girls especially in single sex female schools (UNICEF, 1993). There is evidence that co-educational secondary schools are not good for girls as compared to unisexual schools. Girls are likely to suffer from sexual harassment from their male counterparts (Mackenzie, 1993).

This is further revealed by a research on career and educational aspirations which noted that girls in co-educational schools have extremely low educational and career aspirations as compared to girls attending unisexual schools Kibera (1993). She established that though both are disadvantaged in such schools, girls are the worst hit.

Swanson (1995) conducted a study to find out factors affecting performance of students in public schools in three countries of Southern Africa (Malawi, Zambia, Zimbabwe). The study established that performance by boys and girls in single sex schools were better than performance of boys and girls in mixed schools.

According to the findings of the study, mixed secondary school environment presented some difficulties that undermined the performance of girls much more than boys. The study singled out girls in mixed secondary schools as worst affected by lack of social reward for good performance. Duncan (1986) concurred with Swanson when she confirmed that pressure for girls in mixed schools to conform to gender typed classroom environment interfered with their achievement.

2.2 Household based environmental factors

2.2.1 Socio-Economic backgrounds

Given the prevailing economic crisis in Africa, poverty is widespread and affects schools and families alike. Literature indicates the extent to which parents have to cover the shortfalls due to fiscal crisis that has had a devastating impact on household income and educational system (Asomaning, 1993).The trend to shift educational costs to parents in the name of cost sharing is especially likely to work against girls' education (Kinyanjui, 1993).

Poor parents are increasingly unable meet educational costs that include tuition fees, uniform, textbooks and building and activity fees among others. Costs associated with schooling are higher for girls than for boys (Davidson and Kanyunka, 1992). This is due to the high costs of girls' uniform, transportation costs, sanitary protection and under clothes among others. A study carried out in Zimbabwe indicates that at onset of menstruation, girls have no underwear or sanitary protection they remain at home while menstruating and this undermines their confidence on their return to school and ultimately contributes to poor examination performance resulting from truancy (Camfed, 1994).

The opportunity cost of sending children appears more of a concern with regard to girls than boys. While the importance of child labour for agricultural, domestic and marketing tasks have been well documented, when it comes to childcare, girls are more involved than boys. This leads to absenteeism, poor participation and gradual withdrawal from school. The demand for domestic labour in urban areas has led the resource poor rural households to sending their daughters into domestic labour market in exchange for regular cash income. This draws girls away form school and leaves them with little opportunity to return to school impacting negatively on their examination performance (Fanta, 1991).

The argument that socio-economic background of students tend to influence their performance is advanced by supporters of the "good home" theory, Tyler (1977)

in Ayoo (2000), they maintain that students whose parents are educated tend to be provided with an enabling environment that stimulates education. They are also encouraged by their parents to study and read relevant books and literature. It is assumed that the provision of good reading materials and intellectual environments motivate students to learn and gives more exposure to the students.

Studies that have been carried out in developed countries have shown that performance of boys and girls was significantly related to socio-economic background of their parents Duncan, (1989) established that one way in which a family's socio-economic background affected school achievement was through the type of school attended. Children from deprived homes, despite their mental potential tended to go to cheaper, low performing schools, whereas their counterparts whose ability could be average could go to well performing schools because their parents could afford. The choice of school therefore was found to be a main determinant of educational attainment and later educational placement.

The findings of Ministry of Education and Technology MOEST (2003) technical working group on the sector and development reveals that socio-economic and educational background of the parents have a direct bearing on educational quality. The group pointed out further that due to cost sharing policy, parents were expected to pay towards the provision of textbooks, building classrooms and other expenses, with increasing poverty in the majority of households, with 46.8% of Kenyans living below poverty line, most parents cannot afford to pay for those requirements. They conclude that schools patronised by rich parents subsequently perform better in national examinations.

2.2.2 Home environmental influence

As a factor home environment also plays a key role in the academic performance of a student. It designates all the objects, forces and conditions in the home which influence a child physically, intellectually and emotionally. The home

environment varies on many aspects such as parents level of education, economic status, attitudes, values, interests, parental expectations, family size among others

Studies conducted elsewhere in Africa reveal that home environment contributes substantially to different academic achievement levels by girls and boys. Swanson, (1994) in Ayoo (2002) in his study on the constraints to education in Malawi, established that both boys and girls participated in household tasks, but gender differences in their participation level were substantial with girls performing more chores than boys. He also established that the situation was more demanding for girls from poor families. He contended that in poor households, there was greater demand for domestic labour for girls, given the economic needs of such households consequently, girls experience loss of concentration levels during lessons due to exhaustion and attend school more irregularly and less intensively thus, performing poorly in national examination.

Kathuvysky et al (1967) equally stressed on the importance of home environment in contribution towards attainment. They found that children who had warm, nurturing and accepting parents were likely to master their environment. They stress parental encouragement as important in achievement. It is the interest which the parents will consistently show in their children's school progress if not actual help which will lead to better schoolwork not the fact that parents have good jobs and are themselves educated.

According to Bjeren, (1967) good socio-economic conditions facilitate studies while poor one hinder them. A big number of children fail because of the poor financial states of their parents such children are sent away frequently because of lack of learning materials such as pens and textbooks. It was argued that the pupils are adversely affected. The poor atmosphere at home negatively affects the pupils in schools. This is usually the case in homes which do not have study facilities to enable children to do extra schoolwork and homework. Where

children do not have facilities to supplement what is learnt in schools learning is thwarted and slow indeed

Kemp, (1995) found a strong relationship between socio-economic status of the parents and the child's school attainments. Research carried out in the 1960's and 70's in Western countries concluded that social cultural, economic and political structures are the main determinants of school outcome (Coleman et al 1966, Bowlers and Griffins (1976). Findings of survey of British school children agree with American studies conducted by Jenks, (1972) and Coleman, (1966) and emphasize the influence of the home as an important contributor to variation in academic achievement.

Plowden study (1967) noted that school teacher and other related factors accounted for 28 per cent of the variation with student achievement while home circumstances explained 20 per cent of the variation in performance (Plowden et al 1967; 33). Plowden further reports that in general "The higher the socio-economic group, the more parents attend open-days, concerts and Parents Teachers Association meetings and the more often they talked with heads and class teachers about how their children were doing in school (Plowden et. Al, 1967;15).This suggests that the more education and well paid parents showed greater concern for academic progress of their children than parents with low education and poorly paying jobs. Parental occupation also tends to have an influence on academic performance of their children, as well as parents level of education, family size, learning facilities at home.

2.2.3 Parental attitudes' influence on the academic performance of girls at Kenya Certificate of Secondary Education

In respect to the role of parents and their effect on girls' performance in examinations, it has been postulated that family environment impinges on curriculum and influence the quality of school practice. This is due to the fact that the family is represented in school organizations. These associations influence the

implementation of curriculum and school practices through ideas and financial support

The curriculum, school quality, and school practices influence the girls' educational aspirations and expectations which is further reflected in the students' performance in the various school programmes. It is further noted that initial experience that mould an individual's values, aspirations, emotions and attitudes are those that are offered by parents and other close members of the family. Parents' values, aspirations and interests are subtly and unwillingly transferred to their children. The kind of activities a parent encourages his/her children to take part in has a direct influence on their future development. This leads to stereotyping which begins right from home and sets the pace for the latter pursuits of their children.

Girl's education in Africa and elsewhere is plagued by pedagogy of difference by a way of educating boys, girls, man and woman rather than similarities. Such pedagogy of difference starts at home and in the community. Parents educate girls differently from boys because the parents, relatives and community at large perceive girls to be radically different from boys. McDonald (1985) in reporting the way the parents view girls observed that most parents believe that girls do not have qualities of independence, initiative and assertiveness hence reinforcing the believe that girls cannot do science as much as boys. In close relation to this is the tendency for girls to be given many chores in the house thereby reducing their study time and basically the chores revolve around the societal expectations of women.

Parental influence has been cited as a factor which influence learning as it may enhance positive self-esteem which improve performance. Muola,(1990) found that children whose parents encourage them to do well in school, have interest in their schooling, are actively involved in their school work and perform better in national examinations.

FAWE (OPCIT) says that traditional practices and attitudes are responsible for girls not wanting to aspire for higher education. Parents feel that sending their daughter to school takes up too much valuable time that could otherwise be spent teaching them their traditional role in the society. The general belief is that educating boys makes more sense given their ultimate role as family heads and breadwinners and make parents pull their daughters out of school. Court et al (1974; 17) agrees with the above and says "fewer girls than boys go to school or work their way up the educational ladder. There are fewer places for them and the main reason for this is less pressure from parents to have girls educated. The reluctant has little to do with traditional attitude towards women. It is that families cannot afford to send both sons and daughters to school as they reckon that financial returns to expenditure for girls' education are a great deal smaller than that of boys.

Gakuru et al (1982) noted that the co-operation and support from parents is important in any learning process. Griffin, (1996) has also accorded parents participation great importance as a factor determining the pupil's performance in an examination. He pointed out that parent's involvement is an important element in the learners' academic achievement and that this relationship was observed even when the school student population, teacher qualification and experiences were controlled.

Kathuri cited in Asuga (2002) revealed that children whose parents paid regular visits to school to find out their progress or attend school functions do better academically than those whose parents never paid such visits. Ayoo (2002) in her study on factors affecting academic performance in KCSE examination in public secondary schools in Maseno Division also agreed with the view that parents involvement in school functions has a positive effect on performance and examination.

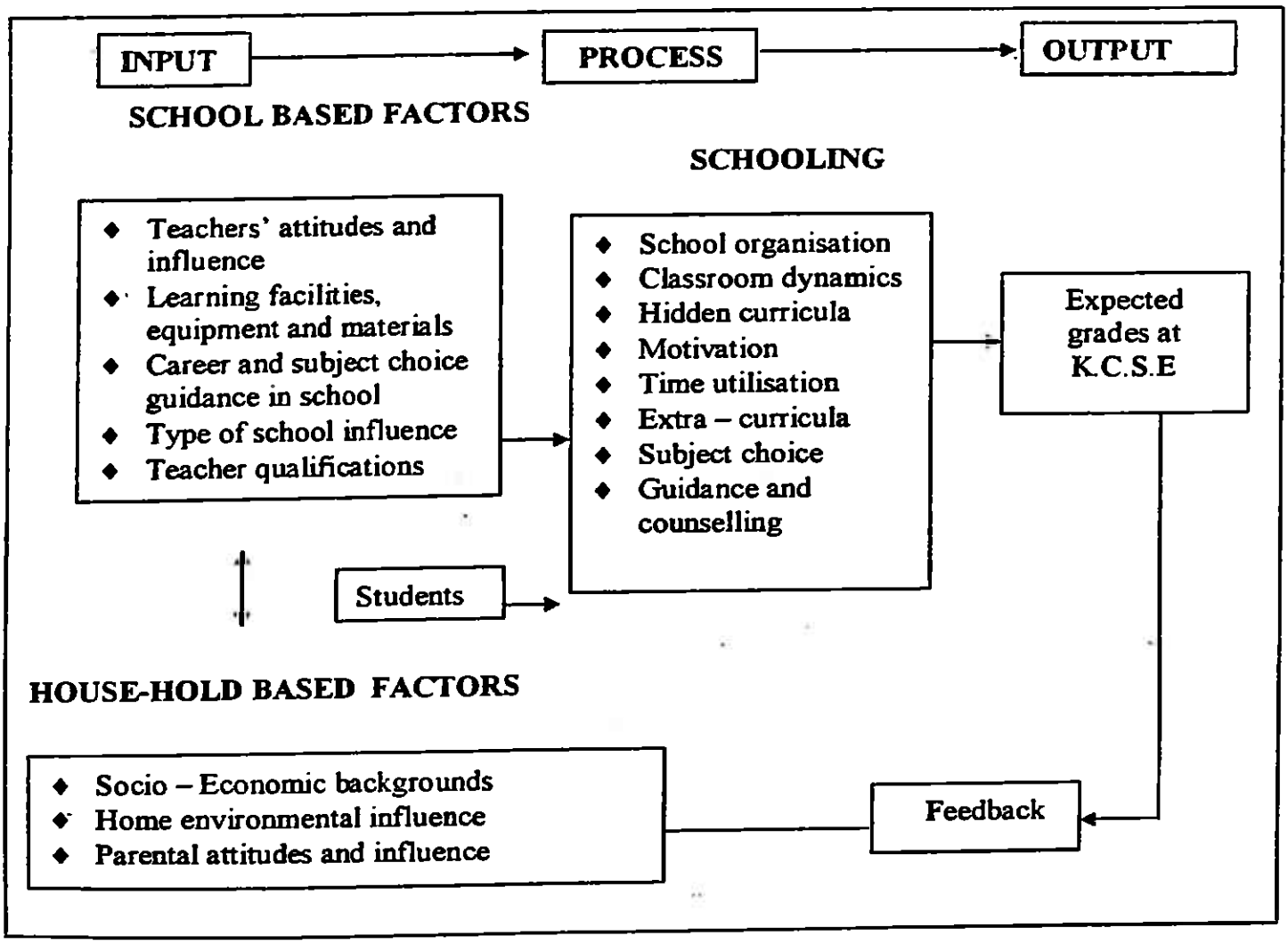
Parental attitudes have also a role to play in the academic attainment of a child. Acceptance of a child, rejection and overprotection or over indulgence will have different effects on schooling and academic performance of a child. Positive parental attitude will lead to acceptance of a child who will develop into an enthusiastic, responsible, calm, attentive, optimistic and relaxed child. Such a child is capable of doing well in national examinations. Such positive parents would also provide learning resources to their children, motivate them, follow up their performance and these would lead to excellent results.

Parents serve as useful guides to the academic fields which their children pursue. They can build self confidence in their girls to help them develop high esteem, high degree of independence and encourage them to participate in those activities that will help them develop interest in academic work thereby perform well especially in sciences where they are generally known to be performing poorly.

2.3 Conceptual Framework on the Determinants of Girls' Performance in KCSE Examination in Public Secondary Schools

Basically a conceptual framework outlines the factors that are associated with the subject of study. In this case it has enumerated the factors that are thought to have an effect/influence on girls' academic performance at Kenya Certificate of Secondary Examination. These factors are presented in Figure 1 below.

Figure 1: Conceptual Frame on the determinants of girls' performance in KCSE Examination in Public Secondary Schools



In this study, girls' performance was conceptualised in a process perspective (input-process-output). Students go through schooling process at the end of which they are examined through the KCSE examination. Their scores in Kenya Certificate of Secondary Education Examination is the output. The home environment seems to influence the school-based factors. Both school based factors and home environment (inputs) determine what takes place in the school (process of schooling). In turn, what takes place in the school is expected to determine the level of pupils' performance in Kenya Certificate of Secondary Education Examination (KCSE). The Kenya Certificate of Secondary

Examination (KCSE) Examination provides feedback to the school and the home environment leading to adjustment for improvement

2.4 Summary of literature review

In this chapter, various factors that hamper girls' performance have been discussed. The factors have been discussed under two categories. The first category includes school based factors such as teacher's attitudes and classroom interactions, teaching and learning resources such as text-books, facilities such as laboratories, toilets, career guidance and subject choice in school, and the type of school attended. The second includes household environmental based factors such as socio-economic backgrounds of the learner, parental attitudes and influence including involvement in school matters. From the foregoing literature reviewed, it is evident that the factors cited both the school and the household factors have militated against the achievements of girls in education. This therefore triggered a need for study on the factors that influenced performance of girls in order to find viable solutions to the problem.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This research study was set out to find out the determinants of girl's performance in public secondary schools with a special focus on co-educational day institutions in Kikuyu Division in Kiambu District.

To be able to realize its objectives, there were certain considerations that were of great importance. These included the research design, target population, sample and sampling procedure, research instruments, instruments validity, instruments reliability, data collection procedures and data analysis techniques.

3.1 Research design

The research design used was expost facto research design defined by Kerlinger as cited by Ndiritu (1995) as "... systematic empirical inquiry in which the scientist does not have a direct control of independent variables because their manifestations have already occurred or because they are inherently not manipulable inferences about relations among variables are made without direct intervention from concomitant variation of independent and dependent variable (1967) in Ndiritu (1998)." The design was used to investigate into determinants of girls' performance in public secondary school in co-educational schools in Kikuyu Division in Kiambu District. The design was recommended for this research because it involved conditions or events that have already occurred and the researcher has no direct control of the independent variables such as sex, age, academic qualifications, administrative experience, geographical location, school size among others.

The independent variables cannot be manipulated (factors that determine girls' performance) and the dependent variable (Kenya Certificate of Secondary Education), KCSE performance has already occurred. In this research therefore

the determinants of girls' performance in KCSE examination were investigated so as to determine their effect on girls' performance in national examination (KCSE Examination)

3.2 Target population

The population of this study confined itself to the selected co-educational and unisexual public secondary schools in Kikuyu Division in Kiambu District. The inclusion of both single sexed and co-educational schools enabled the researcher to establish the influence of both school and home factors on academic performance of secondary school students.

3.3 Samples and sampling procedures

The participants used in this study were selected from co-educational day schools and unisex schools in Kikuyu Division. The target population for this study consisted of teachers handling Form three (3) classes and form three (3) pupils/students and the head-teachers of these schools.

The headteachers are the organizers and facilitators of teaching and learning process in their schools and were thought to be in a better position to provide general information about the schools.

Teachers handling the Form three (3) classes were also in contact with the students almost on daily basis, they were also preparing students for next year's Kenya Certificate of Secondary Education examination (KCSE examination) and hence most likely to have had more reliable information about the determinants of performance in KCSE examinations.

Sampling Procedures

The representative schools were randomly selected. A total number of eight (8) schools out of twenty three (23) public secondary schools in Kikuyu Division participated in this study. Those eight schools represented over 34 percent of the

total number of school in the division. Stratified, simple and purposive random sampling procedures were utilised in this study.

Four schools which were co-educational day secondary schools were selected Two (2) which were unisexual girls and two others which were boys public secondary schools were selected to be participants mainly using the stratified, simple and purposive random sampling procedures. Each class has about 40 students, therefore in single streamed school, all the students participated in the study. However, in a multi-streamed school, simple random selection procedure was used. Using this sampling procedure, fifty girls 50 (37.3% were selected from multi-streamed girls' school using simple random sampling technique. All the thirty one 31(23.1%) girls from a single-streamed girls' school participated selected through purposive sampling procedure. All girls 53 (39.6%) from single-streamed schools that were co-educational were participants selected through purposive random sampling procedure. For the boys, thirty four 34(32.1%) from multi-streamed single sexual schools were selected using simple random sampling procedure. All boys 72(67.9%) from the single-streamed mixed schools participated and were selected through purposive sampling procedure A total of one hundred and thirty four 134 (100%) girls and one hundred and six 106 (100%) boys participated. The total number of students' participants totalled to two hundred and forty (240).

The headmaster was automatically selected as a respondent in all the participating schools selected using purposive random sampling totalling to eight of them (8). For the selection of teachers, the researcher obtained both males and females separately. From the number each was allocated a number (males and females) separately. They were then sampled through stratified random sampling, from each of the eight schools, two (2) females and two (2) males participated totalling to thirty two (32) of them.

3.4 Research instruments

The research employed self-administered questionnaires. These were used to obtain information from the head-teachers, teachers and students. The questionnaire was preferred in the study because all those taking part were literate and capable of responding to the items on their own. The researcher therefore constructed the questionnaires for the different respondents.

One was constructed in form of a questionnaire for the head-teacher of the school to be used as a guide to obtain information on the administrative and professional aspects of the school including matters related to gender concerns in the institution prepared as shown in Appendix B. Another questionnaire was prepared for the teachers handling form three classes as presented in Appendix C requiring teachers to respond accordingly as guided. For the pupils/students, a questionnaire schedule was prepared which required yes or no responses and attitude items which are rated on an attitude scale based on likert five point method and this was used denoted as appendix D. Structured close ended and open ended questionnaires were carefully developed by the researcher with the help of the supervisor and self-administered by the researcher.

Finally documentary analysis was used as a tool for the purpose of obtaining more data and probably supportive evidence of collected data. These tools were dished out to the relevant persons by the researcher and administered personally.

3.5 Documentary analysis

Information on the number of public secondary schools and their respective KCSE performance analysis in the District and in the Division for the last four consecutive years (2000-2003) was obtained from the DEO's Office Kiambu. Other relevant documents were obtained from the MOEST headquarters Nairobi stipulating performances of public secondary schools in KCSE examination nationally. School documents such as class registers were also perused that gave supportive evidence on school attendance of the students'. School inventories and

ledgers were handy in this research and were utilised to obtain information on availability and adequacy of the learning resources in the schools. This was used to support information pertaining the status quo on availability and adequacy of the learning resources in the various schools.

3.6 Validity of the instrument

Validity of the instrument is its ability to measure what is intended to measure (Borg and Gall 1989: 249). Two processes were involved in validating the instrument. The first process involved consultation of experienced graduate research supervisors from the department of educational administration and planning to assist in improving the quality of the instrument or its ability to measure what it is intended to measure. The second process involved pre-testing the instrument. In this process, a pilot study was conducted on a population similar to the large population. Muhusa (1988) suggests that a researcher can select ten (10) subjects from the total number of subjects to participate in the study. The pilot study was thus conducted with the head-teachers, teachers and pupil/students whose responses and discussions with the researcher helped to identify items that might have been difficult and ambiguous. Such items were modified appropriately hence the piloting stage enabled the researcher to pre-test the instruments for clarification and to ascertain that they captured the data that was required. For an instrument to be valid, it must be reliable.

The pilot study was therefore to establish the validity and reliability of the instruments of the study. The respondents contacted through pre-test were not included during the final administration of the research instrument, this helped control of the extraneous influence on the research findings due to prior knowledge of the information required by the instruments.

3.7 Reliability of the instruments

Best and Kaln (1998) defined reliability as the degree of consistency that the instruments or procedure demonstrates whatever it is measuring it does so

consistently. Mugenda (1991) defines reliability as a measure of the degree to which a research yields consistent results or data after repeated trials. However reliability in the research is influenced by random error. As random error increases, reliability decreases. Random error is the deviation from a true measures due to factors that have not been effectively been addressed by the researcher.

These errors might arise from inaccurate coding, ambiguous instructions to the subjects, interview fatigue and interviews bias. Consequently the researcher in designing and administering of her instruments took care of these errors.

There were three questionnaires in this study. The items reflected the objectives and research questions. The pilot-study that was undertaken thus addressed the question of validity and reliability of the instruments used in the study.

3.8 Data collection procedures

The researcher conducted the study in Kikuyu Division after obtaining permission from the Office of the President. Thereafter the researcher paid a courtesy call to the District Education Office in Kiambu District.

In matters of procedure, preliminary visits were conducted in which the headteachers were made aware of the impending study. Arrangements were then made for the researcher to meet the Form Three students and their teachers. The selected students and their teachers filled their respective questionnaires. The head-teacher too filled the questionnaire.

The questionnaires for the students tapped information on their socio-economic background and the school factors while those of the headteacher and teachers dwelt on their demographic school factors and their attitudes to students abilities to learn.

During the data gathering exercise, respondents assured that strict confidentiality was to be maintained in dealing with their responses. This phase was expected to take one month after which the questionnaires were personally collected by the researcher. The resultant information was used to arrive at the conclusion on the determinants of performance of girls in Kenya Certificate of Secondary Education examination (KCSE examination).

3.9 Data analysis techniques

After collection of data, the responses in the questionnaires were tabulated, coded and processed by the computer. The data was further analysed and interpreted to provide meaningful results. Descriptive statistics was also used to analyse the responses. The simplest way to present data according to Brinker (1988) is in frequency or percentage table, which summarizes data about a single variable. Frequencies are converted to percentages (%) so that they are easier to interpret hence in view of the above ascertation, the researcher thus analysed data and presented the findings of the research in chapter four in percentages (%) and frequencies.

CHAPTER FOUR

DATA ANALYSIS, INTERPRETATION AND DISCUSSIONS

4.0 Introduction

The data analysis in this chapter was aimed at addressing the purpose of the study which was to identify the determinants of performance of girls in public secondary schools in Kikuyu Division in Kiambu District.

The first part of the chapter presents the questionnaire return rate. The second part presents the demographic and background information of the respondents and including the Kenya Certificate of Secondary Education Examinations (KCSE) results obtained by the eight public secondary schools in Kikuyu Division covered.

The third part presents the major findings of the study as they relate to each of the four research questions advanced in the preceding chapter. The researcher restates those questions and presents evidence linked to their findings separately in the sections which follow.

The questions below formed the basis of the analysis:-

i) Do the parents/guardians' level of education have an effect on performance of girls in KCSE examinations?

ii) Do the teachers' perceptions about girls' abilities influence girls' performance in KCSE examinations?

iii) Does the adequacy and availability of key facilities, equipment and materials provided influence girls' performance in KCSE examinations?

iv) Does availability of guidance and counselling on subjects choice by teachers influence girls' performance in KCSE examinations?

The researcher presented the findings first by cross simple tabulation analysis and then by use of quantitative analysis of frequencies and percentages statistical analysis. The results of this study are thus reported under six headings:-

i) The questionnaire return rate
ii) Demographic and background information of respondents and KCSE performance by schools in Kikuyu Division.
iii) The socio-economic backgrounds of the girls and how it influences their performance in KCSE examination.
iv) Teachers' perceptions about girls' abilities and how it influences girls' performance in KCSE examination.
v) Availability and adequacy of school facilities, equipment and materials and how they influence girls' performance in KCSE examinations.
vi) Availability of guidance and counselling services in schools and how it influences the girls' performance in KCSE examinations.

4.1 Questionnaire return rate

The table 4 below shows the data on questionnaire return rate from the various respondents involved in the study.

Table 4: Questionnaire return rate

Respondents	Delivered	Returned	%
1. Students	240	240	100.0
2. Teachers	32	32	100.0
3. Head teachers	08	08	100.0
Total	**280**	**280**	**100.0**

The table above indicated that the questionnaires administered to the students were two hundred and forty in total. They were successfully returned and duly

completed at a 100% rate of return. As for the teachers' questionnaire, a total of 32 out of 32 were returned with all fully completed.

For the head teachers, the questionnaires administered to the eight (8) of them were all successfully completed and returned, giving a 100% rate of return.

4.2 Demographic and background information of respondents

The data for the study was collected through self-administered questionnaires to form three (3) sets of questionnaires. One set consisted of students' questionnaire. who formed a sample of two hundred and forty (240) who were in form three The other set consisted of teachers teaching the form three (3) students who formed a sample of four (4) teachers; 2 males and 2 females from each of the eight schools totalling to thirty two (32). The final set was composed of all the eight head teachers of the schools under study, totalling to eight (8) respondents. These sets of questionnaires provided information concerning their gender, age, academic and professional qualifications. The district educational officer (DEO) Kiambu was also visited to provide information on the KCSE examination in the division. The head teachers and teachers provided information concerning their gender, age, academic and professional qualifications.

The head teachers provided information concerning administrative experiences. Teachers provided information concerning their teaching experience. The students provided information on their learning experiences. The sample size by school category and respondents is summarized in table 5.

Table 5: Sample size by School categories and Respondents

Category	Students F	Students %	Teachers F	Teachers %	Head teachers F	Head teachers %
1 Mixed school	100	50.0	16	40	04	50.0
2. Boys school	70	25.0	08	30	02	25.0
3. Girls school	70	25.0	08	30	02	25.0
Total	240	100.0	32		08	100.0

The sample by the school categories and respondents from mixed schools formed half (50%) while girls-only category was second with a percentage of 25%. The rest were the boys-only school category, which constituted of 25%. This was deliberately done to come up with a higher sample from the co-educational schools which was the inclination of the research and more so to have more girls' respondents contributing to the views as the research was on determinants of their performance. Boys were included for the purposes of comparison in this research.

Teachers from the mixed school schools formed 50% while others 25% and 25% from boys' only category and girls' only category respectively.

On the basis of the data analysed, it is clear that most teachers came from mixed schools category as they formed 50 % of the respondents among the participating teachers. The gender of the respondents is presented in table 6.

Table 6: Respondents by Gender

Gender	Students F	Students %	Head teachers F	Head teachers %
1. Male	106	44.0	03	37.5
2. Female	134	56.0	05	62.5
Total	240	100.0	08	100.0

The information in table 6 shows that 56 % of the respondents were girls; while boys formed 44% sample. Girls' sample was comparatively higher for the research to be more valid as it was meant to determine the girls' performance. A smaller sample of boys was selected for the main purpose of comparison.

The head teachers' sample constituted of 37.5% of the male head teachers and 62.5% from female head teachers. It emerged from the data that there are higher numbers of female head teachers than the male head teachers in the selected public secondary schools. This is a positive move towards gender equality in positions of power like the schools' administration. The results of teachers' and headteachers' qualifications are summarised in table 7.

Table 7: Teachers' and headteachers' professional qualifications

Qualification	Teachers		Head teachers	
	F	%	F	%
1. S1	04	12.5	-	-
2. Diploma in education	-	-	01	12.5
3. BA/BSc	04	12.5	-	-
4. Bachelor of education	24	75.0	06	75.0
5. Master in education	-	-	01	12.5
Total	32	100.0	08	100.0

The data on teachers' qualifications of the respondents was presented in table 7. This data indicates that 75% of the teachers had obtained a Bachelors of Education Degree, 12.5% had a Bachelors of Arts or Science Degree and 12.5% had an S1 qualification. None had a Diploma in Education an indication that most teachers were professionally qualified with only a few (12.5%) who may have required an in-service course in a professional course in education to upgrade their qualifications in teaching that is, the Bachelor of Arts/Science teachers

teaching these schools. This data is also a real testimony of the prominent problem of lack of professionally qualified science teachers in such schools. To curb this problem, there has been a tendency of schools to result into hiring of science teachers who have had a base of science knowledge like the Bachelor of Science graduates through the board of governors. This does not augur well for they may not deliver the knowledge appropriately using proper educational methodologies hence need for more professionally qualified science teachers in the schools and need for in-servicing of these teachers to be professionally qualified. Another revelation is that teachers of S1 qualification had remained in the same grades without upgrading to diploma levels indicated by the presence of a few in the schools. There was a conspicuous absence of any teacher with a professional qualification of Masters in Education Degree in all the schools sampled signalling the need for more teachers to higher their professional status to higher educational ladders. As for the head-teachers, 12.5% had a diploma in education, 75% had a Bachelor of Education Degree, 12.5% had a Masters in Education qualification while none had an S1 qualification. It is of significance to note from the data that a majority of head-teachers 75% and 12.5 % are highly professionally qualified having attained a bachelors' or a masters' degrees. Next teachers were requested to indicate their workload and their assessment as to whether it was heavy or not the teachers' teaching load is contained in table 8.

Table 8: Teachers' workload

Lesson per week	F	%
15 –20	08	25
21 – 25	14	43.75
26 & over	10	31.25
Total	32	100.0

The analysis in table 8 shows that the majority 43.75% of teachers handle a load of between 21-25 lessons per week and 31.25 % of respondents handle 26 lessons

and above per week while only a few, 25 % , handle between 15-20 lessons per week. The teachers' response on how heavy the workload is summarised in table 9.

Table 9: Response of teachers on how heavy their workload was

	F	%
1. Very heavy	06	18.75
2. Heavy	11	34.375
3. Just light	10	31.25
4. Not heavy	05	15.625
TOTAL	32	100.0

The data in table 9 is an indication that most teachers are well utilized though not fully according to the curriculum-based establishment that requires a minimum load of 24 lessons per week. There remains a few who may not be meeting curricular expectations. Majority of the teachers 34.375% as per the data are of the opinion that their workload is heavy while only a minority 15.625 felt that the workload was not heavy. The teachers' response with respect to in-service training is indicated in table 10

Table 10: Responses of teachers on whether they had attended any in-service course

Response	F	%
1. Yes	18	56.25
2. No	14	43.75
Total	32	100.0

N=32

The data in table 10 above reveals that majority 56.25% of the respondents said that they had attended in-service courses, 43.75% indicated that they had never attended any of the courses. The data therefore reveals that though majority had

attended the in-service courses, there is still quite a number of teachers the 43.75% who had not attended any. This provokes a need for continued in-servicing of teachers as an ongoing process. The age range for these majority teachers was between 31 and 40 years .This data is presented in table 11

Table 11: Teachers age distribution

Age brackets	F	%
Below 25 yrs	-	-
25 – 30 yrs	02	06.25
31 – 35 yrs	14	43.75
36 – 40 yrs	14	43.75
41 & above	02	06.25
Total	32	100.0

The data in table 11 show that the majority of the teachers are in the energetic working age of between 31-40 years. With regard to headship of schools, it emerged that the majority of headteachers (62.5%) had occupied the position for more than five years. This information is summarised in table 12.

Table 12: Duration of being a head teacher in the school

Years	F	%
1. Less than a year	01	12.5
2. 1 – 2 years	-	-
3. 3 – 4 years	02	25.0
4. 5& above	05	62.5
Total	08	100.0

The long service of the headteachers do not seem to have improved the results of their schools.

With respect to responsibilities held by the teachers besides teaching, some 6.25% and 31, 25% had held the positions of deputy headteacher and head of department respectively. This analysis is presented in table 13

Table 13: Position held by teachers

Position held	F	%
1. Deputy head teacher	02	06.25
2. Head of departments	10	31.25
3. Class room teacher	20	62.5
Total	32	100.0

After analysing information on headteachers and teachers, attention focussed on students' and their schools' data. The socio-economic status of students as measured by level of their parents' level of education (father and mother) is presented in tables 14 and 15 respectively.

4.3 Research Question 1 and Results

Table 14: Responses of students on their fathers' level of education

	Girls		Boys	
Responses	F	%	F	%
Did not attend school	-	-	-	-
Below primary education	-	-	04	03.6
Attended primary school	05	03.8	08	07.1
Form 11	10	07.7	08	07.1
Form 1V	57	42.3	18	17.9
Form V	05	03.8	16	14.3
University	39	28.8	42	41.1
College	05	03.8	08	07.1
No response	13	9.8	12	1.8
Total	134	100.0	106	100.0

The results in table 14 above reveals that the majority of the girls' fathers, a total of about 53.8% had attained a Form IV educational level and below, while a minority 35.4% had their fathers with an educational level of above Form IV level. Only 32.6% had their fathers having gone to college and university. On the other hand, 35.7% boys' fathers had an educational level of Form IV and below. A majority of 62.5% revealed that their fathers had attained an educational level of above Form IV and still 48.2% had their fathers having gone through college and university training. Majority of these therefore showed that the girls' fathers had a lower educational status as compared to the boys' which may bring about differences in socio-economic status of both boys and girls in that the higher the educational levels, the higher the prospects of a lucrative job in the economic field and vice versa. The information on the educational level of the mothers of the targeted students is summarised in table 15,

Table 15: Mothers level of education

	Girls		Boys	
Responses	F	%	F	%
Did not attend school	-	-	-	-
Below primary education	-	-	04	03.6
Attended primary school	05	03.8	08	07.1
Form 11	10	07.7	08	07.1
Form 1V	57	42.3	18	17.9
Form V	05	03.8	16	14.3
University	39	28.8	42	41.1
College	05	03.8	08	07.1
No response	13	09.8	02	01.8
Total	134	100.0	106	100.0

The table 15 above indicates that the majority of the girls' mothers, about 53.8% had an educational level of Form IV and below while 32.6% of them had their mothers having attained a level of above Form IV to university education.

For boys' mothers, the data indicated that about 35.7% had attained an educational level of Form IV and below while 62.5% the majority had attained an above Form IV to university education level. Those mothers that attained college and university education were 48.2% for the boys while they were 32.6% for the girls.

The data therefore may indicate that boys have a higher chance of being at an advantaged positions on socio-economic status as their mothers may have higher prospects of better job opportunities as opposed to the girls, whose majority of their mothers have reached lower educational standards hence lower prospects of lucrative job opportunities.

The next section sought to find out the type of schools which boys and girls attended in terms of whether they were day or boarding schools. This information is contained in table 16.

Table 16: Response of girls on whether they board or day scholar.

	Girls		Boys	
Responses	F	%	F	%
1. Day scholar	84	62.687	72	67.9
2. Boarder	50	37.313	34	32.1
Total	134	100.0	106	100.0

The analysis in table 16 revealed that 84 (62.687%) of the girls' respondents were day scholars while 50 (37.313%) were boarders. Thus, slightly more boys 67.9 % compared to girls 62.7% commuted daily from home to school. This is in line with most peoples' tendency to have girls in boarding schools because they believe such schools offer better learning environment than the day schools. The distances that were covered by the respondents between home and school are presented in the table 17 below.

Table 17: Distances covered by girls and boys from home to school

Responses	Girls F	Girls %	Boys F	Boys %
Less than a Km	36	26.9	34	32.1
2 – 3 Km	36	26.9	15	14.3
3 – 4 Km	26	19.3	11	10.7
Over 5 Km	36	26.9	46	42.9
Total	134	100.0	104	100.0

The results in table 17 shows that most of the girls (73.1%) attended schools that were over 2 Km from their homes and only 26.9% went to schools less than a kilometre from home. It is also revealed that boys likewise formed quite a proportion about 66.2% among those who travelled distances of more than two kilometres. However, more boys (44.2%) than girls (26.9%) seemed to travel distances of over 5 kilometres.

After dealing with distances covered by the students to and from schools, information on the family size was analysed. The data in table 18 contains the responses of students about the number of siblings they have in their families.

Table 18: Number of siblings in a family

No. of siblings Responses	Girls F	Girls %	Boys F	Boys %
1 – 5	104	77.6	65	61.3
6 – 10	21	15.7	34	32.1
11 – 15	03	2.2	04	03.8
No response	06	4.5	03	02.8
Total	134	100.0	106	100.0

The data in table 18 reveal that the majority (77.6%) of the girl respondents had between 1-5 siblings. Only a few of the girls (21.6%) had over six siblings.

On the other hand, (61.5%) of boys had 1-5 siblings while 32.1% (almost double of the girls) had between 6-10 siblings

The study also dwelt on provision of counselling in school. Majority of the girls and boys, 75.5% and 78.6% respectively revealed that there was provision of the services in their schools. A few students (girls and boys) indicated that they had no such services with 25% and 21.4% respectively.

To assess the involvement of parents/ guardians in their children's work, they were requested to state the number of times they visited their schools. The information showing whether parents visited the schools where their children attended schooling is contained in table 19.

Table 19: Students' responses on whether parents/guardians visited schools to check on their academic performance

Responses on parents'/ Guardians' visit to schools	Girls		Boys	
	F	%	F	%
1. Never	34	25.0	23	21.4
2. Once a term	49	36.5	49	46.4
3. More than once a term	13	09.6	23	21.4
4. Once a year	31	23.1	11	10.8
5. No response	07	05.8	00	00
Total	134	100.0	106	100.0

The data in table 19 reveals that the majority of girls' parents (36.5%) visited their schools only once per term to check on their children's progress while 25% never

visited the schools. However, 9.6 % visit more than once a term. The rest 23.1% visited schools more than once a year while 05.8% did not respond to the item. As far as the responses of boys are concerned, 49 (46.4%) indicated that their parents visited their schools once a term, 23 (21.4%) indicated their parents never visited their schools, 11 (10.8%) indicated that their parents visit once a year while a higher number of boys 23 (21.4%) than girls 13 (9.6%) indicated that their parents visited schools more than once a term to check on their progress. The results in table 20 indicated that most respondents' parents rarely visit their children in schools to check on their progress. The failure of parents to visit their children often in schools may have reduced their children's enthusiasm in learning. In addition, the amount of time spent on private studies by students may have affected their performance. This data is presented in table 20

Table 20: Number of hours spent by students on private studies by gender

	Girls		Boys	
Responses	F	%	F	%
Less than hour	13	09.7	16	15.0
1 – 2 hours	67	50.0	45	42.5
3 hours & above	-	-	-	-
4. None at all	54	40.3	45	42.5
Total	134	100.0	106	100.0

The data in table 20 reveals that majority of girls 67 (50%) spend between 1-2 hours on school assignments and private studies. Quite a high percentage 54 (40.3%) never spend anytime on the same and the rest (13) 09.7% spend less than an hour.

For boys 45 (42.9%) spend between 1-2 hours on school assignments and private studies. Another 42.9% of the boys spend no time at all on the same while 16 (14.3%) spend less than an hour.

The data is a revelation that more girls (50%) than boys (42.9%) seem to be spending between 1-2 hours on school assignments and private studies, another indication is that less girls 40.3% than boys 42.9% seem to be spending no time on school assignments and private studies. This is an indication that girls spend more of their time on homework and private studies than their male counterparts. The other indication is that there is quite a percentage 42.9%and 40.3% from both boys and girls respectively who seem not to be spending any of their time in private studies and school assignments a cause for concern on study habits of these students.

The information on whether students assisted with work at home, whether parents/guardians assisted the students with assignments, guardians/parents attended school functions, and if there were interruptions when doing their homework with domestic chores is shown in table 21.

Table 21: Some factors of students on some factors and their influence on students' performance

	Girls						Boys					
Responses in %	AL	RA	NE	NR	Total %	n	AL	RA	NE	NR	Total %	n
1. Do you normally assist with work at home.?	63.5	34.6	01.9	-	100	134	57.1	39.3	-	3.6	100	106
2. Do your parents or people you stay with assist you with assignments?	28.8	51.9	19.2	0.1	100	134	17.9	57.1	25.0	-	100	106
3.Do your parents people you stay with attend school functions whenever there is one?	36.6	36.5	26.9	-	100	134	25.0	42.9	32.1	-	100	106
4. Are you often interrupted while doing your homework?	55.8	36.5	07.7	-	100	134	60.7	28.6	07.1	3.6	100	106
5.Do your parents encourage you to to do private studies?	61.5	34.6	03.8	0.1	100	134	35.7	60.7	03.6	-	100	106

KEY: AL = Always RA = Rarely NE = Never NR = No Response

The issue whether students assisted with home chores revealed that the majority of girls (63.5%) always assisted with work at home, less boys (57.1%) than girls did the same Some 34.6% of the girls rarely assisted in work at home, more 39.3% of the boys rarely assisted, less boys than girls rarely assisted with work at home. This is a revelation that girls participated more on home-chores than the boys and may have left girls with less time for study.

The data on whether parent/guardians attended school functions revealed that 36.6% of girls' and the boys' 25.0% parents'/ guardians' attended a school functions. More boys' 42.9% compared to 36.5% of girls' parents/guardians rarely attended the functions. More of the boys' parents/guardians (32.1%) as compared to the girls' (26.9 %) never attended school functions. Overall the data is a clear indication that majority of parents/ guardians rarely or never attends school functions. This is reflected by the high numbers 63.4% and 75% for girls' and boys' parents/guardians respectively who rarely or never attended school functions. On whether they were interrupted while they studied, majority of both the girls and boys were interrupted with 55.8% and 60.7% respectively. However, though few got interrupted, relatively fewer boys 3.6% than girls 7.7% are never interrupted respectively. On whether they were encouraged to do private studies by their parents, more girls 61.5% than boys 35.7% were encouraged. However the data further revealed that slightly more girls 3.8% than boys 3.6% are never encouraged to do the private studies.

Other factors that were associated with poor academic performance of students are summarised in table 22.

Table 22: Factors that negatively affect pupils performance in National examination

Factors	Extent of effect in% Very High	High	Minimal	Very min.	NR	Total %	n
1. Pupils absenteeism	37.5	25.0	12.5	25	-	100	8
2. Pupils lateness	-	-	37.5	50.0	12.5	100	8
3. Poor management of homework	12.5	50.0	12.5	12.5	12.5	100	8
4. Teachers absenteeism	-	12.5	12.5	37.5	37.5	100	8
5. Interruption of pupils learning by activities such as sports days punishment.	-	-	50.0	37.5	12.5	100	8
6. Poor motivation of teachers	12.5	-	37.5	25.0	25.0	100	8
7. Inadequate textbooks -	-	12.5	37.5	25	25.0	100	8
8. Lack of co-operation from parents	37.5	25.0	25.0	12.5	-	100	8
9. Over-involvement in co-curriculum activities	-	12.5	25.0	50	12.5	100	8

The results in table 22 reveal that among the factors explored, more than a half (62.5%) of the respondents indicated that pupils' absenteeism had a high effect on pupils' performances with 37.5% rating the extent of effect as very high and 25% rating it as high; majority of the respondents (87.5%) rated lateness as minimal with 50% indicating it as having very minimal effect and 37.5% as minimal while 12.5% had no response to the item. The data also revealed that poor management of homework also had a high effect on performance where 62.5% indicated a high effect with 50% high effect and 12.5% as very high. On teachers absenteeism the respondents rated the effect as minimal with 50% indicating a minimal effect and 37.5% had no response to the item while a minority 12.5% indicated it as having high effect. Interruption of pupils learning by activities such sports days was rated by a majority 87.5% of the respondents to have a minimal effect while 12.5% indicated no response to the item. On the motivation of teachers, majority

indicated that it had a minimal effect with 37.5% as minimal, 25% as very minimal only a few 12.5% of the respondents indicated a high effect. On inadequacy of textbooks, a majority revealed that it had minimal effect with37.5% as having minimal effect, 25% as very minimal while a minority 12.5% indicated that it had a high effect and 25% having no response to the item. On co-operation from parents, an overwhelming majority 62.5% indicated that it had a high effect with 37.5%indicating a very high effect, 25% high effect and only a few 37.5% said it had a minimal effect. On over-involvement in co-curriculum activities, majority indicated a minimal effect with 50% as very minimal 25% as minimal and only a minority 12.5% indicated as having a high effect.

This data therefore, reveals that there is a very high effect on pupils' performances through pupils' absenteeism, poor management of homework and lack of co-operation from parents. These were identified as the leading factors amongst the ones explored. Other factors like the pupils' lateness, interruption of pupils learning by school activities, inadequacy of text-books, teachers' absenteeism and poor motivation have had some effect on performances though rated as minimal by the majority of the respondents. Teachers' absenteeism has been rated by the majority as having minimal effects on performances presenting a scenario where though teachers may be there in the schools to dispose of the knowledge, the students may not be available to receive it and may be unwilling to work as required through truancy and poor management of work hence a disadvantage on coverage of the work in the syllabus.

Parents' support on school functions;

Summary of the responses showing the extent for which parents supported school functions is presented in table 23

Table 23: Responses of head teachers on parents support on school functions

Items (%)	Excellent	V. Good	Good	Average	Poor	Total %	n
1.How do you rate the co-operation and support given by parents in school development programmes	12.5	12.5	12.5	37.5	25	100	8
2.How are the parents' response when called upon to visit school on various special occasions or school functions?	12.5	12.5	12.5	37.5	25.0	100	8

The data in table 23 reveal that the majority of parents accord low support on school development programmes as 37.5% were rated to be average in their support, 25% were rated poor.

The data further revealed that the majority of parents 62.5% were rated as average and poor when called up to visit the school for special occasions or functions with 25% rated as average, 37.5%% rated as poor while only a minority 12.5% were rated as good, 12.5% as very good and 12.5% as excellent.

The responses by teachers and head-teachers on both socio-economic and school related factors that were perceived to hinder girls' performance in KCSE examinations is contained in table 24.

Table 24: Teachers' and head-teachers' responses on the factors that they perceived to hinder girls' performance in KCSE Examinations

Responses of:	Teachers in %							Headteacher in %						
Socio-economic factors	SA	A	UD	D	SD	Total %	n	SA	A	UD	D	SD	Total %	n
1 Lack of tuition leading to truancy	10	58	-	20	12	100	32	37.5	37.5	-	25	-	100	8
2 Lack of relevant text books	24	56	5.0	10	5.0	100	32	25	25	50	-	-	100	8
3 Lack of school uniform	-	30	-	60	10.0	100	32	-	-	-	75	25.0	100	8
4. Lack of lunch time meals	-	30	20	50	-	100	32	12.5	-	37.5	25.0	25.0	100	8
5. Lack of sanitary protection for girls	30	41	-	21	8.0	100	32	-	25	12.5	37.5	25.0	100	8
6. Demand for girls domestic labour	35	60.0	-	5.0	-	100	32	25	25	25	25	-	100	8
7. Lack of school fees	53	30	-	17	-	100	32	37.5	37.5	12.5	12.5	-	100	8
8. Lack of electricity	-	30	14	40	16	100	32	12.5	-	25	25	37.5	100	8
9. Long distance traveling to school	10	40	40	6.0	4.0	100	32	12.5	37.5	25	25	-	100	8
10. Lack of parental care in education	60	30	-	10.0	-	100	32	25	37.5	-	25	12.5	100	8
School related factors														
1. Lack of gender sensitive facilities	-	40	50	5.0	5.0	100	32	-	25	-	50	25.0	100	8
2. Lack of enough attention given to girls by teachers	30.0	20.0	25.0	5.0	25.0	100	32	-	50	12.5	12.5	25.0	100	8
3. Lack of teaching/learning facilities	40.0	35.0	-	15.0	10.0	100	32	-	37.5	-	25.0	37.5	100	8
4. Lack of role models	-	20.0	10	60	10.0	100	32	-	25	-	50.0	25.0	100	8
5. Type of school attended	60.0	30	-	10	-	100	32	12.5	50.0	12.5	25	-	100	8
6. Gender discrimination in & out of school	-	30	40	20	10.0	100	32	12.5	-	25.0	37.5	12.5	100	8
7. Gender insensitive curriculum	-	20.0	5.0	70	5.0	100	32	-	-	37.5	25.0	37.5	100	8
8. Lack of adequate academic advice from teachers & others	-	42	25.0	25.0	08.0	100	32	12.5	37.5	25	25.0	-	100	8
9. Lack of administrative support on girls' programmes	10.0	15	19	51	05.0	100	32	-	-	25.0	50	25	100	8
10. Harassment of girls by boys and male teachers	15.0	45	25.0	15.0	-	100	32	25.0	25.0	25.0	25.0	25.0	100	8
11. Harassment of boys by girls & female teachers	-	45	15	25.0	15.0	100	32	-	20.0	40.0	25.0	15	100	8

KEY: SA=Strongly Agree A=Agree UD=Undecided D=Disagree SD= Strongly disagree

The analysis in table 24 reveals that most of the teachers and headteachers agreed that the socio-economic factors had a strong influence on students' performance. Lack of tuition leading to truancy with 68%teachers and 75%headteachers agreed therefore concurring to this while only 32% teachers and 25% headteachers disagreed on the same. Lack of adequate relevant textbooks with 80% teachers

and 50% headteachers agreeing that it hinders performance while a few 15% teachers disagreed and 50% headteachers were non committal to this. Lack of sanitary protection with 71% teachers agreeing and a few 29% disagreed while only 25% of the headteachers agreed to this and 62.5% disagreed while 12.5% were undecided. Demand for girls' domestic labour was rated at 95% by teachers and 50% by headteachers who agreed while only a few 5% and 25% disagreed respectively with another 25% headteachers undecided. Lack of school fees with 83% of teachers and 75% of headteachers concurring to this in agreement while only a few 17% and 12.5% teachers and headteachers disagreed respectively and another 12.5% of headteachers who were undecided on the same. On long distance travelled to school, 50% of teachers agreed and 40% were undecided, 50%, headteachers agreed, 25%were undecided and 25% disagreed on the same

Lack of parental care in education where 90% of teachers and 62.5 % of the headteachers agreed, a few disagreed with10% teachers and 37.5% headteachers disagreeing to the same. lack of attention by teachers 50% teachers and 50% headteachers agreed while 25% and 12.5% were undecided respectively25% of teachers and 37.5% disagreed on the same. Lack of learning teaching facilities teachers rated it highly with 75% agreed and only 25% who disagreed while the headteachers differed in this opinion with 62.5% who disagreed and only37.5% agreed to this item. The type of school one attended had 90% teachers and 62.5% headteachers agreeing while only a few 10% and 25% disagreed respectively and another 12.5%of headteachers who were undecided on the same. Lack of learning facilities the two differed, where, majority 75% of teachers agreed while a minority 37.5% of headteachers seemed to agree on the same. On harassment of girls by male teachers and boys both seemed to agree on the opinion where 60% of the teachers and 50% headteachers agreeing that it affects performance while a few of them15% and 25% disagreed respectively .Others 25%teachers and 25% headteachers were undecided.

The lowly factors perceived to have little influence on students' performance by the respondents included;

Lack of school uniforms with majority of respondents70% and 100% teachers and headtechers who disagreed respectively. Lack of lunch time meals with 50% and 50% teachers and headteachers disagreed respectively while 20% and 37.5% were undecided respectively. Lack of electricity where 56% and 62.5% teachers and headtechers disagreed while 14% and 25% were undecided respectively. Lack of gender sensitive facilities was rated lowly by both and especially the headteachers who rated it as follows; 75% disagreed and only 25% agreed while teachers 40% agreed and 10% disagreed while a greater percentage 50% of the teachers were undecided on the item. On lack of role models majority disagreed with 70% and 75% teachers and headteachers disagreed, 10% and teachers were undecided while only a few 20% teachers and 25% headteachers who agreed on the same.

On gender discrimination in and outside school 30% and 62.5% teachers and headteachers disagreed respectively. Majority 40% of teachers were undecided while only a few 12.5% of headteachers were undecided on whether discrimination against girls existed amongst them. Other factors lowly rated were gender insensitive curriculum where 75% and 62.5% teachers and headteachers disagreed respectively. Some 5% of teachers were undecided while 25% headteachers were undecided on the same. Lack of adequate academic advice from leaders and others also featured with 33% and 62.5% teachers and headteachers disagreeing respectively, 25% teachers and 25% headteachers were undecided on the same. More teachers 42% than headteachers 12.5% agreed on the same hence diferred on this opinion. Lack of administrative support on girls' programmes had 56 % and 75% of teachers and headteachers disagreeing while only a few 19% and 25% who were undecided respectively. A few 10% of teachers agreed on the same. Harassment of boys by girls and female teachers recorded 40% teachers and 40 % headteachers disagreed, 15% and 40% teachers and headteachers were undecided respectively while 45% of teachers and only 20% of the headteachers agreed on the same.

When students were asked to indicate the level of education they aspired to, they provided information summarised in table 25

Table 25: Students' aspired level of education.

Responses	Girls		Boys	
	F	%	F	%
Secondary level	03	2.2	-	-
College level (Diploma)	23	17.2	11	10.4
Bachelor Level (University)	05	3.7	11	10.4
Masters level (University)	36	26.9	31	29.2
Doctoral (PH.d University)	67	50	53	50.0
Total	134	100.0	106	100.0

From the data in table 25, the respondents show a high aspiration for higher levels of education. Majority 50% of the girls had the highest aspiration of getting at doctorial level (Ph.d University) with 50% of the boys also aspiring for the same.

However, it is important to note that at some of the higher levels, the number of girls fell short of that of the boys, for example, at bachelors level there were 3.7% of girls as compared to 10.4% of boys on the same. At masters level, (University) there were 26.9% of girls while boys were 29.2%.

On the other hand, at lower levels of education, girls tended to be more than the boys from the above data. For example, at college level (diploma) more girls 17.2% than boys 10.4%, at secondary level, 2.2 % girls opted to go to this far while there was none of the boys who opted for such a level. The data generally shows that though there is an indication of high aspiration to achieve higher levels of education in the majority of the students, fewer girls than boys have high aspirations for higher levels. More girls than boys seem to go for lower levels of

education This has been an attitude of the majority of girls who seem to have lower aspirations than the boys inevitably has served as an obstruction to girls achievement in higher ladders of education as majority of then get contented with lower levels of education than their counterpart boys hence hindering their opportunities for better careers that demand high levels of educational achievements.

The data in table 26 shows some of the factors that may contribute to girls poor academic performance

Table 26: Response of students on some factors that may contribute to girls' poor academic performance

Responses	Girls							Boys					
	SA	A	NS	D	SD	Total %	n	SA	A	NS	D	SD	Total %
1. If you are assured of continuous and sufficient funding, can you continue your studies after secondary secondary school education.	90.4	05.8	03.8	-	-	100	134	89.3	07.1	03.6	-	-	100
2.. Do the counseling or advice you receive from your teachers or superiors influence your level of academic attainment in school	69.6	-	01.5	-	28.6	100	134	82.1	-	10.7	-	7.2	100
3. Do you receive adequate attention in class and out of class activities from your teachers?	17.3	63.5	09.6	05.8	03.8	100	134	50.0	25.0	07.2	10.7	7.1	100

The data in table 26 reveal some information about girls and boys that would affect their performance. One is that a higher number 90.4% of girls than boys 89.3% have higher aspirations to achieve higher levels of academic ladders beyond the form four levels. These girls strongly agreed that given sufficient funding, they would continue with their education beyond secondary education.

The data also revealed that slightly more girls 3.8% than boys 3.6% were not sure of whether they would continue with their education beyond secondary education level.

The data in table 26 is an indication that girls are aspiring highly in education but has only been a wishful thought to many. It therefore signals an urgent call to all the education stakeholders to have concerted efforts towards improving girls' performance that would enable them to secure places at higher levels of education to put their wishes into reality. The research also sought to find out whether guidance and counselling the students receive in schools influence their academic attainment in school. The responses from the above table 26 indicates that lesser girls 69.6% than the boys 82.1% view guidance and counselling as a channel for greater academic attainment.

Further, the data reveals that majority of girls 28.6% than boys 7.2% strongly disagreed that guidance and counselling do influence their academic attainment. This is a clear indication given the data above that though guidance and counselling may be offered in most of the schools under study, it may not be impacting positively on academic attainment of girls as in the boys. This is an outright call to all the stakeholders particularly those concerned with guidance and counselling in schools to boost counselling in academic matters in girls' schools as it may not be sending positive signals to the students that it does influence their academic attainments and particularly the girls schools. Guidance and counselling in schools have been known to be much concentrating on discipline matters particularly the schools with mass indiscipline cases and therefore students may have taken guidance and counselling to be much essential for those with discipline problems, a wrong misconception of the efforts put in place to establish the institutions of guidance and counselling in schools.

On the question of attention given in class in and out of class by their teachers, the data above revealed that only 17.3% of girls as compared to the boys 50% strongly agreed that they received adequate attention from their teachers. The data therefore is an indication that though students may be receiving attention from their teachers in schools, the amount given to girls may fall short of that given to boys where half of the boys response showed certainty in strongly agreeing as

compared to a mere minority of girls 17.3% who strongly agreed that it was adequate. This therefore is an urgent call to teachers to remove gender biased attitude and behaviour in schools in order to promote gender sensitive education that caters for all in enhancing conducive learning environment.

4.4 Research Question 2 and Analysis

Do the teachers' perceptions about girls' abilities influence girls' performance at secondary level of education?

The results relating to research question 2 in respect to types of schools where teachers preferred to teach is presented in table 27

Table 27: Types of schools teachers preferred to teach

	Teachers		Head teachers	
School type	Frequency	%	Frequency	%
1. Mixed school	09	28.125	02	25.0
2. Boys school	12	37.5	01	12.5
3. Girls school	08	25.0	05	62.5
4. No preference	03	09.375	-	
Total	32	100.0	08	100.0

The information in table 27 reveal that teachers preferred to teach in boys compared to girls schools. This was clearly indicated by the majority of teachers both males and females 37.5% who opted for boys only schools, fewer 28.125% opted for mixed schools and only 25% for girls only. Others 09.375% were comfortable to teach both boys and girls. Preference to teach in various types of schools are discussed here under.

Reasons for preferring mixed schools:

- For comparison purposes because mixed school have both sexes thus easy to compare girls and boys performance in the same environment 6.2%

- For exposure 6.2%
- They have been interacting with mixed persons either in church and other social gathering thus will like to continue interacting with students in mixed schools 12.5%

Reasons for preferring to teach in all boys schools:

- Boys seems to be interested in their subjects (science subject) 12.5%
- Boys have less problems as compared to girls 37.5%
- Boys are easy to handle as compared to girls who are very difficult 12.5%

Reasons for opting to teach in an all girls school:

- Girls are disciplined and thus manageable and easy to handle 12.5%

In addition, boys are perceived to have less problems as compared to girls (37.5%) and that they are easier to handle than girls. Those who opted for girls only schools had an opinion that girls are disciplined and thus manageable and easy to handle (12.5%). This therefore calls for a need to re- evaluate teachers' practices in schools in an attempt to remove gender imbalances in schools to create conducive atmosphere for learners of both sexes.

- Inspite of the fact that majority of teachers preferred to teach boys, 75% of them agreed that girls can do as well as boys in academic work. This information is presented in table 28

Table 28: Teachers response on whether they think girls can perform as well as boys in all subjects.

Responses in %	Frequency	%
1. Yes	24	75
2. No	05	15.625
3.No Response	03	09.375
Total	32	100.0

4.5 Research Question 3 and findings

Do the adequacy and availability of key facilities, equipment and materials provided influence girls' performance at secondary level of education?

The results on the availability and adequacy of facilities equipment in girls' and Boys' schools is contained in table 29

Table 29: Students (boys and girls) response on availability and adequacy of facilities & equipment in their schools

Facilities	Very sufficient		Sufficient		Insufficient		Very Insufficient		Total %		n	
	G	B	G	B	G	B	G	B	G	B	G	B
1. Books	40.4	40.4	44.2	32.1	13.5	21.4	01.9	6.1	100	100	240	106
2. Classrooms	42.3	39.3	51.9	42.9	05.8	14.2	-	03.6	100	100	240	106
3. Text books	09.6	28.6	36.5	32.1	46.2	32.1	07.7	07.2	100	100	240	106
4. Revisions books	19.2	28.6	23.1	25.0	42.3	31.0	15.4	15.4	100	100	240	106
5. Science Laboratory	21.2	35.8	63.5	50.0	11.5	07.1	03.8	07.1	100	100	240	106
6. Physical laboratory	21.2	28.6	49.7	42.9	21.4	21.4	07.7	07.1	100	100	240	106
7. Home science laboratory	09.6	14.3	57.7	17.9	15.4	28.6	17.3	07.1	100	100	240	106
8. Workshops	05.8	14.3	23.1	42.8	28.6	17.9	40.7	25.0	100	100	240	106
9 Staff room	32.7	67.9	59.6	32.1	05.8	-	01.9	-	100	100	240	106
10. H teacher office	44.3	75.0	50.0	25.0	01.9	-	03.8	-	100	100	240	106
11. Deputy's office	21.2	50.0	75.0	25.0	01.9	25.0	01.9	-	100	100	240	106
12. Girls toilets	44.2	37.5	32.7	37.5	17.3	17.9	05.8	07.1	100	100	240	106
13. Boys toilets	25.9	35.7	17.3	35.7	13.5	21.4	07.7	07.1	100	100	240	106
14. Tap water	19.7	35.7	45.7	42.8	17.3	17.9	17.3	03.6	100	100	240	106
15. Electricity	17.3	39.3	38.5	32.1	15.4	10.7	28.8	17.9	100	100	240	106
16. Play fields	11.5	46.5	36.5	28.5	21.2	17.9	30.8	07.1	100	100	240	106
17. Games facilities	09.6	28.6	15.4	21.4	53.8	32.1	21.2	17.9	100	100	240	106

KEY: G = Girls B = Boys

The data in table 29 indicates that majority of students both girls' and boys' schools have sufficient key basic facilities like the books, classrooms, textbooks, science laboratories, workshops, offices, staff room, toilets, water, electricity, playfields and games facilities

What is of significance in the data is the finding that there were higher levels of sufficiency boys 'than in girls' schools. For example, on textbooks where more boys 60.7% said they were sufficient while only 46.1% of the girls indicated they were sufficient. More girls said they were insufficient 53.9% and only 39.3% of boys said they were insufficient.

For revision books, boys rated 53.6% sufficient while girls (42.3%) sufficient and higher levels of insufficiency on the same for girls with 57.7% while boys had 46.4%. On science laboratories, boys rated sufficiency at 85.8% where 35.8% said these were very sufficient and 50% said they were sufficient while girls on the other hand rated nearly the same at 84.7 % with 21.2% as very sufficient and 63.5% sufficient a figure lower than that of boys. On the same, girls rated insufficiency higher at 15.3% than where boys rated it at 14.2%. Same trend emerged on physical laboratories with girls rating it lower in sufficiency than boys at 70.9% and 71.5% respectively.

On workshops girls rated lowly on levels of sufficiency with the majority of them indicating insufficiency than the boys. Girls rated it 28.9% sufficient while boys rated it 57.1% sufficient and 69.3% insufficient for girls while boys 42.9% insufficient as the data shows. Further, games facilities seemed inadequate in girls' schools than boys as they rated it lowly with 25% sufficient while boys was 50% sufficient. In the insufficiency, girls rated it highly with 75% while it was only 50% insufficient for boys.

This is an indication that though schools may be having facilities, equipment and materials for learning, girls' schools are still lagging behind in the levels of sufficiency than boys' schools. This calls for redistribution of learning resources

more equally and fairly in all schools. This therefore calls for the urgent need for an affirmative action to equip girls' schools with key facilities particularly workshops and enough science laboratories for the science and technology subjects' enhancement.

In terms of basic learning resources, results seem to indicate that they were available and sufficient .This analysis is summarised in table 30.

Table 30: Head teachers' response on the availability of basic teaching and learning resources and facilities in their schools

Resources	Very adequate	Adequate	Inadequate	Very inadequate	Total %	n
1. Classroom	62.5	25.0	12.5	-	100	8
2. Library	-	12.5	87.5	-	100	8
3. Desks	50.0	50.0	-	-	100	8
4. Chairs	50.0	50.0	-	-	100	8
5. Tables	37.5	25.0	37.5	-	100	8
6. Text books	-	50.0	50.0	-	100	8
7. Exercise books	62.5	37.5	-	-	100	8
8. Science laboratories	25.0	62.5	12.5	-	100	8
9. Workshops	12.5	37.5	25.0	25.0	100	8
10. Science rooms	25.0	37.5	25.0	12.5	100	8
11. Play fields	37.5	25.0	25.0	-	100	8
12. Games facilities	37.5	37.5	25.0	-	100	8
13. Staff houses	-	12.5	62.5	12.5	100	8
14. Water	37.5	25.0	25.0	12.5	100	8
15. Toilets	25.0	50.0	25.0	-	100	8
16. Electricity	37.5	37.5	12.5	12.5	100	8

The data in table 31 shows that most schools have adequate basic facilities with the majority of respondents rating the level of adequacy such as classrooms at 82.5%, desks 100%, chairs 100%, tables 57.5%, textbooks 50% exercise books 100%, science laboratories 87.5%, workshops 50%, science rooms 63.5%, playfields 63.5%, games facilities 75%, water 59.5%, toilets 75%, electricity 75%. However, staff houses were rated below average with 75% of the respondents indicating that they were inadequate. Also workshops and textbooks had 50% and 50% inadequate respectively of the responses concurring with the students' response in the previous table. These key facilities are not adequate in quite a number of schools as the data shows, thus, great effort is required to boost the levels of these key learning resources that are inadequate in some of the schools.

This therefore indicates that if schools have good quality learning and teaching facilities/resources, this automatically is a conducive ground for boosting the wanting performances. The question is whether the resources available are fully utilized to enhance teaching and learning. There is need therefore to put more emphasis into more utilization of available teaching and learning resources in those schools and call for more improvisation on those that may be unavailable so that they produce better results

4.6 Research Question 4 and Results:

Does guidance and counselling services in schools influence girls' performance in K.C.S.E examinations?

The responses on the extent to which guidance and counselling services were perceived to contribute towards girls' and boys' academic performance is presented in table 31.

Table 31: Students' responses on whether the counselling or advice they receive from teachers influence their level of academic attainment.

Response	Girls		Boys	
	F	%	F	%
1. Strongly Agree	72	53.7	87	82.1
2. Not sure	15	11.2	11	10.4
3. Disagree	21	15.7	04	03.8
3. Strongly Disagree	26	19.4	04	03.8
Total	134	100.0	106	100.0

The data in table 31 clearly reveals an overwhelming majority especially from the boys' respondents 82.1% while for the girls 53.7% strongly agree that the counsel or advice given influences their academic attainments. Also a number of students disagreed on the statement where more girls 35.1 % than boys 7.6% only disagreed. More girls (11.2%) than boys (10.4%) were not sure about the statement.

The results in table 31 are therefore a clear indication on the position of girls on guidance and counselling impact in secondary schools. Majority of the boys than the girls seem to have taken the advice given by teachers seriously and positively hence raising their academic attainments to a level higher than that of the girls. It is a sad position that girls still do not seem to benefit as much as boys by the advice from the teachers with quite a number disagreeing even strongly. There is therefore need to look into the strategies that could be used to put sense into girls of the importance of guidance and counselling and probably focus more on their needs.

Indeed teachers believed that guidance and counselling services were fairly good and also useful in supporting the academic performance of both boys and girls.

The teachers' views on the quality of guidance and counselling service is contained in table 32

Table 32: Teachers' rating of the impact of guidance and counselling on academic achievement in their schools

Response	F	%
1. Satisfactory	09	28.125
2. Unsatisfactory	02	06.25
3. Average	07	21.875
4. Good	14	43.75
5. Poor	-	-
Total	32	100.0

The data in table 32 reveals that the majority (43.75%) of the teachers feel that the impact of guidance and counselling in their schools is good and 28.125% as satisfactory, while only a few 6.25% rate it as unsatisfactory. None rated it as poor.

The data therefore is an indication that most teachers believe in guidance and counselling as strongly influencing academic attainment though their positive wish is contrasted with the results attained in the majority of the schools studied. It is therefore necessary to intensify guidance and counselling in academics in those schools in order to bear fruits on academic achievements of the students.

4.7 Factors that affect girls' and boys' performance in KCSE

The study sought views from students, teachers and head-teachers on what affects both girls and boys performance in KCSE examination. The factors that the students thought affected girls' and boys' performance are outlined here under in table 33

Table 33: Factors affecting girls' performance as cited by the students

Response	Girls F	Girls %	Boys F	Boys %
1. Absenteeism	120	13	100	14
2. Boy/Girl relationships	134	15	106	15
3. Lack of proper facilities in schools	120	13	94	13
4. Lack of parental/ guardians' concern for students academically	130	14	100	14
5. Financial constraints/ Lack of school fees	120	13	80	11
6. Peer pressure	98	11	104	14
7. Discrimination against girls	97	11	20	3
8. Drug abuse	92	10	104	15
Total	911	100	708	100

The results in table 33 reveal that there are certain factors in view of students that have militated against their performance at various magnitudes. Cited highly by both girls and boys were cases of boy/girl relationships with a majority 15% and 15% of both respectively, lack of parental concern in their academic work with 14% girls and 14% boys, absenteeism from school with 13% girls and 14% boys, lack of proper facilities in schools with 13% girls and 13% boys, lack of school fees with 13% girls and 11% boys, peer pressure with 11% girls and 15% boys citing the same. Other factors that were cited but thought to relatively lowly affect students' performance particularly girls were discrimination against girls 11% girls and 3% boys, drug abuse with 10% girls and 15% boys. Here the opinion differed where more boys than girls felt drug abuse highly affects performance while on the other hand on discrimination against girls, more girls than boys felt that it highly affects their performance. Further opinion was sought from the

headteachers and teachers as to what thought affects the students performance in their schools. The information is summarised in table 34.

Table 34: Factors affecting girls and boys' as revealed by teachers and head teachers

	TEACHERS		HEADTEACHERS	
Response	F	%	F	%
1. Drug abuse	32	14	8	13.8
2. Boy/Girl relationships	25	11	4	6.9
3. Lack of adequate revision	30	13	7	12.1
4. Lack of proper parental/ guardians' encouragement and guidance	30	13	7	12.1
5. Financial constraints (school fees problems)	32	14	8	13.8
6. Peer influence	30	13	8	13.8
7. Lack of academic discipline and focus	31	13	8	13.8
8. Lack of close supervision by teachers	20	9	8	13.8
Total	230	100	58	100.0

The data in table 34 reveal that both the teachers and their headteachers are in agreement that certain factors highly affected the boys' performances. Majority of both teachers and headteachers cited factors such as drug abuse 14% and 13.8%, financial constraints with 14% and 13.8%, lack of academic discipline and focus with 13% and 13.8% respectively. Others almost equally cited highly by the teachers and head-teachers were peer influence with 13% and 13.8%, lack of adequate revision 13% and 12.1%, lack of parental / guardians' guidance and encouragement with 13% and 12.1% respectively. Another cited factor was lack of close supervision by teachers of which the headteachers overwhelmingly cited 13.8% while less teachers 9% cited the same. On the other hand the research

sought views from the same respondents (teachers and headteachers) on factors that affected girls' performance and the results are shown in table-35.

Table 35: Factors affecting girls' performance as cited by teachers and headteachers

Response	TEACHERS F	%	HEADTEACHERS F	%
1. Boy/Girl relationships	26	12	5	10
2. Peer influence	32	16	7	14
3. Lack of adequate care and encouragement by parents/ guardians	32	16	8	16
4. Domestic chores after school consuming alot of time for private studies	31	15	7	14
5. Absenteeism caused by lack of fees' payment	29	14	8	16
6. Lack of guidance encouragement from teachers	25	12	8	16
7. Lack of adequate revision	30	15	7	14
Total	205	100	50	100

The data in table 35 reveal that majority of both the teachers and headteachers overwhelmingly cited certain factors that affects girls' performance as; boy/girl relationships with 13% and 10%, peer influence with 16% and 14%, lack of adequate care and encouragement by the parents/guardians with 16% and 16% , domestic chores after school consuming a lot of time for private studies with 15% and 14%, absenteeism as a result of poor fees payments with 14% and 16%, lack of adequate guidance and encouragement by the teachers with 12% and 16%, lack of adequate revision with 15% and 14% citing these respectively

Among all the respondents certain factors were identified as affecting both the girls and the boys. Pressing factors amongst girls by most respondents were boy/girl relationships, absenteeism due to financial constraints back home, peer

influence, lack of parental care and poor attitude towards learning. Amongst boys most pressing factors were cited as drug taking, peer influence, lack of parental care and guidance and financial constraints. Further response was sought from teachers on constraints faced in their endeavour to improve girls performance. This information is contained in table 36

Table 36: Constraints faced in trying to improve girls' performance as cited by teachers

Response by teachers	F	%
Poor attitude towards learning especially science and mathematics	30	15
Lack of enough support from parents in guiding, counseling and encouraging girls	32	16
Financial constraints that keep girls away from schools hence truancy that affects syllabus coverage.	31	16
Improper revision as the girls put much energy in boy/ girl relationships, home chores and peer influence	28	14
Rebellious attitude from boys in mixed schools when teachers give attention to girls	20	10
Relationships between boys and girls in class that often distract their full concentration on academics in mixed schools	27	14
Lack of competitive skills where girls shy off in presence of boys	30	15
Total	198	100

The data in table 36 reveal the very highly rated constraints faced by the teachers as they tried to improve the girls' performances in the schools. The teachers overwhelmingly were in agreement in such constraints as;

- Poor attitude towards learning especially mathematics and science subjects (15%).
- Lack of enough support from parents in counselling, guiding and encouraging girls (16.%)

- Financial constraints that keep girls away from schools resulting to much absenteeism that affects syllabus coverage (16%)
- Improper revision by the girls as they put their energies in boy/ girl relationships due to peer pressure and less time given to academic work due to home chores (14%)
- Rebellious attitude from boys in mixed schools when teachers give attention to girls (10%)
- Relationships between girls and boys in class that often distract their full concentration on academics in mixed schools (14%)
- Lack of competitive skills, girls not willing to participate in the presence of boys where boys then take advantage and dominate class discussions especially in mixed schools (15%).The study sought further suggestions of the headteachers heading the schools on strategies that could improve performances in their schools. The information given is in table 37.

Table 37: Suggestions on how girls' performance in KCSE can be improved as given by the head-teachers.

Suggestions	F	%
1. Intensify guidance & counseling in girls' school	08	13.8
2. Teachers/parents to encourage girl child	08	13.8
3. Educate girls on dangers of boy / girl relationships while in schools	05	8.6
4. Give girls financial assistance eg Bursary	07	12.1
5. Provision of adequate learning/teaching facilities	06	10.3
6. Involve parents/guardians in counseling the girls	07	12.1
7. Encourage girls to interact with boys academically	04	6.9
8. Separate girls' from boys' class in mixed schools	06	10.3
9. Provision of more cheap boarding schools for girls	07	12.1
Total	58	100.0

The data in table 37 reveals the suggestions by the respondents on how girls' performance could be improved. The suggestions among the respondents on improving girls' performance were as follows; intensify guidance and counselling in girls' schools (13.8%) to change the negative attitude towards learning in some subjects like science and mathematics, teachers and parents to encourage the girl child (13.8%) educating girls on the dangers of boy-girl relationships (8.6%), giving girls financial assistance like bursaries (12.1%) to keep them in schools and cut on the rate of absenteeism due to fees problems, provision of adequate learning / teaching facilities (10.3%), involve parents and guardians in counselling the girls on importance of education (12.1%), encourage girls to interact more with the boys academically (6.9%), in mixed schools, separation of boys and girls in different classes (10.3%) and provision of more cheap boarding schools for girls among others (12.1%). On the other hand, suggestions were also sought from respondents on how to improve boys' performance. The summary of the information is contained in table 38

Table 38: Suggestions on how to improve boys' performance in KCSE examinations as revealed by headteachers

Suggestions	F	%
1. Intensify guidance & counseling to alleviate drug abuse problems.	08	25
2. Involve parents/guardians in counseling the boys	08	25
3. Teachers to be concerned of the boys' needs	05	15.625
4. Provision of adequate learning/teaching facilities	07	21.875
5 Improve attitude between teachers and parents	04	12.5
Total	32	100.0

For the boys, the most highly rated suggestions were to intensify guidance and counselling (25%) particularly to alleviate problems of drug abuse and change their attitudes of rebelliousness, involve parents fully in counselling of the boys

(25%), teachers to take more interest in their needs (15.625%), provision of adequate teaching and learning facilities (21.875%), improve attitude between teachers and parents (12.5%).

From the foregoing suggestions above, the respondents seem to strongly concur in amongst many suggestions towards improvement for both boys and girls as; the need to intensify guidance and counselling in girls' and boys' schools addressing their various needs, need for teachers/parents encouraging and guiding the students both socially and academically, better cooperation between the schools and the parents in guiding the students and provision of adequate learning/teaching facilities among others. These were highly cited as measures towards girls' and boys' performance improvement.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

Efforts were made in the previous to analyse and report the results of the data collected. The main aim of this chapter is therefore to summarize the findings reported, discuss implications and make conclusions emerging from the study.

The chapter will also suggest some recommendations to the various stakeholders in education and lastly make recommendations for further research based on the outcome of the research.

5.1 Summary of the major findings

The findings of this study established that majority of the girls' parents were of low socio-economic status. This was reflected by the majority number of their parents 53.8% of their fathers and 53.8% of their mothers who had only managed to attain an education of up to Form IV level and below only a few 46.2% of their parents attained a level beyond form four.

The research established further that the issue of absenteeism of girls in school, peer pressure, lack of parental guidance ,financial constraints as some of the highly cited factors by the participants as acting as major setbacks to their academic achievements . An overwhelming majority of girls 98.5% girls and 100% boys contended that girls do miss school. The teachers and headteachers 62.5% also cited this as a major constraint highly affecting performance in their schools.

The findings also established that majority of the girls 62.7% and boys 67.9% were day scholars commuting to and from school for distances over two Kilometres. Slightly more of the boys than girls were day scholars.

The research also established that majority of the girls 63.5% as compared to 57.1% counterpart boys assisted in domestic chores always. There was also evidence that majority of both girls 55.8% and 60.7% boys were interrupted during their studies with domestic chores. Other revelation was that most parents had very low interest in their children's achievements as very few 09.6% parents visited schools more than once a term to check on their children's progress and the rest of the majority 84.6% girls' and 78.6% boys' parents/guardians rarely or never visited the schools.

The research findings found that teachers preference for boys to girls continues in schools where majority of them (males and females) preferred to teach boys 37.5%, 28.125% preferred mixed schools and only a mere 25% preferred girls only schools. A few 09.375% were comfortable in any type of school. This disparities could bring about gender imbalances in schools.

The findings further established a divided opinion amongst boys and girls regarding attention given to them by their teachers where girls were not convinced as the boys of the adequacy of this attention with only 17.3% strongly agreeing to the adequacy of attention while half of the boys (50%) were strongly convinced that they received adequate attention.

On learning resources, the findings established that most schools were relatively well equipped with most of the basic learning equipment and facilities. However, on close scrutiny, the research findings noted unequal distribution of these resources across the various categories of schools with some having lower levels of some facilities than others. Some of the key facilities such as relevant textbooks, libraries, workshops, science laboratories, games facilities, playfields particularly where girls existed were rated lower than where the boys existed. This phenomenon was also noted by mere observations of the structures during the visits to the schools.

On guidance and counselling, the findings established a worrying trend where there were disparities in conviction of the influence it has on academic attainments amongst the genders. An overwhelming majority of boys 81.1% as compared to only 69.6% girls agreed that guidance and counselling received from their teachers influence their level of academic attainment.

From the foregoing research findings it is therefore eminent that all the participants concurred that there are constraints that hinder the performance of girls and such were cited as; financial constraints, lack of encouragement from both parents and teachers, attitude of students towards science subjects, absenteeism among girls, lack of proper revision among others. The study finally obtained information on how the problems identified could be solved. The respondents stated that the following are the most important solutions to the problems experienced by girls:-

- intensify guidance and counselling in the schools
- provision of adequate teaching/learning resources
- parents and teachers to encourage the girl child
- give financial assistance like bursary to girls
- more cheaper boarding schools provisions for girls
- separate girls from boys' class in mixed schools
- educate girls on dangers of girl-boy relationships

These measures according to the respondents would go along way towards improving the girls' performance in public secondary schools in KCSE examinations.

5.2 Conclusions of the study

In view of the findings stipulated above, the research has established the following in the division;

- That amidst the presupposed affluent community in Kiambu District, there is a high percentage 53.8% of households that are socio-economically deprived

and hence unable to sustain and support their children's education in public secondary schools as required. Majority of these parents ended up taking their children to low performing schools around the vicinity which are mainly the co-educational day schools while others, the 46.2% of parents whose socio-economic potentials seemed reasonable tended to secure places for their children in well performing schools because they can afford particularly the single sexual boarding schools.

- That children from deprived homes or backgrounds are affected by many constraints like high rate of absenteeism from schools, low academic encouragement among others. With the increasing poverty, parents are unable to meet financial obligations in schools resulting to truancy as a result of lack of tuition consequently their children are kept away from school for long affecting their performance as they hardly cover their syllabuses.
- The research found low levels of facilities also in the schools patronised by deprived and poor parents. This also concur with findings of other researchers like of the MOEST (2003) where poverty levels of parents affects schools in that, schools patronised by rich parents tend to be better equipped. This scenario was noted in this research in the majority of boarding schools where there were elaborate science laboratories, workshops, games facilities, libraries and playfields while on the other hand the schools patronised by the poor parents mainly the day co-educational schools had lower levels of such facilities. Well equipped schools tend to offer better learning environment while ill-equipped schools hinder the teaching and learning activities in schools which affected these schools in performance.
- The findings of the research found a worrying trend on parents support to their children's education where they hardly visited schools to know their children's progress, for functions and rarely assisted them in school work. The encouragement that the girls get towards academic work may be very little if it existed hence the low stimulation towards academic work.

- These findings also found that the domestic chores of the girls are many and demanding hence, girls have no time and even where chances allow, they are tired and exhausted for any meaningful concentration on academic work made worse by the distances they do travel to and from school on daily basis for those who are day scholars. This puts the students in the day co-educational schools at a disadvantaged position in comparison with those who are in boarding single sex schools who are less involved in such home-chores and do not foot for long distances hence able to put more of their energies into academic work.
- On guidance and counselling, the findings were that the institutions seemed to benefit boys more than the girls .It is therefore evident that girls seem not to have reaped the full benefits from the institutions of guidance and counselling in schools like their counterparts the boys. It is therefore important that efforts are re-directed towards girls in guidance and counselling in schools in order for it to have positive impact on girls' attainments.
- Whereas findings showed that teachers were convinced that students (both boys and girls) can perform equally in all subjects, evidence on the ground was that most teachers preferred teaching boys than girls which may bring about gender imbalances in schools. From the foregoing discussions and conclusions, it is true that there are myriad of challenges facing the girls both at home and in schools that are constraining their academic achievements in schools. It is in view of this that the research gives the following recommendations to various stakeholders in education that could improve the performance of girls in public secondary schools.

5.3 Recommendation to various stakeholders

Although there has been several interventions aimed at improving the education of girls, a number of challenges confront progress on that front and specific measures are needed to address these concerns in order to maximize the gains that accrue to the girl child individually and to the society as a whole from improved education of women.

These measures need to be addressed by all stakeholders in education. From the foregoing study, therefore, recommendations were made to various stakeholders in education sectors in an endeavour to improve the performance of girls in public secondary schools. This is mainly because facts clearly show that educating girls and women is the best long term investment for any nation and the world community as a whole.

- There is an urgent need to enact a national gender policy on education to address the education sector in a comprehensive manner, this would be a catalyst of sorts in developing a sectoral and sub-sectoral gender policies. Such a policy would guide the development of gender responsive school texts, development of teachers and other educational staffs, provision of facilities and other resources and ensuring safe learning environments for girls and boys.
- Initiate and support income generating activities in public secondary schools particularly day schools so that more resources could be pulled together to improve standards of learning facilities and materials in these schools which seem marginalised in terms of distribution levels of resources. .
- Consider in the adjustment of teacher training curriculum so that teachers could be made aware of malpractices such as preference for boys to girls to reddress this imbalance and help girls to realize the importance of education including science and mathematics; this could be done by integrating gender sensitive training into the teacher training courses.
- Relevant guidance and counselling in schools that addresses the students' needs in all areas to include academic matters. This should be carried out through proper guidance and counselling as in subject and career choices especially to girls particularly to remove the imbalances caused by sex stereotyping of science and technology.

- Sensitize and motivate parents to support the girl-child education and create an enabling environment at home in order to boost their academic morale while at home and in school.
- Parents to create a conducive learning environment at home for their children such as provision of adequate time for their studies, reasonable and fair delegation of home chores to both boys and girls without discrimination, provision of adequate space, extra materials and texts.
- Parents' support their children's education by prompt payment of their fees or search for sponsorship or bursaries and provision of other basic material and facilities for learning to avoid absenteeism.
- Parents to support school programmes by their material contributions and by attending school functions that are important sources of information concerning the welfare of their children in academic and social maters.

5.4 Recommendations for further research

This research has left many issues unanswered therefore calls for further research as follows:-

- A similar study could be replicated to a larger sample to establish if similar results could be attained.
- Investigate girls' performance at higher levels like the universities.
- Investigate the gap in quality of education provided in co-educational, public schools, private and single sex public secondary schools.
- Investigate the enrolment rates of girls in science-oriented courses in higher institutions of learning and their performances
- Investigate the impact of co-educational schools in terms of enrolment to public institutions of higher learning (universities).

  Factors that make some mixed schools perform better than others in a district or even nationally.

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APPENDIX A

UNIVERSITY OF NAIROBI,
FACULTY OF EDUCATION,
DEPARTMENT OF EDUCATIONAL ADMINISTRATION AND PLANNING,
P.O. BOX 30197,
NAIROBI.

Dear Respondent,

I am a Post-Graduate Student pursuing a Masters Degree in Educational Administration and Planning at the University of Nairobi. I am conducting a research for my final year project which is a requirement of the Degree Programme. The research topic is "Determinants of performance of girls at Kenya Certificate of Secondary Education".

The findings of this study will enlighten the students, teachers, parents, government and other stakeholders in education on the determinants of performance of girls in KCSE examination and possibly put measures in place to improve the performance.

I am therefore kindly requesting you to spare a few minutes to answer this questionnaire. The information obtained will be purely for the purpose of this research and will be treated as strictly confidential. In order to ensure utmost confidentiality, do not write your name anywhere in this questionnaire.

Thank you for your co-operation and assistance.

Lucy Wangari Kimani
(M. Ed Student U.O.N)

APPENDIX B

QUESTIONNAIRE FOR HEADTEACHERS

INSTRUCTIONS

This questionnaire is intended to help an investigation on determinants of girls' performance in KCSE examination in Kikuyu Division in Kiambu District.

You are kindly requested to complete this questionnaire indicating your honest response by placing a tick [✓] against your option and fill in the blanks by giving many details as you can.

All information given will be treated with strict confidentially and your kind co-operation will be highly appreciated. You may not sign your name.

SECTION A

1. Indicate the name of your school.

2. Indicate which category your school falls.

   a) Mixed School [ ]
   b) Boys School [ ]
   c) Girls School [ ]

3. What is your gender?

   a) Male [ ]
   b) Female [ ]

4. What is your highest professional qualification?

a) S1 [ ]
b) Diploma in Education [ ]
c) Bachelor of Education [ ]
d) Masters in Education [ ]
e) Any other (specify)

5. For how many years have you been a Headteacher?

a) Less than 3 years [ ]
b) 3-5 years [ ]
c) 6-8 years [ ]
d) 8-10 [ ]
e) Over 10 years [ ]

6. For how long have you been a Headteacher in this school?

a) Less than a year [ ]
b) 1-2 years [ ]
c) 2-3 years [ ]
d) 4 and above 10 years [ ]

7. Indicate the number of teachers in your school by their gender and qualification.

		Females	Males
a)	Untrained teachers	[ ]	[ ]
b)	S1 teachers	[ ]	[ ]
c)	Diploma teachers	[ ]	[ ]

d) ATS teachers [ ] [ ]

e) Graduate teachers [ ] [ ]

Any other (specify)_____

8. Below is a list of the basic teaching and learning resources and facilities that are necessary in a school for its effectiveness. Please tick against the statement that best describes their availability in your school.

Resources	Very Adequate	Adequate	Inadequate	Not available
Classrooms				
Library				
Desks				
Chairs				
Tables				
Text books				
Exercise books				
Science laboratories				
Workshops				
Science rooms				
Play fields				
Games facilities				
Staff houses				
Water				
Toilets				
Electricity				

9. Below is a list of factors that negatively affect pupil's performance in National Examinations. Please tick against the statement that best describes the extent to which each factor affects pupil's performance in your school.

Factors	Extent to which affects performance			
	Very high effect	High effect	Minimal effect	Very minimal effect
Pupil's absenteeism				
Pupil's lateness				
Poor management of homework				
Teachers absenteeism				
Interruption of pupils by learning activities such as sport days, punishments.				
Poor motivation of teachers				
Inadequate textbooks				
Lack co-operation from parents				
Over-involvement in co-curriculum activities				

Any other specify _____

10. Below is a list of possible factors that may hinder the performance of girls in KCSE examination. To what extent do you agree that the following factors hinder girls' KCSE performance in your school? Please answer the question if in a mixed or girls' school by indicating a tick in the relevant column.

Scale

SA - Strongly Agree

A - Agree

UD - Undecided

D - Disagree

SD - Strongly Disagree

Socio-economic factors	SA	A	UD	D	SD
a) Lack of tuition leading to truancy					
b) Lack of relevant text books					
c) Lack of school uniform					
d) Lack of lunch time meals					
e) Lack of sanitary protection for girls					
f) Demand for girls domestic labour					
g) Lack of schools fees					
h) Lack of electricity					
i) Long distances traveled to school					
j) Lack of parental interest in their education					
School related factors					
a) Lack of gender sensitive facilities					
b) Lack of enough attention to girls by teachers					
c) Lack of teaching and learning facilities					
d) Lack of role models in school					
e) Type of school attended					
f) Gender discrimination in and outside school					
g) Gender insensitive curriculum					
h) Lack of adequate academic advice from teachers and significant others					
i) Lack of administrative support on girls' programmes					
j) Harassment by boys and male teachers					
k) Harassment of boys by girls and female teachers					

11. How would you rate the co-operation and support given by the parents in school development programmes?

a) Excellent [ ]
b) Very Good [ ]
c) Good [ ]
d) Average [ ]
e) Poor [ ]

12. How is the parents' response when called upon to visit school on various special occasions or school functions?

a) Excellent [ ]
b) Very Good [ ]
c) Good [ ]
d) Average [ ]
e) Poor [ ]

13. In your view what factors do you think could be attributed to pupil's poor performance in KCSE examination in your school?

(i) Factors affecting boys

a)
b)
c)
d)
e)

(ii) Factors affecting girls

a)
b)
c)
d)
e)

14. Suggest ways of improving academic performance for KCSE in your school.

Thank you for your co-operation and participation.

APPENDIX C

QUESTIONNAIRE FOR FORM THREE TEACHERS

This questionnaire is intended to help in an investigation on determinants of girl's performance in KCSE examination in Kikuyu Division of Kiambu District.

You are kindly requested to complete this questionnaire indicating your honest response by placing a tick [✓] against your option and fill in the blanks by giving many details as you can. All information given will be treated with confidentiality and your kind co-operation will be highly appreciated. You may not sign in your name and institution.

SECTION A

1. Please indicate whether you are a female or a male.

   a) Male [ ]
   b) Female [ ]

2. What is your age in years?

   a) 0-25 [ ]
   b) 25-30 [ ]
   c) 30-35 [ ]
   d) 35-40 [ ]
   e) 45 and above [ ]

3. How long have you been a teacher?

   a) 0-5 [ ]
   b) 6-10 [ ]
   c) 11-15 [ ]
   d) 16-20 [ ]
   e) Over 20 years [ ]

4. Indicate your position in your school by using a tick against the appropriate alternative below.

a) Headteacher [ ]
b) Deputy Headteacher [ ]
c) Head of Department [ ]
d) Classroom teacher [ ]
e) Other (specify)

5. What is your highest academic/ professional qualification?

a) S1 Diploma [ ]
b) BA / BSC [ ]
c) B. Ed [ ]
d) MA [ ]
e) MSC [ ]
f) M. Ed [ ]
g) Any other (specify) _____

6. (a) Have you attended any in-service course?

a) Yes [ ]
b) No [ ]

(b) Indicate your teaching experience. Tick [✓] appropriately.

(a) Less than 1 year [ ]
(b) 1-2 years [ ]
(c) 3-4 years [ ]
(d) 5.6 years [ ]
(e) 7 years and above [ ]

7. Which type of school are you teaching?

a) Mixed School [ ]
b) Girls only [ ]
c) Boys only [ ]

8. What is your teaching load per week?

a) Below 10 periods [ ]
b) 11-15 periods [ ]
c) 16-20 periods [ ]
d) 21-25 periods [ ]
e) Above 26 periods [ ]

SECTION B

9. Do you find your load very heavy? Tick [✓] appropriately.

(a) Very heavy [ ]
(b) Heavy [ ]
(c) Just right load [ ]
(d) Not heavy [ ]

10. Which type of school would you most prefer to teach given an option?

a) Mixed School [ ]
b) Boys only [ ]
c) Girls only [ ]

Please give reasons for your option above.

11. Below is a list of possible factors that may hinder the performance of girls in KCSE examination. To what extent do you agree that the following factors hinder girls' KCSE performance in your school? Please answer the question if in a mixed or girls' school by indicating a tick in the relevant column.

Scale

SA - Strongly Agree

A - Agree

UD - Undecided

D - Disagree

SD - Strongly Disagree

Socio-economic factors	SA	A	UD	D	SD
k) Lack of tuition leading to truancy					
l) Lack of relevant text books					
m) Lack of school uniform					
n) Lack of lunch time meals					
o) Lack of sanitary protection for girls					
p) Demand for girls domestic labour					
q) Lack of schools fees					
r) Lack of electricity					
s) Long distances traveled to school					
t) Lack of parental interest in their education					
School related factors					
l) Lack of gender sensitive facilities					
m) Lack of enough attention to girls by teachers					
n) Lack of teaching and learning facilities					
o) Lack of role models in school					
p) Type of school attended					

q) Gender discrimination in and outside school					
r) Gender insensitive curriculum .					
s) Lack of adequate academic advice from teachers and significant others					
t) Lack of administrative support on girls' programmes					
u) Harassment of girls by boys and male teachers					
v) Harassment of boys by girls and female teachers					

12. (a) Do you think girls can perform as well as boys in all subjects?

a) Yes [ ]
b) No [ ]

(b) Give reasons for your answer.

13. (a) Is there a guidance and counselling teacher in your school?

a) Yes [ ]
b) No [ ]

(b) If *Yes* to the above question 13(a) is she/he competent enough to handle the role professionally in the school?

a) Yes [ ]
b) No [ ]

14. Rate the impact of guidance and counselling on academic achievement in your school.

a) Satisfactory
b) Unsatisfactory
c) Average
d) Good
e) Poor

15. (a) If your school has girls (mixed or girls only), are there constraints that you face while trying to improve girls' performance?

a) Yes [ ]
b) No [ ]

(b) If *Yes* to question 15 (a) please list some of the constraints faced.

16. Please list the factors you believe affect girls' performance in KCSE examination.

17. Please list the factors that your believe affect the performance of boys at KCSE examination.

Thank you for you kind co-operation and participation.

APPENDIX D

STUDENTS' QUESTIONNAIRE - FORM THREE

This questionnaire is intended to help in an investigation of determinants of performance of girls in KCSE examination in Kikuyu Division in Kiambu District.

You are kindly requested to complete this questionnaire indicating your honest response by placing a tick [✓] against your option and fill in the blanks by giving many details as you can. All information given will be treated with confidentiality and your kind co-operation will be highly appreciated.

SECTION A

1. What is your sex?

   a) Female [ ]
   b) Male [ ]

2. In which type of school are you in?

   a) Mixed school [ ]
   b) Boys only [ ]
   c) Girls only [ ]

3. (a) Are you a boarder or a day scholar

   a) Day scholar [ ]
   b) Boarder [ ]

   (b) Estimate the distance from home to school in Kilometres?

   i) Less than 1km
   ii) 2-3kms
   iii) 3-4kms
   iv) Over 5kms

PART B

4. What is your father's level of education?

a) Did not attend school [ ]
b) Below Primary education [ ]
c) Attended primary education [ ]
d) Form II [ ]
e) Form IV [ ]
f) Form V [ ]
g) University [ ]
h) Others (please elaborate)_____

5. What is your mother's level of education?

a) Did not attend school [ ]
b) Below Primary education [ ]
c) Attended primary education [ ]
d) Form II [ ]
e) Form IV [ ]
f) Form V [ ]
g) Form IV
h) University [ ]
i) Others (please elaborate)_____

6. How many younger sisters and brothers do you have?

a) Brother (s) [ ]
b) Sister(s) [ ]
c) None [ ]

e) Others (specify)_____

12. Do your parents or people you stay with attend school functions whenever there is one?

a) Always [ ]
b) Sometimes [ ]
c) Never [ ]

13. Do your parents or people you stay with buy you books rather than the ones recommended by your teachers for reading at home?

a) Always [ ]
b) Sometimes [ ]
c) Not at all [ ]

14. How many hours do you spend on your school assignments and other private studies?

a) 0-1 hrs [ ]
b) 1-2 hrs [ ]
c) 3 hrs and above [ ]

15. How frequent do you miss classes as a result of being sent home for fees or any other issues in school?

a) Often [ ]
b) Sometimes [ ]
c) Not at all [ ]

16. If you are assured of continuous and sufficient funding, can you continue your studies after secondary school education?

a) Strongly agree [ ]
b) Agree [ ]
c) Not sure [ ]
d) Disagree [ ]
e) Strongly disagree [ ]

17. Listed below are different levels of education. Indicate the level you would like to achieve.

a) Secondary [ ]
b) College (Diploma) [ ]
c) Bachelors (University) [ ]
d) Masters (University) [ ]
e) Doctoral (PH. D University) [ ]

18. In your opinion do girls miss school more than boys??

a) Yes [ ]
b) No [ ]

19. Below is a list of basic facilities and learning resources necessary in a school. Please indicate by ticking their availability in your school accordingly to the level of sufficiency.

	Very sufficient	Sufficient	Insufficient	Not available
Books				
Classrooms				
Text books				
Revision books				

Science lab				
Physics lab				
Homescience room				
Workshops				
Staffroom				
H/teacher office				
Deputy's office				
Girls toilets				
Boys toilets				
Tap water				
Electricity				
Play fields				
Games facilities and equipment				

20. (a) Does your school provide services of a counsellor, career master or mistress?

a) Yes [ ]
b) No [ ]

(b) If *Yes*, do the counselling or advice you receive from your teachers or supervisors influence your level of academic attainment in school?

a) Strongly agree [ ]
b) Not sure [ ]
c) Strongly disagree [ ]

21. Do you receive adequate attention in class from your teachers?

a) Strongly agree [ ]
b) Agree [ ]
c) Not sure [ ]

d) Disagree [ ]

e) Strongly disagree [ ]

22. (a) Given an option, which school would you prefer to be in? Tick where appropriate.

a)	Mixed school	[ ]	Boarding	[ ]	Day	[ ]
b)	Girls only	[ ]	Boarding	[ ]	Day	[ ]
c)	Boys only	[ ]	Boarding	[ ]	Day	[ ]

(b) Indicate reasons for your choice of the type of school above in question 22(a)

23. Please list the factors that you believe affect girls' performance in KCSE Examinations. Please list some of these factors below.

1)

2)

3)

4)

5)

24. Please list the factors that you believe affect the performance of boys at KCSE examination.

1)

2)

3)

4)

5)

Thank you for your kind co-operation and participation