INFLUENCE OF FREE SECONDARY EDUCATION POLICY ON GENDER PARITY, REPETITION, DROPOUT, WASTAGE AND STUDENTS' ACADEMIC ACHIEVEMENT IN KERICHO COUNTY, KENYA

BY

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DECLARATION

DECLARATION BY THE CANDIDATE

This thesis is my original work and has not been presented for a degree in any other University. NGENO VIVILINE CHEROTICH: Signature......Date..... PG/PHD/0151/2011 **DECLARATION BY SUPERVISORS** This Thesis has been submitted with our approval as university supervisors. DR. E.M.W. SIMATWA Signature.......Date..... Department of Educational Management and Foundations, Maseno University. PROF. T.M.O. AYODO Signature...... Date..... Faculty of Education, Arts and Theology, Kabarak University.

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DEDICATION

This work is dedicated to my husband Mr. Charles Mutai, my daughter Priscilla Chepkemoi, my Sons Joseph Kiprop and Elisha Kipkirui. I do dedicate it to my father Mr. Jonah Ngeno and my father- in - law Simion Soi, all my siblings and in laws for the support they gave me throughout my studies. Not forgetting my late mother Grace Ngeno for the effort she put into my life and my late mother in law Elizabeth Soi. I would also like to dedicate it to my sister Jane Koech who passed on during my studies for the full support she gave me during data collection. Lastly, but not least I dedicate it to Mr. and Mrs. Reuben Maritim for the support they gave me when I was doing my undergraduate studies in Pakistan. Thank you and God bless you all.

ABSTRACT

In pursuance of provision of Education for All, Free Secondary Education (FSE) policy was adopted in 2008 to enhance access, improve quality, equity, relevance and Gender Parity in the provision of secondary school education in Kenya. The first cycle of students who benefitted from FSE policy graduated in 2011. The national mean Gender Parity Index (GPI) for 2004 to 2007 was 0.88 while in Kericho County it was 0.69 lower than national. The form to form transition fluctuated as between 9,103 and 9,333 in Kericho County while Students' mean scores in Kenya Certificate of Secondary Education on average was 5.39. This means that GPI, repetition, dropout, wastage and students academic achievements were concerns that were to be addressed by FSE policy, however, its influence was unknown. Therefore, the purpose of this study was to establish influence of FSE Policy on GPI, repetition, dropout, wastage and students academic achievement in Kericho County. Objectives of the study were to; determine the influence of FSE policy on GPI; repeaters rate, dropout rate, wastage rate and students academic achievement in Kericho County. The study was based on the concept of investment choices and consequently a conceptual framework was formulated. The independent variable was FSE policy and dependent variables were GPI, repeater rate, dropout rates, wastage rates and students academic achievement. Descriptive, ex-post factos and correlational research designs were adopted. The study population was 4,457 Principals, Sub County Quality Assurance and Standard Officers, Directors of Studies and form IV students of 2011. The sample size was 485. Snowball and saturated sampling techniques were used to select respondents. Questionnaire, interview schedules, Focus Group Discussion guide and document analysis guide were used to collect data. Supervisors validated the instruments. Reliability coefficient of the principals' questionnaire was 0.80 at set p-value of 0.05. Quantitative data was analyzed using cohort analysis, descriptive and inferential statistics. Qualitative data was transcribed and analyzed in emergent themes and sub themes. The study established that there was a moderate negative relationship between FSE policy and GPI with a coefficient of -0.44 at a p-value of 0.05, meaning it accounted for 19% of the variation. There was a weak positive relationship between FSE policy and repeater rate GPI with a coefficient of 0.0016 at a p-value of 0.05, meaning it accounted for 0.16% of the variation. There was a moderate negative relationship between FSE policy and dropout as signified by a coefficient of -0.31 at a p-value of 0.05, meaning it accounted for 10% of the variation. There was a weak negative relationship between FSE policy and wastage rate with a coefficient of -0.22 at a p-value of 0.05, meaning it accounted for 5% of the variation. There was a moderate positive relationship between FSE policy and students' academic achievement with a coefficient of 0.69 at a p-value of 0.05, meaning it accounted for 48% of the variation. The study concluded that FSE policy reduced GPI, drop out and wastage rates; and enhanced students' academic achievement but had very low influence on repetition rates. The study recommended that FSE fund should be reviewed upward to increase GPI, improve further on Students academic achievement and reduce educational wastage rates. The findings of this study are significant to stakeholders in education as it informs them on the need to review the policy with a view to improving secondary school education so as to achieve the objectives of FSE policy.

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LIST OF ABBREVIATIONS AND ACRONYMS

AIDS Acquired Immune Deficiency Syndrome

BBC British Broadcasting Corporation

BOM Board of Management

BSR Book Student Ratio

CDE County Director of Education

DOS Director of Studies

DQASO District Quality Assurance and Standards Officer

EFA Education for All

ESEA Elementary and Secondary Education Acts

FGM Female Genital Mutilation

FPE Free Primary Education

FSE Free Secondary Education

GEE Gender Equality in Education

GPI Gender Parity Index

HOD Heads of Departments

ILO International Labour Organization

KCPE Kenya Certificate of Primary Education

KCSE Kenya Certificate of Secondary Education

KDHS Kenya Demographic Health Survey

KENPRO Kenya Projects Organization

KNEC Kenya National Examinations Council

MAIS Mallya Aditti International School

MDGs Millennium Development Goals

NCES National Council of Education Statistics

NTSR Non teaching Student Ratio

ODL Open and Distance Learning

OECD Organization for Economic Co-operation and Development

PIDS Philippines Institute of Development Studies

PISA Program for International Student Assessment

SACMEQ Southern and Eastern African Consortium for Monitoring and

Evaluation Quality

SMASSE Strengthening Mathematics and Science in Secondary Education

STR Student Teacher Ratio

UNESCO United Nations Education Scientific Cultural organization

UNGEI United Nation Girls' Education Initiatives

UN United Nations

UNICEF United Nations International Children's Emergency Fund

UK United Kingdom

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CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Education is vital in eradicating extreme poverty, reducing child mortality rates, fighting disease epidemics such as Human Immunodeficiency Virus (HIV) and Acquired Immune Deficiency Syndrome (AIDS), and developing a global partnership for development. This is supported by world summit declaration on Education for All which is a global movement led by the United Nations Education Scientific and Cultural Organization (UNESCO), which aimed at meeting the learning needs of all children, youth and adults by 2015 (World Bank, 2000a). United Nations Human Regional Commission (2012) points out that education is both a human right in itself and an indispensable means of realizing other human rights. World Bank (2011) states that some countries are now declaring free universal secondary education. In this respect countries like Angola, Benin, Botswana, Uganda and several other sub-Saharan Africa have introduced Free Secondary Education (FSE) Policy to be in line with both Education for All (EFA) Goal and Millennium Development Goals (MDGs). It is against this backdrop that the Kenya government introduced Free Primary Education (FPE) and Free Secondary Education (FSE) policies in 2003 and 2008 respectively.

FSE policy (MOE, 2007) was put in place to enhance transition from primary to secondary school by making secondary school education affordable. The objectives of FSE policy were to enhance access to secondary education, improve quality, equity, relevance and gender parity in the provision of secondary school education (MOE, 2007). To achieve these objectives the government provided a guideline (Table 1.1).

Table 1.1

Costs incurred by the Government for each Student per Year after the Introduction of FSE Policy in 2008

Vote head	Day Schools	Boarding Schools			
	(Kshs.)	(Ksh	ıs.)		
-	GOK Subsidy	GOK Subsidy	Parent Fees		
	(FSE)	(FSE)			
Tuition	3,600	3,600	0		
Boarding, Equipment and Stores	0	0	13,034		
Repair, Maintenance and Improvement	400	400	400		
Local Travel and Transport	400	400	500		
Administration Costs	500	500	350		
Electricity, water and Conservancy	500	500	1500		
Activity Fees	600	600	0		
Personal Emolument	3,965	3,935	2,743		
Medical	300	300	100		
Total School Fees	10,265	10,265	18,635		

Source: Ministry of Education (2009)

According to the Ministry of Education (2009) FSE is meant to cater for the following items in secondary education: Tuition Kshs. 3,600/=, to cater for the students learning materials for instance textbooks, reams of paper, exercise books and other learning materials, Kshs. 400/= for Repair, Maintenance and Improvement (RMI), Kshs. 500/= for Electricity, water supply and conservancy (EW&C). Kshs. 400/= for Local Transport and Travel (LTT), Kshs.500/= Administrative Costs (AC), Kshs.3, 965/=, Personal Emolument (PE). Kshs. 600/= and Kshs. 300/= Co-curricular activities and medical care respectively.

The day schools parents were to cater for Lunch, Uniforms, personal effects and other projects for example expansion of infrastructure upon approval by the District Education Board (DEB) in consultation with the Boards of Governors (BOGs) and Parents Teachers Association (PTAs). Clear the fee balance for continuing students for the academic year 2008 (MOE, 2009). The boarding schools on the other hand parents should cater for boarding, Equipments and store Kshs. 13,034/=, RMI Kshs. 400/=, EW&C Kshs. 1,500/= LTT Kshs. 500/= personal Emolument Kshs. 2,743/= and medical care Kshs. 100/= respectively. Making a total of Kshs. 18,635/=. Parents were not required to pay for tuition and co-curricular activities but they were to cater for the following costs school uniforms, boarding and projects (MOE, 2009). The implementation of FSE first phase ended in 2011 with graduation of the first cohort that fully benefited from this policy. What was unknown was the influence of FSE policy on gender parity, repetition rate, dropout rate, wastage rate and students academic achievement in Kericho County. These were the knowledge gaps this study sought to fill.

Gender parity is one of the factors affecting equity in education and FSE policy was put in place to reduce disparities in gender in secondary schools. A survey study by Usher and Medow (2010) in western countries revealed that Mexico and Germany had the students' bodies where the gender balance is closest to fifty-fifty, however in both countries male students made up the majority of students. These were the only two countries in which this was the case. This study used survey design and secondary data (Gross enrolment data from UNESCO Institute for Statistics download). Most countries had gender balances in the range

between 1.2 and 1.5, meaning that female students in all these countries made up between 55 and 60 percent of the student body as indicated in Table 1.2.

Table 1.2
Western Countries Gender Parity Index

Country	GPI	Distance from GPI	Rank
Australia	1.30	0.30	6
Canada	1.36	0.36	7
Estonia	1.69	0.36	14
Finland	1.24	0.24	4
France	1.28	0.28	5
Germany	0.91	0.09	2
Mexico	0.98	0.02	1
Netherlands	1.40	0.40	8
Norway	1.62	0.62	13
New Zealand	1.48	0.48	11
Portugal	1.22	0.22	3
Sweden	1.59	0.59	12
United Kingdom	1.40	0.40	8
USA	1.40	0.40	8

Source: Usher and Medow (2010)

The survey was based on secondary data only. Secondary data per se does not give the up to date data for a study but rather for diagnostic purposes that need confirmation using primary data. The survey provided data on an exploratory basis and did not address factors responsible for the respective GPI in Kericho County. This is the knowledge gap this study sought to fill.

A study carried out by Takashi and Asankha (2011) on the impact of Universal Secondary Education in Uganda revealed that when the Free Secondary Education was started, it led to increased enrollments and the girls seemed to have benefited more from the policy. Longitudinal survey was used to get data from sampled 940 sampled households in 2003,

2005 and 2009 and descriptive statistics was used to analyze and report the findings. The researchers employed interview to collect data. This study used descriptive statistics in form of percentages. This study focused on an important area in planning and economics of education. It used households as a unit of analysis. Use of school principals and education officers would have added more value to this study. Analysis of GPI would have provided a better insight into the impact of universal secondary education on gender equality in education.

A study done by Murunga, Kilaha and Wanyonyi, (2013) in central province on Emerging Issues in Secondary School Education in Kenya, reveals that issues surrounding attrition of the boy child from learning have persisted despite FSE and FPE. The factors identified were peer pressure, mungiki sect, sand harvesting quarry activities, tea/coffee plucking and hawking. This study employed document analysis and newspapers to collect secondary data. The study and sample population was not given in this study. This study focused on emerging issues in secondary school education in Kenya based on secondary data.

This study relied on secondary data, whose accuracy may be in doubt particularly newspapers as the reporters are usually not authoritative and puts authenticity of the data used in doubt. These three studies tried to address gender inequality in secondary education by researching on GPI in western countries, general impact of universal education at secondary school level and factors responsible for boy attrition in secondary education. These studies had weaknesses in research methodology as they were mainly based on secondary data. Primary data and use of major stakeholders at this level of education, namely students and line personnel would have sufficed. These studies did not address the influence

of FSE policy on GPI. This is the knowledge gap this study attempted to fill using Kericho County as the site for the study.

Kericho County was used as a site for the study on influence of GPI because its GPI was lower than the national one (Table 1.3).

Table 1.3

Gross Enrolment by Gender for Secondary Students National and Kericho County from 2004 to 2007

Year	ar Number of Students	s Totals	Percenta	Percentages (%)		
	Boys	Girls	-	Boys	Girls	
National	level					
2004	490,506	435,643	926,149	52.96	47.04	0.89
2005	494,157	439,992	934,149	52.90	47.10	0.89
2006	546,072	484,008	1,030,080	53.01	46.99	0.89
2007	638,690	541,577	1,180,267	54.11	45.89	0.85
Kericho	County					
2004	20,135	15,134	35,269	57.09	42.91	0.75
2005	22,363	14,005	36,368	61.49	38.51	0.63
2006	22,785	15,126	37,911	61.40	38.60	0.66
2007	23,083	16,382	39,465	58.49	41.51	0.71

Sources: National Enrolment: Economic Survey (2009) and County Director of Education Office, Kericho (2011)

Table 1.3 is the gross enrolment rates for secondary school students in the Kenyan national level and Kericho County level from 2004 to 2007 respectively. The Gross enrolment nationally shows that the students ranged from 926,149 to 1,180,267 from 2004 to 2007. The boys were 490,506 (52.96%); 494,157 (52.90%); 546,072 (53.01%) and 638,690 (54.11%)

respectively. For the girls the enrolment was as follows; 435,643 (47.04%); 439,992 (47.10%); 484,008 (46.99%) and 541,577 (45.89%) respectively. The gender parity index was 0.89, 0.89, 0.89 and 0.85 respectively. The gross enrolment by gender in the county ranged from 35,269 to 39,465 from 2004 to 2007. The boys were 20,135 (57.09%); 22,363 (61.49%); 22,785 (61.40%) and 22,083(58.27%) respectively. For the girls the enrolment was as follows; 15,134 (42.91%); 14,005 (38.51%); 15,126 (40.98%) and 16,382 (41.51%) respectively. The gender parity index was 0.75, 0.63, 0.66, and 0.71 respectively. This is lower than the nationally GPI which ranged from 0.85 to 0.89. Republic of Kenya (2010 a) shows that in the 2009 census 49, 386 (48.75%) were male and 51,945 (51.26%) are female between the ages of 15 to 19 years in Kericho County this group were supposed to be in secondary school. This shows that most children who were supposed to be in school were not especially the girls as indicated by the give statistics.

Reviewed studies by Usher and Medow (2010) were done in western countries. While the study carried out by Takashi and Asankha (2011) was on the impact of Universal Secondary Education in Uganda A study done by Murunga, Kilaha and Wanyonyi, (2013) in central province was on Emerging Issues in Secondary School Education in Kenya. These studies did not address the influence of FSE policy on gender parity in Secondary schools in Kericho County. This was the knowledge gap this study sought to fill.

FSE policy was deemed to deal with the cases of repetition, dropout and ultimately education wastage that had adversely affected access to secondary education in Kenya. Gross Enrolment trends in Kericho County indicated that repetition, dropout and ultimate wastage

rates were matters of concern. Thus from Table 1.4 it can be noted that enrolment fluctuated as students transited from one for to another.

Table 1.4

Gross Enrolment in Terms of Form to Form Transition of Secondary School Students in Kericho County 2004 - 2007

Years	Form I	Form II	Form III	Form IV
2004	<u>9,103</u>	9,444	8,620	8,102
2005	9,434	<u>9,333</u>	8,990	8,611
2006	<u>10,516</u>	9,329	<u>9,217</u>	8,849
2007	10,310	<u>10,637</u>	9,237	<u>9,281</u>

Source: County Director of Education Office, Kericho (2011)

From Table 1.4 it can be observed that transition of the three cohorts were as follows: 2004 cohort transited as follows 9,103; 9,333; 9,217 and 9,281, the 2005 cohort transited as follows: 9,434; 9,329 and 9,237 and the 2006 cohort transited as follows: 10,516 and 10,637. The fluctuations could be attributed to repetitions and dropout because on the whole a general decline can be observed as students transited from form one to form four for the 2004 cohort. This trend was of concern because with introduction of FSE policy the participation rates were expected to increase and be sustained. FSE policy was introduced to enhance transition of pupils from primary schools to secondary schools, improve on quality of secondary education and reduce wastage. This trend parallels that of South Africa.

Thus South Africa basic education (2011) carried out a household survey and found that in 2009, on average 9% of learners enrolled in schools were repeating the grade they were in the previous year. South Africa's level of repetition is high. International comparative

information for primary schools for 2007 shows that South Africa's average level of repetition in primary schools (at 7%), was higher than the average level for developing countries (5%) and for developed countries (less than 1%). In general, repetition is higher among male learners than female learners and much greater in higher grades than in the lower grades. This study was done after the introduction of Universal Free Education. This study focused on Primary schools and inferential statistics was not done to determine the Free education influence on repetition.

Musyimi (2011) did a study on wastage rates in Kenya secondary schools in Kathonzweni District, Makueni County showed that repetition rate for the boys was 1.4% in form 1, 2% in form 2, 4% in form 3 and 6% in form 4 while for the girls was 2% in form 1, 3% in form 2, 4% in form 3 and 7% in form 4. The study further revealed that this repetition rates was caused by poor performance, forced repetition, chronic absenteeism, teenage pregnancies and drug abuse. The study was conducted using a descriptive survey design. The sample size was 18 secondary Schools in the district, and since the study involved a complete enumeration of all schools in the district, it was a census inquiry. Data was collected from the DEO's office using a proforma. Quantitative data was analysed using the statistical package for social sciences. The actual cohort wastage rate was not computed in this study since the data was not collected directly from the schools.

A study by Macharia, (2013) on impact of Free Secondary Education Policy on internal efficiency of day schools in Gatanga District, Murang'a County found that in the period between 2008 and 2011 repeater rates greatly increased in a study. Survey design was

adopted in the study. The target population for this study was 23 day schools, 23 principals and 245 teachers. The sampled population consisted of 8 day schools, 8 principals and 48 teachers. Questionnaires and interview were used to collect data. Percentages and standard deviation were used to analyze data. The population used was small to sample. Correlational research should have been used to determine the impact of FSE policy on repeater rate.

These studies focused on repetition in schools and collected data from households, in case of South Africa, secondary data in the case for Musyimi (2011) while Macharia (2013) used primary data. Different designs, that is, survey descriptive were used. These designs were not adequate because the intent of the studies was on influence and impact. This means that correlational research designs would have made the studies more complete in bringing out the real intent of these studies rather than serving as diagnostics. These studies did not deal with influence of FSE policy on repetition rates. This is the knowledge gap this study attempted to fill using Kericho County as the site for the study.

South Africa basic education (2011) carried out a household survey and found that dropout rate before Grade 9 was extremely low. It was around 1% in Grades 1 and 3 and less than 1% in Grades 2 and 4. From Grades 5 to 8 the dropout rate was minimal, ranging between 2% and 4%. The low dropout rate in the lower grades was consistent with the high enrolment rates in this grade 3 from Grade 9 upwards; however, the dropout rate increases, reaching almost 12% in both Grades 10 and 11. In total 10% of learners who had been enrolled in Grades 9 to 11 dropped out of school between 2007 and 2008. This was after the introduction of Free Universal education. This study only used percentages to analyse data but inferential statistics was not done to determine the influence of free education on dropout rates.

Musyimi (2011) did a study on wastage rates in Kenya secondary schools in Kathonzeni District, Makueni County and showed that dropout rate after introduction of FSE was 24.1% in form 3 and 4 for boys and 22% for the girls which were high compared to other classes. Studies further revealed that these dropout rates were because of the following reasons lack of family support, lack of interest, poor performance, indiscipline, peer pressure, sickness, teenage pregnancies and early marriages. The study was conducted using a descriptive survey design. The sample size was 18 secondary Schools in the District, and since the study involved a complete enumeration of all schools in the District, it was a census inquiry. Data was collected from the DEO's office using a proforma. Quantitative data was analysed using the statistical package for social sciences.

The South Africa study (2011) and Musyimi (2011) study addressed important areas of planning and economics of education because they affect the use of educational resources in schools. The South Africa (2011) study used households as unit of analysis, which was good, but it could have been better if school managers, administrators and students were used to bring out more data on dropout. Musyimi (2011) study used secondary data and only questionnaires were used to collect data. Use of primary data and interviews would have added more information on this subject of study. The two studies did not embrace influence of free secondary education policy on dropout rates. This is the knowledge gap this study attempted to fill using Kericho County as a site for the study.

The studies reviewed on the other hand focused secondary school dropout in South Africa and Kenya (South Africa Basic Education 2011; Musyimi 2011) did not address the influence of FSE policy on dropout rates in Kericho County secondary schools for the cohort 2008. This was the knowledge gap this study sought to fill.

A study carried out in Nigeria by Adeyemi, (2012) on school variables and internally efficiency of secondary schools in Ondo state revealed that wastage rate index was 1.17 indicating that students spend 7.02 student years to complete against an ideal student years of 6 years. The coefficient of efficiency of 85.5% this shows that the secondary schools in Ondo State, Nigeria are 85.5% internally efficient. The study employed document analysis in collecting data from 32 secondary schools. It further revealed that Teacher qualification best predicts school internal efficiency, followed by teachers teaching experience, class size, student teacher ratio, school location and school size. The used only document analysis and should have employed more instruments to get varied results through interview. This study did not establish the influence of FSE policy wastage rates.

Musyimi (2011) did a study on the impact of FSE policy on wastage rates in secondary schools in Kathonzweni District, Makueni County. The study was conducted using a descriptive survey design. The sample size was 18 secondary Schools in the District, and since the study involved a complete enumeration of all schools in the District, it was a census inquiry. Data was collected from the DEO's office using a proforma. Quantitative data was analysed using the statistical package for social sciences. Findings indicated that cohort wastage rates were decreasing, from a high of 44% in the 2006 cohort to 19% in the 2007 cohort. The actual cohort wastage rate was not computed in this study since the data was not from the schools. Inferential statistics was not done to determine the impact of FSE policy on wastage rate.

Adeyemi (2012) and Musyimi (2011) studies addressed the issue of educational wastage in Nigeria and Kenya using specific regions as sites for their studies. However those sites were not made. Adeyemi (2012) used schools as unit of analysis and so did Musyimi (2011). However, Adeyemi (2012) collected data from schools, which was primary data, but Musyimi (2011) used secondary data from DEOs office. It is always better to use primary data. Adeyemi (2012) focused on internal efficiency and addressed wastage as an indicator of internal efficiency indirectly while Musyimi (2011) dealt directly with wastage. These studies did not address the influence of FSE policy on wastage rates. This is the knowledge gap this study sought to fill using Kericho County as a site for the study.

Students' performance in KCSE prior to FSE policy in Kericho County was of concern. Thus the data on students performance in Kericho county was as shown in Table 1.5.

Table 1.5

Performance in KCSE in Kericho County Secondary Schools for the years 2004 to 2007

Years	Mean Scores	Deviation
2004	4.77	0.10
2005	5.83	1.06
2006	5.45	-0.38
2007	5.52	0.07

Source: Kericho County Director of Education Office, 2011

From Table 1.5 it can be noted that Performance in Kericho County was not impressive despite the fact that it had some of the top performing schools nationally. The performance from 2004 to 2007 was observed to be fluctuating as signified by the lowest mean scores of 4.76 in 2004 and 5.83 which is the highest in 2005. This is an indication that the County was not performing well in secondary education as the mean scores remained below average for

the years. KCSE is the ultimate indicator of students' academic achievement as it reflects the quality of input in terms of book student ratio, teaching learning materials, class size, teacher student ratio, Repairs, maintenances and Improvement, Support Staff student ratio.

Ngeno, Simatwa and Soi (2012) study revealed that in Kericho District the performance indices in KCSE for day scholar girls and boarders were 3.38 and 3.59 respectively in mixed day and boarding secondary schools in 2010. This performance was equally below average. This outcome was attributed to school levies, indiscipline, family factors, entry behaviour of the child, lack of interest on the girls' to complete their work, the attitude some parents have towards the girl child compared to the boy child, and lack of required books. The study established that it was more cost effective to educate a girl child in day school than a boarding school in Kericho District. The study population consisted of 150 form four students, 45 Heads of Department and 6 principals. The sample size was 124 form four students, 35 HODs and 5 principals. The instruments for data collection were questionnaire, document analysis guide and interviews. This study focused on girls in day and boarding schools and did not embrace the influence of FSE policy. Nevertheless, it provided data on factors that influenced performance of girl students and established the cost effectiveness of educating the girl child in day and boarding secondary schools.

Nanda (2014) indicates that in India despite levying a tax to fund education the government has not succeeded in improving learning outcomes in India's schools. The highest populations of world illiterate adults 37% are Indians. Education accounts for 10.5% of the total government expenditure. It further indicated that at least 28% of the cost of primary and secondary education is met by households in India. The data presented is a general view and

the costs incurred. This study did not indicate the methodology used the instruments that were used. The data should have been computed and correlation done to establish the influence of levied education on students' academic outcome.

A study by Macharia, (2013) on the Impact of Free Secondary Education Policy on Internal Efficiency of Day Schools in Gatanga District, Murang'a County found that in the period between 2008 and 2011. Performance of day schools in KCSE improved where 37.5% of the schools retained their previous performance while 62.5% improved. Survey design was adopted in the study. The target population for this study was 23 day schools, 23 principals and 245 teachers. The sampled population consisted of 8 day schools, 8 principals and 48 teachers. Questionnaires and interview were used to collect data. Percentages and standard deviation were used to analyse data. This study had a small study population and should have been sampled. Correlation has been done to determine the influence of FSE policy on students' academic achievements. The study focused on the impact of FSE policy on internally efficiency.

A study done by Soi, Barmao and Ngeno (2013) on the influence of school type on girls' attitudes towards mathematics in Ainamoi Division, Kericho District, Kenya revealed that there was no significant difference between girls' attitude towards mathematics in girls' only schools and girls in co-educational schools. However it revealed that there was a statistically significant difference at 0.05 alpha levels in girls' perception of ability between girls in girls' only schools and those in Co-educational schools in favor of those in girls' only schools. A total of 200 girls (80 from girls only schools and 120 from co-educational schools) responded

to a three-point rating scale instrument that measured attitudes towards mathematics. Descriptive survey was adopted. Correlation design should have been proper since the analysis determine the relationship. This study focused on girls schools only in Ainamoi Division but did not determine the influence of FSE policy on Students' Academic Achievements.

Ngeno, Simatwa and Soi's study carried out in Kericho District focused on cost effectiveness of educating girls in day and boarding secondary schools. They did not take into account the influence of FSE so as to indicate what it accounted for in performance of the girl child. Nanda's (2011) study carried out in India was an exploratory study and revealed very important information that despite free education interview by levying tax to fund education the level of literary had not improved as a learning outcome. The study by Macharia (2013) revealed that FSE policy had enhanced academic performance in day secondary schools. However, Macharia (2013) used a small sample size that was not representative of the study population. That is the sampled 8 secondary schools from 23 secondary schools. The study should have used saturated sampling technique. The study by Soi, Barmao and Ngeno dealt with girls attitude towards mathematics in a division in Kericho County. These studies did not address the influence of FSE policy on students academic achievement in Kericho county. This is the knowledge gap this study attempted to fill.

1.2 Statement of the Problem

The objectives of FSE policy were to expand on access to secondary education, and improve quality, equity, relevance and gender parity in the provision of secondary school education. Gender Parity Indices at National level from 2004 to 2007 were 0.89, 0.89, 0.89 and 0.85 while in Kericho County they were 0.75, 0.63, 0.66, and 0.71 respectively which was lower than the national ones. What was unknown was the influence of FSE policy on gender parity index as one of the concerns that was to be addressed by FSE policy. This was the first knowledge gap this study sought to fill. Kericho County experienced fluctuations in the students' enrolment as they transited from one form to another. Studies reviewed revealed that repeater rates, dropout rates and wastage rates were issues of concern despite the FSE policy. These studies did not address the influence of FSE policy on repetition, dropout and wastage rates in Kericho County secondary schools for the 2008 cohort. These were the other three knowledge gaps this study sought to fill. Students' academic achievement in Kericho County was low from 2004 to 2007, that is, the mean scores in KCSE were 4.77, 5.83, 5.45 and 5.52 respectively as it was observed to be low as signified by the lowest mean scores of 4.76 in 2004 and 5.83 which was the highest in 2005. This was an indication that the County was not performing well in secondary education as the mean scores remained below average for the years. Studies done indicated that FSE policy had improved performance in Gatanga District in Murang'a County. This study did not address the influence of FSE policy on students' academic performance in Kericho County, hence the influence of FSE policy on student academic performance was unknown in Kericho County. This was the fifth knowledge gap this study sought to fill. It was therefore necessary to carry out a study in Kericho County to establish the influence of FSE policy on Gender parity,

repetition rates, dropout rates, wastage rates and students' academic achievement using 2008 cohort which was the first cohort that benefited from FSE policy.

1.3 Purpose of the Study

The purpose of the study was to establish the influence of the Free Secondary Education policy on Gender Parity, repeater rate, dropout rate, wastage rate and Students' academic achievement in Kericho County.

1.4 Objectives of the Study

The Specific objectives of the study were to:

- (i) Determine the influence of Free Secondary Education policy on Gender Parity in secondary schools in Kericho County.
- (ii) Determine the influence of Free Secondary Education Policy on repeaters rate in secondary schools in Kericho County.
- (iii) Determine the influence of Free Secondary Education Policy on dropout rate in secondary schools Kericho County.
- (iv) Establish the influence of Free Secondary Education Policy on wastage rate in secondary school in Kericho County.
- (v) Establish the influence of Free Secondary Education Policy on students' academic achievements in Kericho County.

1.5 Research Questions

In order to investigate effectively this problem, the following research questions were derived from the above objectives:

- (i) What is the influence of Free Secondary Education policy on Gender parity in secondary school in Kericho County?
- (ii) What is the influence of Free Secondary Education policy on secondary school repeater rate in Kericho County?
- (iii) What is the influence of Free Secondary Education policy on secondary school dropout rate in Kericho County?
- (iv) What is the influence of Free Secondary Education policy on secondary school education wastage rate in Kericho County?
- (v) What is influence of the Free Secondary Education policy on students' academic achievement in Kericho County?

1.6 Significance of the Study

The findings from this study are significant to stakeholders and the county in:

- (i) Understanding the influence FSE policy has on Gender Parity in Kericho County secondary schools. So that they may chart the way forward for enhancing it.
- (ii) Highlighting the influence FSE policy has on students' academic achievement in terms of mean scores in Kericho County secondary schools so that measures to improve on performance can be put in place.
- (iii) Helping education planners to know the influence FSE policy has on repetition rates in Kericho County secondary schools and take appropriate steps to reduce fourth Rrates.

- (iv) Helping education planners to be informed on influence FSE policy has on dropout rates in Kericho County secondary schools so that intervention measures can be put in place.
- (v) Helping education planners to be informed on influence FSE policy has on wastage rates in Kericho County secondary schools so as to decide on the way forward.

1.7 Conceptual Framework

The conceptual framework (Figure 1) postulates that, gender parity, repetition, dropout wastage, and students' academic achievement are influenced by Free Secondary Education Policy in Kenya. The conceptual framework was based on the concept of investment choices advanced by Psacharopolous and Woodhall (1985). Thus the study adapted the concept to make it suitable for this study. The adaptation involved having one independent variable and five dependent variables with one intervening variable. The originator of this concept provided a production function equation in which there was one dependent variable and many independent variables: $Y = X_1 + X_2 + X_{3+}$ Pscharapolous and Woodhall (1985). Notwithstanding this approach, use of the concept was ideal. This was in accordance with the grounded theory (Creswell, 2002) which states that where there is no appropriate theory a conceptual framework can be developed based on the available data that presupposes the relationships. The available data presupposed that FSE subsidy could influence gender parity, repeater rates, dropout rates, wastage rates and students' academic achievement in secondary schools and was in line with the objectives of FSE policy (MOE, 2007). Woodhall (2004) indicates that education is a form of investment in human capital that yields economic benefits and contributes to the country's future wealth by increasing the productive

capacity of its people. FSE subsidy is an investment choice by the Government of Kenya aimed at promoting transition from primary school education at the same time enhancing equity, gender parity, reducing wastage in secondary school education and improving quality secondary education.

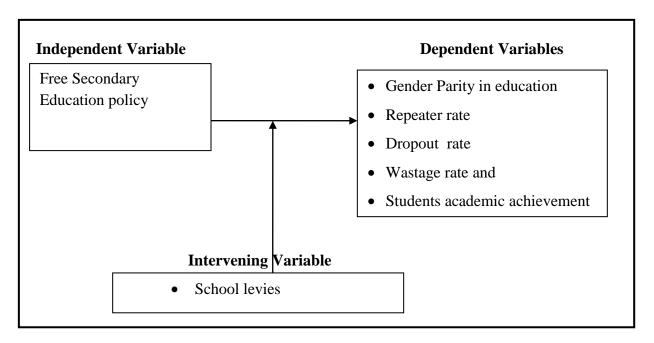


Figure 1: Conceptual Framework Showing the Influence of the FSE Policy on Gender
Parity, Repeater rate, Dropout rate, Wastage rate and Students' Academic
Achievement in Kericho County

This conceptual framework was adapted to focus on independent and dependent variables. Independent variable was FSE policy while dependent variables were gender parity, repeater rate, dropout rate, wastage rate and students' academic achievement. According to Mc Burney and White (2010) an independent variable is selected by the experimenter to determine the effects of behavior while dependent variable is a measure of a subject's behavior that determines independent variable effects. This study focused on the following variables Free Secondary Education Policy and the influence it had on gender parity,

repetition, dropout, wastage and students academic achievement in Kericho County. The school levies was an intervening variable. This variable was taken care of by including it in correlations to establish its influence. The dependent variables were gender parity, repetition, dropout, wastage and students academic achievement in Kericho County secondary schools.

Gender parity was determined by computing the difference between the boys and the girl before and after FSE policy. Two cohorts were used for the study. The first cohort was before FSE from 2004 to 2007 and was used as a control group, while the second cohort was after FSE policy from 2008 to 2011. The repetition, dropout and wastage rates were computed in Kericho County secondary schools before and after FSE policy. Students' academic achievement was determined by analyzing students' performance in KCSE before and after the introduction of FSE Policy. While trying to establish the influence of FSE policy on students' academic achievement it was necessary to establish the utilization of FSE fund on educational inputs which was part of the package of FSE policy to enhance students' academic achievement. In this respect the study sought to establish the provision of inputs, Book Student Ratio (BSR), class size, Student Teacher Ratio (STR) and Non Teaching Staff Student Ratio (NTSR), which were studied as they had a direct bearing on student academic achievement. This helped to explain the influence of FSE policy on students' academic achievement. Pearson Product Moment Correlation Coefficients and coefficient of determination were used to establish the influence of FSE funds on GPI, repetition, dropout, wastage and students academic achievement in Kericho County.

1.8 Scope of the Study

The study was confined to Kericho County. The focus of the study was on the influence of free secondary education policy on gender parity, repeater rate, dropout rate, wastage rate and students academic achievement. The study was conducted between 2012 and 2014.

1.9 Limitations of the Study

The findings of this study may not be generalized to the whole country because it was not a case study. It only focused on the influence of FSE policy on GPI, repeater rate, dropout, wastage rate and students' academic achievements in Kericho County at a given point in time.

1.10 Assumptions of the Study

The study made the following assumptions:

- (i) FSE money was paid to all the schools and utilized well by the school administrators to achieve the objectives of FSE policy.
- (ii) Both boys and girls in primary schools had equal chances of transiting to secondary school.

1.11 Operational Definition of Terms

Accession Registers: This is a document containing all the records of text books in

the school library.

Bodaboda: Means motorcycle and bicycles operators doing taxi

business

Cohort: A cohort is a group of students enrolled together in the same

class and they transit together till graduation.

Construct: People's behavior for instance motivation, creativity, ratio

bias that cannot be directly observed and measured

Descriptive statistics: Numerical data that describe variables or characteristics

being measured which summarize the general nature of data

obtained for instance; as average, percentage or frequency

Director of Studies: A senior teacher in charge of examination and curriculum

implementation in secondary schools.

Dropout rate: These are the students who join and education system but

don't graduate in the final grade.

Equity: Fairness in treatment of both boys and girls based on existing

rules and regulations.

Free Primary School: This is where the government subsidizes fees for all primary

school children in public schools.

Free Secondary Education: This is education system whereby students' fees are

subsidized by government in all public secondary schools in

Kenya.

Free Secondary Education Is the package of Kshs.10, 265 being a government subsidy

policy: for all secondary school students in public secondary

schools.

Gender Parity: This is the equality between the girls and boys in secondary

school enrolment.

Gender parity index: Gender Parity Index (GPI) is the ratio of female to male

values of a given indicator and a GPI of 1 (or within the band

of 0.97 to 1.03) indicates parity between the sexes. A GPI of

above 1 indicates a disparity to the disadvantage of boys,

while a GPI of below 1 indicates a disparity to the

disadvantage of girls.

Inferential: Computational data that is used to make inferences from data

obtained on variables. It helps researchers to make decisions

about the data for instance: Pearson r coefficients

Inventory: This is a document used to record issue of books to the

departments where books are not centralized in the library.

Mean score: These are KCSE performance results in Kenya presented in

Means and done yearly during the final year in secondary

schools.

Non teaching staff student This is the average number of students per non teaching

ratio: staff at a specific level of education in a given school year.

Non teaching staff: Workers in schools on permanent, contract and casual terms

Performance: Students' academic achievements as measured by KCSE

results in terms of mean scores.

Promotion rates: Proportion of students from a cohort enrolled in given school

years who study in the next grade in the following school

year.

Public schools: These are schools funded and managed by the government

of Kenya

Quality education: This is standard of education measured in terms of inputs

like textbooks, desks, physical facilities, teaching staff and

non-teaching staff that commensurate with educational

output inform of KCSE mean scores of 70 and above.

Repeater rate: Means grade retention and occurs when students are held in

the same grade for an extra year or more rather than being

promoted to a higher grade along with their age peers.

Students Academic Students' performance measured in terms of KCSE mean

Achievements: scores.

Student teacher ratio: This is the number of students per teacher at a specific level

of education in a given school year.

Subsidy: Grant of money paid by the government to the students to

reduce the actual cost of education.

Survival rate: This is the number of students who stay in an education

system till graduation. Is a percentage of a cohort of students

enrolled in the first grade of a given level or cycle of

education in a given school year who are expected to reach successive grade.

Transition rate:

The number of students admitted to the first grade of a higher level of education in a given year expressed as a percentage of the number of students enrolled in the final grade of the lower level of education in the previous year (UNESCO, 2009 b).

Tuition:

This is the money that is paid for one to be taught and it includes money paid to purchase teaching and learning resources.

Variable:

Is a characteristic of interest that is possessed by each item or individual under study and varies in its value from one individual to another in a definite population, for example performance.

Wastage rate:

Wastage rate is the number of student-years spent in total and calculated and compared with what is theoretically possible (Owolabi, 2006).

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter deals with reviewed related literature regarding the study. It focused on gender parity, repeater rate, dropout rate, wastage rate and students academic achievement.

2.2 Influence of FSE Policy on Gender Parity in Secondary Schools

Secondary schools have been considered as providers of basic education worldwide. In the United States of America (USA) and most developed countries governments have tried to fund primary and secondary education. Elementary and Secondary Education Act (1965) was passed as a part of President Lyndon B. Johnson's War on Poverty and has been the most farreaching federal legislation affecting education ever passed by Congress. The Act is an extensive statute that funds primary and secondary education, while explicitly forbidding the establishment of a national curriculum. It also emphasizes equal access to education and establishes high standards and accountability. In addition, the bill aims to shorten the achievement gaps between students by providing each child with fair and equal opportunities to achieve an exceptional education. As mandated in the Act, the funds are authorized for professional development, instructional materials, for resources to support educational programs, and for parent involvement promotion. A study on Contextualizations and Recontextualizations of Discourses on Equity in Education done by Haugen (2009), found that despite differences in equitable functions the losers in both educational systems tend to be the same: pupils from lower socio - economic backgrounds and ethnic minorities. It is likely that those pupils whose parents have enjoyed only limited schooling and other vulnerable children in terms of their low socio - economic status, potential special needs and in some cases ethnic and language background make up the tail of underachievement.

Gender parity is a problem worldwide; the girl child seems to be disadvantaged compared to the boys, more so in developing countries. Studies by UNESCO (2011) indicate that globally, some 39 million girls of lower secondary age are currently not enrolled in either primary or secondary education, while two - thirds of the world's 796 million illiterate adults are women. Only about one - third of countries have achieved gender parity at secondary school level. This evidence shows that something needs to be done to change this trend. UNESCO (2009 a) revealed that goal of eliminating gender disparity in primary and secondary education by the year 2005 was missed in 122 countries according to with available data. Thus Gender parity in primary school education was achieved in 118 (63%) of 188 countries and 37% of 144 countries in secondary school education. This was below average for the secondary school education.

Usher and Medow (2010) did a survey in western countries that Mexico and Germany have the students' bodies where the gender balance is closest to fifty-fifty, however in both countries male students make up the majority of students these are the only two countries in which this is the case. This study used survey and data was secondary acquired from UNESCO. Most countries have gender balances in the range between 1.2 and 1.5, meaning that female students in all these countries make up between 55 and 60 percent of the student body as indicated Table 2.1.

Table 2.1
Western Countries Gender Parity Index (GPI)

Country	GPI	Distance from GPI	Rank
Australia	1.30	0.30	6
Canada	1.36	0.36	7
Estonia	1.69	0.36	14
Finland	1.24	0.24	4
France	1.28	0.28	5
Germany	0.91	0.09	2
Mexico	0.98	0.02	1
Netherlands	1.40	0.40	8
Norway	1.62	0.62	13
New Zealand	1.48	0.48	11
Portugal	1.22	0.22	3
Sweden	1.59	0.59	12
United Kingdom	1.40	0.40	8
USA	1.40	0.40	8

Source: Usher and Medow (2010)

A study carried out by the State University (2002 a) on equity in education in the United State of America found that there are critics on public education arguing that many children do not have equal opportunities to learn and are not likely to attend a quality school. In fact, critics suggest that the education system perpetuates poverty and disadvantage, providing rich and poor schools with stark contrasts in learning environments and physical surroundings. Impoverished neighborhoods typically house run-down schools with less money and poor conditions, while affluent neighborhoods house newer and safer schools providing better learning environments. Furthermore, ethnic minority students are more likely to attend the lower-quality urban schools. While there have been many efforts to improve this inequality of opportunity, such efforts are only the first step in achieving equity, even with millions of dollars invested in federal programs. This study focused more on access and equity.

According to the United Nation (2005) countries where overall enrolments are high, girls tend to be well represented in both primary and secondary education. In Latin America, for instance, more girls than boys are enrolled in secondary school. But in most developing regions, gender disparities become progressively more marked when girls enter secondary school and later go to university. Of some 65 developing countries with full data, about half have achieved gender parity in primary education, about 20 per cent in secondary education and 8 per cent in higher education. World Bank (2008) indicates that girls are more disadvantaged and it is very common in Africa and in parts of Asia. Of the 53 countries with a Gender Parity Index (GPI) below 0.97, thirty one (58.49%) are in Africa, 17(32.08%) in Asia and just 5(9.43%) in the rest of the world.

According to the UNESCO (2009 a) only universal access to equitable quality education can enhance achievement of human and social development goals. This study showed that the number of adults who cannot read or write declined by 10.4% from 864 million to 774 million between 1985-1994 and 2000- 2004. But what remained unchanged is that 64% of illiterate people worldwide are women. Despite progress in the same period striking gender parity still prevailed in Afghanistan, India, Nepal, and Pakistan. In sub-Saharan 150 million adults cannot read or write in a ratio of 76 women for every 100 men. UNICEF, (2009 a) in their analysis revealed that boys' enrolment rates were significantly lower than those of girls in Malaysia, Mongolia, the Philippines and Thailand. With a GPI of 1.00, 1.05, 1.07 and 1.02 for lower secondary and 1.17, 1.13, 1.20 and 1.20 for upper secondary respectively in this countries. It employed focus group discussion and interviews on students and teachers. This study used the right approach in data collection and analysis. This study did not determine

the influence of Free Secondary Education on GPI. The methodology used was a broader gender analysis was then undertaken utilizing the information provided in the case studies, government policy reviews and analyses of other relevant sources. The findings of these underlying gender dynamics where boys are considered more independent, believed to be less interested in learning, and have the potential to earn money while working mean that boys are more likely to leave school.

UNESCO, (2009 a) revealed that there has been progress towards increasing primary school enrolment yet 72 million primary school aged children are still denied their right to education 57% of whom are girls. Girls accounted for 60% out of school children in the Arab states and 54% in the sub-Saharan Africa, India, Nigeria and Pakistan account for 27% of all out of school children. Thirty five fragile states identified by the OECD accounted for almost 37% of all out of school children in 2005. UNESCO (2010 a) revealed that in sub-Saharan Africa, between 1999 and 2007 the average net enrolment rate of primary school increased from 56% to 73% and the population out of school reduced by nearly 13 million from 1999 to 2007. Unfortunately 25% of the regions primary age children were still out of school which accounted for nearly 45% of the global out of school population. This was a slight improvement from that of UNESCO (2009 a).

Gender parity index being an issue worldwide is worst in developing countries and it is often more pronounced in secondary, technical and vocational educational institutions than in primary education. In South and West Asia, along with sub-Saharan Africa, girls accounted for 44% of students in secondary education in 2007, but just 27% and 39%, respectively, in technical and vocational education (UNESCO, 2010 b). According to UNICEF (2009 b)

Gender Parity Index (GPI) is the ratio of female to male values of a given indicator. A GPI of 1 (or within the band of 0.97 to 1.03) indicates parity between the sexes. A GPI of above 1 indicates a disparity to the disadvantage of boys, while a GPI of below 1 indicates a disparity to the disadvantage of girls. In East Asia and Pacific it revealed that in Viet Nam at the national level the GPI for the net attendance ratio at the secondary and higher levels of education is 1.02, indicating that gender parity has been achieved (within the gender parity band of 0.97 and 1.03). However, a closer look at the sub-national level reveals a more varied picture, with significant disparities to the disadvantage of girls in the North East and to the disadvantage of boys in the South East and Central Highlands region, calling for targeted action to address the gender disparities in these areas.

Oketch and Rolleston (2007) conclude that efforts have been made to expand access to education ever since they gained their independence from British colonial rule in the early part of the 1960s in East Africa countries. Yet still, there are those with no access, those who are excluded after initial entry, those at risk of dropout, and a majority excluded from any form of secondary education. This study focused more on student access in East Africa Countries. In Niger secondary school enrolment ratio showed that the girls was less than 11% and 97% in Seychelles and South Africa respectively. Gender biased was also noticed whereby the boys were given a priority compared to the girls who are rarely given a chance by the parents to go to school (UNESCO, 2010 a).

Studies carried out by the World Bank (2005) on Gender Equity in junior and senior secondary school Education in sub-Saharan shows that 56% of children live in countries with gender disparities in primary gross enrolment ratios and not surprising it is girls who are

generally disadvantaged. One in ten children live in countries where GPI for primary education is less than 0.85 indicating that for every 100 boys few than 85 girls are enrolled. It further indicated that gender parity against girls are highest in Benin, Cote'd' Ivoire, Ethiopia, Guinea Mali and Togo with fewer than 60 girls per 100 boys entering secondary schools.

A study on Gender Equality in Education (GEE) score cards was carried out in 9 countries in Africa by Kamau, Ngigi, Mulugeta, Mlama, Madanda, Chiuye, Mogotsi, Namibia, Nomcebo, Mwansa and Mutanga, (nd). This study used quantitative and qualitative approaches. The study adopted a cross sectional survey and case study designs. It employed a score card in form of a questionnaire which was given to each countries lead researcher. The following were the findings of the study.

Table 2.2 Score Card

Country	Gender Equality in Education		
Namibia	6.63		
Kenya	6.54		
Tanzania	6.22		
Swaziland	6.04		
Zambia	6.06		
Uganda	5.64		
Malawi	5.41		
Ethiopia	5.34		
Zimbabwe	4.87		

Adopted from: Gender Equality in Education Score Card

Key:

Score Description

Below 5 Need for improvement

6-7 Good 8-9 Very Good 9 and above Excellent

Source: (http://www.fawena.org/resources/GenderScoreCard.Pdf) (nd)

This study indicated that most of these countries GEE in education is generally good or needs to improve. This is an indication that these Africa countries need to improve when it comes to gender in education.

A study carried out by Takashi and Asankha (2011) on the impact of Universal Secondary Education in Uganda revealed that when the Free Secondary Education was started, it led to increased enrollments and the girls seem to benefit more from the policy. Longitudinal survey was used to get data from sampled 940 sampled households in 2003, 2005 and 2009. The researchers employed interview to collect data. This study used descriptive statistics in form of percentages and regression to analyze data. The GPI ratio was not computed in this study.

When Kenya introduced the free secondary education programme in 2008 it was meant to raise enrolment and give all children equal right to education. This has the government so far released more than \$41m to pay for the different phases of the programme which has proved to be a success to relieve the poor and marginalized communities from accessing education equally (Economic Survey, 2008). The free primary education, which is also compulsory, saw many children, particularly from poor families; enjoy an opportunity to be in school. Based on reports by the MOE (2008) the number of boys and girls enrolled in primary school has risen from five million to a staggering eight million. According to the ministry of education strategic plan 2006-2011 the total enrolment for 2004 for secondary schools were 926,149 with 48% being female students and 52% being male. While in primary schools it stood at 108.0% for boys and 101.6% for girls.

Mulama (2004) revealed that about 1.9 million children of ages 5-17 have not yet been able to access Free Primary Education because they are busy working in Kenya. The Central Bureau of Statics estimates that 17.5% of the 1.9 Million children are employed as domestic workers. More than a half of the children in Kenya that is 8.6 million out of 16 million live below poverty line. Under such circumstances, parents force their children into working including the domestic sector to supplement family income. A study on an evaluation of the implementation of Free Primary Education in selected public secondary schools in Kakamega District carried out by Luvega (2007) found that there was a significant relationship between FPE and enrolment of school going age children. Apparently, pupils in the area of study had taken advantage of the new policy to access education. This study used case study.

According to Kenya Education Partnerships (2010) Teenage girls are affected by menstruation and other related difficulties where sanitary products are not available meaning girls often drop out of school. It further revealed that in many families there remains a clear preference towards educating boys, while girls drop out and pregnancy is among the factors. The required data was acquired from the relevant ministries. Data analysis was computed in form of percentages. This study did not compute the GPI and did not establish the influence of FSE policy on GPI. Studies carried out by Oketch and Somerset (2012) indicated that over the full eight year primary cycle, the response was of course more muted, total enrolments rising from 6.13M in 2002 to 7.16M in 2003 (17%). This was a case study carried out in four districts, Nairobi, Kajiado, Kisii and Nyeri.

A study by Paul, (2008) in Migwani division revealed that the boys in schools are slightly more compared to the girls. The boys have tripled after the start of FPE while the girls have doubled. Data collection was done in ten schools. By conducting face-to-face interviews, the writer interviewed 7 head teachers, 2 deputy head teachers, 16 individual students, 2 student groups (16), 7 community members and 4 government administrators. This study employed interview to collect data. Both qualitative and quantitative data was collected, documents from schools was also analyzed. Percentages were used to analyze data and was presented by tables and charts. International Labour Organization (2010) in the study on the micro factors inhibiting education access, retention and completion by children from vulnerable communities in Kwale district, Kenya revealed that the reasons which leads to non enrolment were lack of funds, decision by the father, parents ignorance or low literacy levels, religious factors, distance, nomadic life style, cultural beliefs, domestic work and employment as house helps. This study did not focus on the influence of FSE policy on gender parity index.

Comboni Missionaries Kenya (2012) revealed that the Kenyan government estimate indicated 70 out of every 100 adults cannot read and write in any language in Turkana County. Illiteracy is considerably higher in females, with only 15 out of every 100 women able to read and write in any language. More than 50% of school age children do not attend school. Girl child education is still very low with many girls leaving school to work at home caring for other children or being married at a very young age for a dowry of goats, cows or camels. This has led to High rate of pregnancy for girls and high rate of school drop-outs both for boys and girls between the ages of 14-18.

A study done by Murunga, Kilaha and Wanyonyi, (2013) in central province on Emerging Issues in Secondary School Education in Kenya, reveals that issues surrounding attrition of the boy child from learning have shifted from learning despite FSE and FPE. The factors identified were peer pressure, mungiki sect, sand harvesting quarry activities, tea/coffee plucking and hawking. This study employed document analysis and secondary data from books and newspapers. The study and sample population was not given in this study. This study focused on emerging secondary school education in Kenya and the influence of FSE policy on the attrition was not established. According to Kenya National Examinations Council (KNEC) as cited in the Standard Newspaper (2012, March 1st) gender disparity remains a great concern in secondary schools in Kenya despite the free education policies. For instance the ratio of boys to girls who sat for KCSE in 2009 was 55:45 countries wide. The area most affected were Nyanza Province and North Eastern Province where the ratio of boys to girls was 70:30.

Studies done by UNESCO (2011) was general focusing on the whole world and dealt with illiteracy and enrolment at primary and school level thus giving the trend. Usher and Medow (2010) did a survey in western countries and used data from UNESCO that is secondary data and tried to establish gender parity in 14 countries including USA and United Kingdom where the GPI ranged from 0.91 to 1.69. Oketch and Rolleston (2007) did their studies on access in the former British colonial countries in East Africa, South Africa, Niger and Seychelles and revealed that boys were given priority compared to girls to attend schools. Takasha and Asankha (2011), dealt with impact of Universal Education in Uganda and revealed that free secondary education had led to increment in enrolment of girls but did not

compute GPI. Kenya Education Partnership (2010), established that girls dropped out of school due to unavailability of sanitary products and pregnancy was another factor. Muranga, Kilaha and Wanyonyi, (2013) in their study in central provivnce of Kenya found that attrition of boy child was being experienced despite FSE and FPE policies. These studies did not address the influence of FSE policy on gender parity. This is the knowledge gap this study tried to fill using Kericho County as the site for the study.

2.3 Influence of FSE Policy on Repetition Rates in Secondary Schools

UNESCO (2004) revealed in its study the average repetition rates in primary and secondary schools in the world and the results were as shown in Table 2.3.

Table 2.3

Average Repetition rates per region, Primary and Secondary School in the world 2001/02

Region	Repetition rate (%)			
	Primary School	Secondary School		
East Asia, Pacific	1.9	2.2		
Eastern and Southern Africa	12.4	12.3		
Eastern Europe, CIS	1.2	1.2		
Industrialized countries	2.1	3.9		
Latin America, Caribbean	10.0	7.4		
Middle East, North Africa	8.0	12.9		
South Asia	4.5	5.0		
West and Central Africa World	12.9 6.0	18.8 7.8		

Data source: UNESCO, Institute for Statistics (UIS) 2004.
Global Education Digest 2004. Montreal: UIS.

Regional averages, weighted by each country's population of primary school age, are listed as Table 2.3. Worldwide, 6.0% of primary students and 7.8% of secondary students repeat a grade. In primary school, repetition rates are highest in West and Central Africa (average

repetition rate 12.9%), Eastern and Southern Africa (12.4%), and Latin America and the Caribbean (10.0%). In secondary school, the highest repetition rates are observed in West and Central Africa (18.8%), the Middle East and North Africa (12.0%), and in Eastern and Southern Africa (12.3%). In East Asia and the Pacific, Eastern Europe and Central Asia, the industrialized countries, and South Asia, not more than 5% of pupils at the primary or secondary level repeat a grade.

A comparison of primary school gross and net enrollment rates indicates that there is a high share of late entrants and grade repeaters in Sub-Saharan Africa. Repetition rates in primary and secondary school are listed in the Global Education Digest 2004 from UNESCO. Primary repetition rates are available for 138 countries, secondary repetition rates for 125 countries (UNESCO, 2004). The 15 countries with the highest share of repeaters at the primary level are located in West and Central Africa or Eastern and Southern Africa. The highest primary school repetition rates are observed in Equatorial Guinea (40.5%), Rwanda (36.1%) and Gabon (34.4%). Of the 17 countries with the highest share of repeaters at the secondary level, 15 are in Sub-Saharan Africa and 2 in the Middle East and North Africa. The highest secondary school repetition rates exist in Congo 30.8%, Iraq 27.5% and Algeria 27.2% (UNESCO, 2012).

According to Huebler (2010) an analysis of data from a Demographic and Health Survey (DHS) done in 2001 demonstrates that the vast majority of pupils in primary and secondary school in Liberia are older than the theoretical age for their grade. For example, nearly three quarters of all first-graders in Liberia are at least 3 years older than the official entrance age into primary education. 24% of all first-graders are 5 or 6 years overage, 14% are 7 or 8 years

overage, and 5% are 9 or more years overage. Children in the last group start primary school at age 15 or later. According to UNESCO (2006 a) Grade repeaters are more likely to come from families that rank lower on measures of socioeconomic status and related variables (income, parental years of education completed, etc.). They also are more likely to be male than female. Subsequently, it occurs more often at grades preceding transitions to middle school, junior high school, or high school than at other grades. Repetition decisions are almost always initiated by the school rather than the parents, although they may be communicated as recommendations rather than requirements.

South Africa basic education (2011) carried out a household survey and found that in 2009, on average 9% of learners enrolled in schools were repeating the grade they were in the previous year. South Africa's level of repetition is high. International comparative information for primary schools for 2007 shows that South Africa's average level of repetition in primary schools (at 7%), was higher than the average level for developing countries (5%) and for developed countries (less than 1%). In general, repetition is higher among male learners than female learners and much greater in higher grades than in the lower grades. This study was done after the introduction of Universal Free Education. This study focused on Primary schools and inferential statistics was not done to determine the Free education influence on repetition.

Musyimi (2011) did a study on wastage rates in Kenya secondary schools in Kathonzweni district, Makueni County showed that repetition rate for the boys was 1.4% in form 1, 2% in form 2, 4% in form 3 and 6% in form 4 while for the girls was 2% in form 1, 3% in form 2,

4% in form 3 and 7% in form 4. Studies further revealed that this repetition rates was caused by poor performance, forced repetition, chronic absenteeism, teenage pregnancies and drug abuse. The study was conducted using a descriptive survey design. The sample size was 18 secondary Schools in the District, and since the study involved a complete enumeration of all schools in the District, it was a census inquiry. Data was collected from the DEO's office using a proforma. Quantitative data was analysed using the statistical package for social sciences. The actual cohort wastage rate was not computed in this study since the data was not from the schools. Inferential statistics was not done to determine the impact of FSE policy on wastage rate.

A study by Macharia, (2013) in Gatanga District, Muranga County found that in the period between 2008 and 2011. The findings revealed that Repeater rates greatly increased. Survey design was adopted in the study. The target population for this study was 23 day schools, 23 principals and 245 teachers. The sampled population consisted of 8 day schools, 8 principals and 48 teachers. Questionnaires and interview were used to collect data. Percentages and standard deviation were used. The population used was small to sample. Correlational research should have been used to determine the influence of FSE policy on repeater rate.

International Labour Organization (2010) in the study on the micro factors inhibiting education access, retention and completion by children from vulnerable communities in Kwale District, Kenya revealed that the reasons which leads to repetition were absenteeism, pregnancies due to weddings and funerals that take long, human wildlife conflicts, hunger, sickness, distance, beliefs around witchcraft and evil spirits. A report given by SACMEQ

(2012) indicated that in Zanzibar the repetition rate at secondary school level was 4.9% per annum. In Kenya repetition was 2.6% at secondary school level (Onsomu & Muthaka, 2008).

Okuom, Simatwa, Olel and Wichenje (2012) in their study established high repeater rate of 23.63% in Nyando District. Floods and flood related factors were found to be the cause to loss of learning hours and equally exacerbating poverty through destruction of infrastructure and school structures, water born e diseases, high absenteeism, low syllabus coverage and poor performance in flood prone areas of Nyando District. Data was collected using document analysis guide, questionnaire, interview schedule and focus group discussion. This study was done in primary schools. This study method of data collection was good since all the shortcomings of the methods was well taken care of. The study used percentages to analyze the data but there was no correlation done. It was also done in primary schools in Nyando district.

These studies focused on repetition in schools and collected data from households, in case of South Africa, secondary data in the case for Monsyimi (2011) while Macharia (2013) used primary data. Different designs, that is, survey descriptive were used. These designs were not adequate because the intent of the studies was on influence and impact. This means that correlational research designs would have made the studies more complete in bringing out the real intent of these studies rather than serving as diagnostics. These studies did not deal with influence of FSE policy on repetition rates. This is the knowledge gap this study attempted to fill using Kericho County as the site for the study.

2.4 Influence of FSE Policy on Dropout Rates in Secondary Schools

Studies carried by the State University (2002 b) indicates that dropout rates differ by various demographic factors, including gender, race and ethnicity, immigration status, and geographic location. In the United States dropout rates are higher for males than for females. Hispanics have the highest dropout rates by far, followed by African Americans, non-Hispanic whites, and Asian Americans. For example in 2000, the status dropout rate for Hispanics was 27.8 %, while the corresponding rates for African Americans, non-Hispanic whites, and Asian Americans were 13.1%, 6.9%, and 3.8%, respectively. Individuals born outside the United States have a higher dropout rate than those born in the United States. There are also regional differences in the United States, with the South and West having higher dropout rates than the Northeast and Midwest. Students in urban areas are more likely to drop out of school than students in suburban areas.

According the report by OECD (2011), Britain had more teenage drop-outs than other developed nations as poor children were edged out of good schools by those from sharp-elbowed middle-class families. It further revealed that almost one-in-five pupils (20%) currently leave school at 16 before taking A-level style qualifications, while Grey (2008) revealed that almost half of all public high school students in the US' fifty largest cities fail to graduate. The report states that only 52% of public high school students in these cities graduate after four years, while the national average is 70 %. Some 1.2 million public high school students drop out every year, according to researchers. The report finds that, overall, 17 of the public school systems in 50 major cities have graduation rates of 50 % or lower, and the average graduation rate of all 50 systems is 58%.

A Study carried out by the Daily (2010) on Trends in dropout rates in Canada and the labour market outcomes of young dropouts found that in 2009/2010 it was lower for young women (6.6%) than for young men (10.3%). While rates have declined for both sexes, the rate of decrease was faster for men, resulting in a narrowing of the gap over time. This was a study done on drop out by gender while Pierrakeas and Xenos (2009) carried out a comparative study of dropout rates and causes for two different distance education courses in Greece and they found that out of the 1,230 undergraduate students enrolled in the Informatics course, 349 dropped out (28.4 %). Of the 349 undergraduate students dropouts, 338 (96.8 %) took part in the study. Of the 1,220 graduate students enrolled in the course Studies in Education, 173 dropped out (14.2 %). Of the 173 graduate students who had dropped this course, 108 (62.4 %) took part in the study. This was a study on dropout done in students generally.

World Bank (2005) report on education indicated that dropout rates are at its peak in the transition from primary to lower secondary school and remain high throughout this level of schooling. Thus, while most children spend some time in primary school, a significant proportion of them drop out before completing it. The U.S. Department of Education NCES (2011), reports that between 1972 and 2000 the dropout rate ranged between 4% and 6.7%. It further states that dropout rate declined from 14% in 1980 to 8% in 2009. A significant part of this decline occurred between 2000 and 2009 (from 11% to 8%). Status dropout rates and changes in these rates over time differed by race/ethnicity. In general, the status dropout rates for Whites, Blacks, and Hispanics each declined between 1980 and 2009. However, in each year during that period, the status dropout rate was lower for Whites and Blacks than for Hispanics. In addition, the rate for Asians/Pacific Islanders was lower than that for Hispanics

and Blacks every year between 1989 and 2009. Although the gaps between the rates of Blacks and Whites, Hispanics and Whites, and Hispanics and Blacks have decreased, the decreases occurred in different time periods. The Black-White gap narrowed during the 1980s, with no measurable change between 1990 and 2009. In contrast, the Hispanic-Black gap narrowed between 1990 and 2009, with no measurable change in the gap during the 1980s. The Hispanic-White gap narrowed between 2000 and 2009, with no measurable change in the gap between 1980 and 1999.

McGregor (2007) found that 40% of South African students drop-out of university in their first year. Financial difficulties among the country's large pool of poor black students are, unsurprisingly, largely to blame. First generation students from low-income, less educated families are the most likely to drop out. UNESCO (2006 a) indicated that between 1986 and 1992, the drop-out rate in primary school was estimated at 43.2% in Nigeria. According to a survey, the drop-out rate is higher in the upper primary classes than in the lower classes, presumably because the pupils in upper classes are mature enough to be engaged in income generating activities (HSRC, 2006). The Student Pathways study by the Human Sciences Research Council also found that on average only 15% of students finish their degrees in the allotted time. High student drop-out and failure rates are a major problem in a country with limited state resources, a desperate shortage of high level skills and a pressing need to raise income levels among the poor.

South Africa basic education (2011) carried out a household survey and found that dropout rate before Grade 9 was extremely low. It was around 1% in Grades 1 and 3 and less than 1% in Grades 2 and 4. From Grades 5 to 8 the dropout rate was minimal, ranging between 2%

and 4%. The low dropout rate in the lower grades was consistent with the high enrolment rates in this grade 3 from Grade 9 upwards; however, the dropout rate increases, reaching almost 12% in both Grades 10 and 11. In total 10% of learners who had been enrolled in Grades 9 to 11 dropped out of school between 2007 and 2008. This was after the introduction of Free Universal education. This study only used percentages to analyse data but inferential statistics was not done to determine the influence of Free education on dropout rates. In East Africa SACMEQ (2012) reported that the dropout rate in Zanzibar was 7.3% per annum in 2011. This was a general report on school dropout.

A study by Comboni Missionaries Kenya (2012) indicates that Turkana districts register one of the lowest gross enrollment, retention, and completion rates in the country. 33% of children with the age group 5-10 actually start school 69.2% drop out before finishing primary school. Around 11% sit the Kenya Certificate of Primary Education (KCPE Standard 8) exam 4.9% go to secondary schools 22% drop out of secondary school before completing "Form 4" 4% sit Kenya Certificate of Secondary Education (KCSE "Form 4") exams. Data was analyzed using percentages and correlation was not done. It was done generally in Turkana districts. This study did not determine the influence of FSE policy on drop out.

International Labour Organization (2010) indicated that on the micro factors inhibiting education access, retention and completion by children from vulnerable communities in Kwale district in Kenya revealed that the reasons which leads to drop out from school were absenteeism, pregnancies due to weddings and funerals that take long, human wildlife conflicts, hunger, sickness, distance, beliefs around witchcraft and evil spirits. Gathigah

(2012) explains that though enrolment rates in primary school are higher for girls, fewer girls complete primary school and enroll at secondary schools, compared to boys. He further indicates that more students drop out of school as Free Education Goes down the Drain Student Dropout Rate on the Increases despite Free Education 2010 will go down in history as the year when the first batch of pupils to benefit from the government's introduction of free primary education sat for their Kenya Certificate of Primary Education (KCPE).

A study carried out by Achoka (2007) found out that in a period of 10 years 1992 to 2002 every secondary school cohort suffered not less than 10% school drop outs for instance the highest dropout rate for girls was 50% in 1997/2000 cohort. The average dropout and completion rate for girls in the period under consideration was 20% and 80% respectively. For boys they were 14% and 87% respectively. He further explains that there are several causes and effects of secondary school dropout in Kenya. This study employed descriptive survey research design, questionnaires was used to collect data while descriptive statistics was used to analyze data. Table 2.4 clearly indicates these findings.

Table 2.4

Causes and Effects of Secondary School Drop Out in Kenya

Causes	Effects		
Poverty	Increase crimes and restlessness		
Early pregnancies/marriages	Improvised person and misfit		
HIV/AIDS	Sickly people/frustrated/death		
Drug	Drug addicts and social misfit		
War	Tormented people		
Violence	Unskilled people, dangerous criminals		
Ignorance	Unemployment		
Politics	Disoriented people		
Low self esteem	Low life expectancy, semi illiteracy		
Peer pressure	Malfunctioned people		

Source: Adapted from Achoka, (2007)

This study was carried out before the introduction of FSE policy in Kenya. Studies by Onyango (2003) on factors that influence girls' performance in mathematics in Nyanza Province showed that drop-out rates, particularly for girls are still too high. Dropping out of school ensures a life of poverty for these girls, and many of them also end up being HIV positive because the male female power dynamics become even more slanted against them. According to the latest Kenya Demographic Health Survey (2010), 40% of adolescent girls without any education are either pregnant or have already become mothers. In addition, for those girls with only a primary school education, 26% are mothers compared to an eight percent of those who have a secondary school education or higher. Daily Nation (2009, November 3rd) indicates that only 38% of children who enroll for Standard One sit the Kenya Certificate of Secondary Education exams.

According to Kenya Education Partnerships (2010) Turkana County teenage girls was challenged during the menstruation - related difficulties where sanitary products were not available leading to girls often dropping out of school. While discrimination faces many families in this county where remained clear that there is a preference towards educating boys, while girls drop out and pregnancy is among the factors contributing. This is an indication that girls are not given equal chances in this county where girls drop out of school as young as 13 years because of pregnancy due to motorbike business and fish mongers. One of the primary school head teachers explained that he has lost most of the girls due to pregnancies especially those from single parent families whose mothers are very busy.

Musyimi (2011) did a case study on wastage rates in Kenya secondary schools in Kathonzweni District, Makueni County and showed that dropout rate after introduction of FSE was 24.1% in form 3 and 4 for boys and 22% for the girls which were high compared to other classes. Studies further revealed that these dropout rates were because of the following reasons lack of family support, lack of interest, poor performance, indiscipline, peer pressure, sickness, teenage pregnancies and early marriages. The study was conducted using a descriptive survey design. The sample size was 18 secondary Schools in the District, and since the study involved a complete enumeration of all schools in the District, it was a census inquiry. Data was collected from the DEO's office using a proforma. Quantitative data was analysed using the statistical package for social sciences. Inferential statistics was not done to determine the impact of FSE policy on dropout rate.

Nyamesa and Chemwai (2013) carried out a study on drop out among pupils in rural primary schools in Nandi North District and they found that grade dropout rate was highest for boys in grade six at 4.0% and lowest in grade eight at 1.8%. For girls it is highest at second grade at 6.0% and lowest at grade three. The findings indicated further that teenage pregnancy, chronic repetition, family size, lack of trained teacher counselors and early marriages were the main causes of school dropout in Nandi North. Comboni Missionaries Kenya (2012) indicates that Turkana districts register one of the lowest gross enrollment, retention, and completion rates in the country. 33% of children with the age group 5-10 actually start school 69.2% drop out before finishing primary school. Around 11% did KCPE and 4.9% went to secondary schools 22% drop out of secondary school before completing "Form 4" and 4% did KCSE. This study focused on dropout both in primary and secondary schools. Data was analyzed using percentages and did not factor in the influence of FSE policy on dropout rate.

Okuom, Simatwa, Olel and Wichenje (2012) study on Assessment of factors that contribute to repetition and dropout of pupils in primary schools in Flood Prone Areas of Nyando District, Kenya. The study established high dropout rate of 20.17% in the district. Floods and flood related factors were found to be the cause to loss of learning hours and equally exacerbating poverty through destruction of infrastructure and school structures, water borne diseases, high absenteeism, low syllabus coverage and poor performance in flood prone areas of Nyando District. The study population consisted of 35 head teachers, 280 teachers, 1,225 standard eight pupils, in 35 flood prone primary schools and one District Quality Assurance Officer. Data was collected using document analysis guide, questionnaire, interview schedule and focus group discussion.

The South Africa study (2011) and Musyimi (2011) study addressed important areas of planning and economics of education because they affect the use of educational resources in schools. The South Africa (2011) study used households as unit of analysis, which was good, but it could have been better if school managers, administrators and students were used to bring out more data on dropout. Musyimi (2011) study used secondary data and only questionnaires were used to collect data. Use of primary data and interviews would have added more information on this subject of study. These studies did not embrace influence of free secondary education policy on dropout rates. This is the knowledge gap this study attempted to fill using Kericho County as a site for the study.

2.5 Influence of FSE Policy on Wastage Rates in Secondary Schools

Wastage rate in education is a concern of every country worldwide. It concerns the stakeholders in education because students take too long to complete their secondary education while others drop out of the system early having not acquired the relevant required skills (Owalabi, 2007). This led to wastage of resources in terms of finances, time and human resource efforts and many hours. Wastage in education is of great concern worldwide, for instance the National Centre for Policy Analysis (2008) indicated that the graduation rate in the US was 85%; it further revealed that only about 7 in 10 students are actually successfully finishing high school in four years meaning the 30% complete after four years or dropout, leading to more student years. In the US's 50 largest cities, the graduation rate was 52% implying that the 48% took long to graduate or dropped out. McGregor (2012) states that since the 1990s, the South African government has made a requirement that people go to school from age 7 to 15. In December 2011, the South African government announced that

70% of students passed their final examination to finish high school while in 2008 the rate of those who completed was 63%. World Bank, (1980) wastage rates in some developing countries worldwide in 1980 were as indicated in Table 2.5.

Table 2.5
Wastage Rates in some Developing Countries

Income in Group \$	Country	Medium Rate	Country	High Wastage Rate
Less than \$265	Kenya	1.989	Burundi	5.16
265-520	Jordan	1.67	Thailand	2.03
521-1075	Korea	1.48	Dominican Re	p. 2.50
1076-2500	Singapore	1.30	Gabon	2.38

Source: World Bank, 1980

Table 2.5 indicates wastage rates in some developing countries in the world indicates that Kenya had a wastage rate of 1.989, Jordan 1.67, Korea 1.48 and Singapore 1.30 had medium rate. Countries with high wastage rate were Burundi 5.16, Thailand 2.03, Dominican Republic 2.50 and Gabon 2.38. UNESCO (2006 b) carried out a study in Nigeria on the Situation and Policy Analysis Survey and it revealed that there was a 17% wastage rate and average of 46.6% of primary school pupils who dropped out from schools were girls.

A study carried out in Nigeria by Mallum (1981) on educational wastage and need for guidance in Nigerian schools shows that there are several patterns of wastage in different systems. The main factor leading to wastage was eliminating exams and lack of space in the next grade or level leading to repeaters, drop outs and premature withdrawal by students in schools. This study was done so many years ago and it has been affected by time. A study carried out by Mundia (nd) in Zambia on secondary school wastage, continuing Education

and Youth Employment in Zambia, indicated clearly that wastage was rampant due to factors like lack of space in the next grade or level, poverty and the factor that boys are given a priority when it comes to education leading to the girls dropping out of schools at a very tender age.

Basically it is dropout and repetition that contribute to wastage (Owolabi, 2006). Wastage rate is the ratio of the number of students who dropout and those who repeat a class in a given year to the enrolment in the previous class in the previous year. Every year a student spends in school requires inputs, that is, classrooms, desks, chairs, textbooks, stationery, sports, equipment, laboratory equipment and materials, transport facilities, charts, chalkboard, water, electricity and human inputs' in form of teaching effort, ancillary services of administrative and technical craft as well as student time and effort. All these inputs which can be expressed in money have to be supplied every year. The expenditure therefore translates to student-year. From this point of view education inputs used up in the process of education are measured in terms of student-years. It is expected that students complete their education as stipulated; which then constitutes education output whether he passes the end of cycle examination or not.

A study carried out in Nigeria by Adeyemi, (2012) on school variables and internally efficiency of secondary schools in Ondo state revealed that wastage rate was 1.17 indicating that students spend 7.02 student years to complete against an ideal student years of 6 years. The coefficient of efficiency of 85.5% this shows that the secondary schools in Ondo State, Nigeria are 85.5% internally efficient. The study employed document analysis from 32 secondary schools. It further revealed that Teacher qualification best predicts school internal

efficiency, followed by teachers teaching experience, class size, student teacher ratio, school location and school size. The used only document analysis and should have employed more instruments to get varied results through interview. This study did not establish the influence of FSE policy wastage rates.

Another school of thought is that successful completers are those who pass the examination at the end of the stipulated time; student -years. This means that those who fail end of the set student -year's examination are not counted as outputs, but as unsuccessful completers. In this study the former school of thought was adopted, whereby successful completers, outputs, were those who successfully completed given secondary education cycle of four years, student years. If a student dropped out of school in secondary; form one, form two, form three or four he is not processed to some extent and this contributes to wastage. This is because this school of thought contends that there is nothing gained, that is not lost, until one reaches a certain threshold in learning, the hypothesis of threshold in knowledge acquisition (Owolabi, 2006). This threshold is the point at which knowledge takes root. Until one reaches a threshold where he can start to apply knowledge, acquired knowledge is transient, as he relapses into illiteracy. This means that the number of student-years is lost, hence the expenditure on such students. A student who spends more student -years in school also contributes to wastage rate because more will be the number of student-years or inputs expended on him. In this case when the repeater is given a chance of education, it deprives another one use of those inputs, hence wastage.

Bii and Nzevi (2013) carried out a study on internal efficiency assessment of secondary education in Bureti district, Kenya and they found that secondary schools that had low wastage rates were single schools that were church sponsored and they perform better compared to schools with high wastage. They further found that schools with high wastage rates were public, mixed and day secondary schools and they were plugged by high pregnancy rates for girls and absenteeism. Two sets of questionnaires were used to collect data. Data was collected using one type of instruments and it has its own weakness. This study did not determine the influence of FSE policy on wastage rates though the study was done after the introduction of FSE policy.

A study carried out in Western Kenya by Achoka (2007) found that some of the reasons leading to school dropouts in western Kenya were poverty, early pregnancies, early marriages, HIV/AIDS, drug Abuse and low Self Esteem. Studies by Juma (2004) indicated the major factor influencing dropout rate in secondary schools was lack of school fees and other levies. Education is quite expensive compared to other things like demands which are required. Mwebi and Simatwa (2013) did an analytical study on Expansion of private universities in Kenya and its implication on quality and completion rate found that educational wastage was 3.2% and the completion rate for the said period was 96.8%. The study recommended that Private Universities should improve on provision of physical facilities, teaching and learning materials and administrative services. This study was done in private universities and the wastage rate was not computed as per the student years.

In Kenya expenditure on education has remained high since independence in 1963. Thus the cost of secondary education was found to be a major factor contributing to non-attendance of

school (MOE, 2007). According to Basic report on Kenya integrated household budget survey 2005/2006 (MOE, 2007) about 38% of the out of school secondary school age youth were not enrolled in school because parents did not allow them. 25.6% were not in school due to the school costs. Other reasons included indirect costs of schooling (27.6%) as some youth had to work and or help at home, lack of interest on schooling (11.3%), distance from school (7.1%) and school conflicts with beliefs (7.8%). The youth were out of school due to either dropout, meaningless repetition or were non-starter.

Free Secondary Education policy in Kenya was launched in 2008 to address issues and challenges in making secondary education affordable and accessible by addressing factors that hinder both entry into and completion of secondary education by all gender (MOE, 2007). The Task Force made bold recommendations that were incorporated in the implementation of FSE policy, that were viewed as ones that would increase participation by minimizing dropout and repetition beside attracting the non-starters, to secondary education (MOE, 2007). The recommendations included:

- i) Introduce selective reforms to address secondary education inputs, that is, curriculum, textbooks, staffing, teachers, students and facilities.
- Promote all day schools in terms of facilities and learning environment to the level of provincial schools.
- iii) Develop mechanisms for flexible delivery of curriculum to cater for children with special talents and abilities.
- iv) Improve on lifespan of textbooks, review pupil-textbook ratios.

- v) Permit secondary schools to hire temporary teachers to take place of those who are sick or maternity leave.
- vi) Review staffing norms on regular basis to enhance appropriate development and utilization of teachers.
- vii) Promote measures to ensure that enrolled children complete secondary education.
- viii) Make uniforms affordable and durable.
- ix) Abolish school levies, like PTA project fees.
- x) Enhance provision of special needs education, among others.

A study done by Gachugi (2011) in Nyeri Municipality found that a number of factors contributed to wastage in secondary schools. Lack of fees was a major contributing factor to non-enrolment and dropout in schools. Indiscipline and teenage pregnancy also contributed significantly to dropout. Repetition was attributed to increased chances in acquiring better grades in the KCSE examination and parental requests after student's transfer from other schools to help them gain academic momentum. This study focused on the factors that contribute to wastage rates in Nyeri secondary schools. This study did not determine the influence of FSE policy on education wastage.

Musyimi (2011) did a study on the impact of FSE policy on wastage rates in secondary schools in Kathonzweni District, Makueni County. The study was conducted using a descriptive survey design. The sample size was 18 secondary Schools in the District, and since the study involved a complete enumeration of all schools in the District, it was a census inquiry. Data was collected from the DEO's office using a proforma. Quantitative data was

analysed using the statistical package for social sciences. Findings indicated that cohort wastage rates were decreasing, from a high of 44% in the 2006 cohort to 19% in the 2007 cohort. The actual cohort wastage rate was not computed in this study since the data was not from the schools. Inferential statistics was not done to determine the impact of FSE policy on wastage rate.

Adeyemi (2012) and Musyimi (2011) studies addressed the issue of educational wastage in Nigeria and Kenya using specific regions as sites for their studies. However those sites were not made. Adeyemi (2012) used schools as unit of analysis and so did Musyimi (2011). However, Adeyemi (2012) collected data from schools, which was primary data, but Musyimi (2011) used secondary data from DEOs office. It is always better to use primary data. Adeyemi (2012) focused on internal efficiency and addressed wastage as an indicator of internal efficiency indirectly while Musyimi (2011) dealt directly with wastage. These studies did not address the influence of FSE policy on wastage rates. This is the knowledge gap this study sought to fill using Kericho County as a site for the study.

2.6 Influence of FSE Policy on Students' Academic Achievement in Secondary Education

Students' academic achievement is the ultimate measure of quality of secondary school. FSE fund is channeled to improve on inputs so as to improve in its outcome which is academic achievement (MOE, 2008). While trying to establish the influence of FSE policy on students academic achievement it was necessary to establish the utilization of FSE fund on educational inputs which was part of the package of FSE policy to enhance students'

academic achievement. The inputs include resources, time, human effort, material among others and output in terms of academic achievement as signified by performance in national examinations. Financial resources are crucial inputs. This is why globally governments have made efforts to subsidize the cost of education.

Performance worldwide has not been good according to the worldwide study done by Draves, (nd) he concluded that there is a growing and widespread concern about the academic performance of boys in school. As few as 35% of today's college graduates are men, down from 50% in 1981 and 76% a half century ago, but the problem does not begin in college, because only 35-40% of people entering colleges these days are men. The problem of boys and young men and academic performance runs the gradually from secondary through higher education. A study carried out in America by the Asia Society (2014) indicates that there is a problem of persistent underachievement by American students, especially low income and minority children, against U.S. standards and international benchmarks. While results from the Organization for Economic Co-operation and Development Program for International Student Assessment (PISA) show nearly 25 percent of U.S. 15-year-olds scored at the lowest level of proficiency or below in science (OECD, 2006).

National Council Education Statistics (2007) during their National Assessment of Educational Progress revealed that less than 33% of all eighth grade students nationally score at or above the proficient level in math and less than 32% score at or above the proficient level in reading. It further revealed that there is consistently a sizable difference between minority and non-minority students, and between poor and non-poor students on these

indices. For example, 42% of white eighth graders are categorized as at or above proficient in mathematics and 40% in reading, whereas less than 12% of eighth grade African American students and nearly 16% of Hispanic students at grade 8 are at or above proficient in math, and less than 16% of students from both groups are at or above proficient in reading.

Nanda (2014) reported that India has the highest population of illiterate adults, 287 million, and 37% of the total population of such people across the world. Education accounts for 10.5% of the total government expenditure, 3.3% of the GNP (gross national product) below the 6% target. This is a decrease in spending from 13% of the budget and 4.4% of GNP in 1999, the report said. The agency indicated that at least 28% of the cost of primary and secondary education is met by households in India. This is a higher proportion than the costs met by households in developed countries. A third of primary school aged children reached grade-IV and learned the basics. A further third reached that grade but did not learn the basics. It further revealed that in despite levying a tax to fund education and enacting a law to ensure access to education for all children the government has not succeeded in improving learning outcomes in India's schools. Suryahadi and Sambodho (2013) revealed that Indonesians quality of education is challenged by the teacher qualification and absenteeism from school, currently only 37% of teachers have the appropriate teaching qualification as defined by the 2005 Teacher Law and approximately 15% of all teachers are absent from their class each School day across Indonesia despite Free education policy.

UNESCO (1992) found that there was a general trend of poor performance across all countries in Sub Saharan Africa. While reporting on the matter that girls' performance weakens to the performance of boys at some point in the school cycle, it gives examples that

in Botswana performance of girls starts to decline at the age of ten years while in Kenya girls start to perform poorly in mathematics at the age of six years. However, in Madagascar and Rwanda the girls' performance starts to weaken at the age of thirteen years and nine years respectively. According to World Bank (2005) learning assessments are crucial for measuring education quality and relevance, diagnosing system weaknesses and motivating policy reform. According to Hallack and Poisson (2007), the main function of public examination is to distribute educational benefits throughout the world on grounds that they can serve as instruments for making objective and neutral judgments. This new evidence shows great variations.

Basic Education Report, (2010) indicated that in South Africa performance improved by 7.2% in 2010 compared to 2009 this was after introduction of Free Education in 2007. UNESCO, (2012) indicated that 13 pupils have to share one mathematics textbook in Cameroon, pupils in Benin, Niger, Cape Verde, Rwanda and Mauritius have access to one book each. In Niger, 85% of schools have no potable water and 75% had no toilets. In Mauritius and Rwanda, all schools have such facilities. In Kenya a lot of significance is attached to quality of education. That is why in FSE subsidy the allocation of funds for tuition is 35.07% being higher than other vote heads except personal emolument which is 38.63%.

A study on an evaluation of the implementation of Free Primary Education in selected public secondary schools in Kakamega District carried out by Luvega (2007) found that 88.9% rated their performance as poor while 3.7% this was because the school that enrolled few students performed better than those which enroll more. It revealed that there is a relationship

between the number of students enrolled in class and their performance. The study carried out in Kericho District by Ngeno *et al* (2012) on Cost effectiveness Analysis of educating girls in day and boarding secondary schools indicated that the following factors were responsible for girls poor performance in KCSE; school levies, indiscipline, family problems, entry behaviour of the child, lack of interest among the girls, the attitude some parents have towards the girl child compared to the boy child, and lack of required books.

Kenya Education Partnerships (2010) revealed that limited textbook and science resources; often poorly managed: Students often have little access to textbooks, limiting classroom activities and preventing students from conducting independent learning. Science practical examinations are a mandatory component of the national examinations, yet many students only have the opportunity to watch experiments prior to their examinations, and may never have conducted any themselves due to lack of usable equipment or a furnished lab. A study by Wamukuru and Muthaa (2011) on the causes of secondary school teacher shortages in Kenya indicated that teacher utilization in some public secondary schools in Kenya is underutilized when they teach under enrolled classes. The average class size in public secondary schools is currently about 36 students per class which is below the optimum class size of 40. There are also many schools having a class size of 30.

Graduates of boarding schools appear to be self-driven and many of them work harder and do not give up. This is attributed to habits obtained while attending boarding schools. Thus Boarders spend most of their time learning and performing organized duties. Classes in some boarding schools are smaller and students are able to pursue their academic interests without harassment observed in overcrowded day school classrooms. It further revealed that boarders

perform better than day scholars. It also established that the trend continues in secondary schooling where boarding students dominate performance in the KCSE. Ranking indices from the Kenya National Examinations Council show year after year, almost 100 per cent of the 150 top schools in KCSE board. Eventually, students from those schools dominate admissions to high profile degree programmes in public universities. Apart from Strathmore and Kianda schools, it is hard to remember any other day schools that have ever outperformed some of the best boarding institutions. Apparently the FSE policy seems to be benefitting the day scholars more because a large percentage is paid by the government so the children who cannot afford boarding schools go to day schools.

Students academic achievement in Kenya is a concern as more than 60% of the candidates score below the mean score of 7.00 (KNEC, 2007) which is considered to be a mean score that enables the qualifiers to join diploma and degree programmes in various fields of study. The Pupil Teacher Ratios (PTRs) at secondary school level averaged at 21:1 in 2006 having risen from 19:1 in 2002 in Kenya (MOE, 2007). According to the Daily Nation (2014, March 6th) poor performance in Lamu East in KCSE was due to admission of students in form one with less than 250 marks in local secondary schools. This is what is termed as poor entry behavior. Gogo (2012) indicated in his findings that the increase of expenditure on education by the Kenya government has least effect on performance. OECD (2000) showed that it is clear that in developing countries where resources are limited, the class sizes are below the optimum size and may be linked to inefficiency use of existing resources.

Koross, Ngware and Sang (2009) in their study on Principals and students perceptions on

parental contribution to financial management in secondary schools in Kenya revealed that In

Kericho district, the pupil-teacher ratio (PTR) was 20 with a class size of 36 in 2006, which was at par with the national average. A report by International Labour Organization (2010) on micro factors inhibiting education access, retention and completion from vulnerable communities in Kenya indicated that in Kwale district the Student Teacher Ratio was 41:1.

Jagero (2010) carried out Cost Effectiveness Analysis of Educating Students on both day and boarding secondary schools on the aspect of student performance found out that the day scholar students perform better than the boarders in Kisumu district. The boarders' parents pay more money compared to the day scholars who pay less.

According to Kenya Project Organization (2013), the implementation of FPE, like similar interventions by previous governments, has been a matter of political expediency rather than a well thought out and planned reform. The NARC government, like its predecessors, did not carry out a situation analysis prior to the implementation of FPE. The consequence: poor quality education as a result of overcrowding, lack of teachers and learning materials. The inefficient administration at the MOEST, which attempts to deal with problems relating to funding and infrastructure in an ad hoc manner, only serves to exacerbate the situation. With these challenges, similar to those faced by previous governments, the attainment of UPE will continue to be illusionary. In this respect the MOE (2008) in the implementation of FSE policy in Kenya aimed at improving the Book Student Ratio (BSR) to 1:1, provision of adequate exercise books, equipment and teaching/learning materials.

A study by Macharia, (2013) in Gatanga District, Muranga County found that in the period between 2008 and 2011. Performance of day schools in KCSE improved where 37.5% of the schools retained their previous performance while 62.5% improved. Survey design was

adopted in the study. The target population for this study was 23 day schools, 23 principals and 245 teachers. The sampled population consisted of 8 day schools, 8 principals and 48 teachers. Questionnaires and interview were used to collect data. Percentages and standard deviation were used to analyze data. This study focused on impact of Free Secondary Education policy on internal efficiency of day schools in Gatanga District, Murang'a county. Survey research design was used in this study and it employed the use of interview and questionnaires to collect data. This was good because both quantitative and qualitative data was collected. The data was analyzed using percentages and standard deviation. Correlational research design should have been appropriate to determine the influence of FSE policy on students' performance. This study was done in Gatanga District, Muranga County where the sampled population consisted of eight day schools, eight principals and 48 teachers. The students were not included in this study and they are the key people in this study since FSE policy was meant for them.

Kariuki et al, (2012) did a study on the performance and influence of poor performance in Mathematics Baringo County and revealed that factors contributing to poor performance include under staffing, inadequate teaching/ learning materials, lack of motivation and poor attitudes by both teachers and students, retrogressive practices. Descriptive survey research design was adopted for the study. The target population was 1876 respondents which comprised of Form Three secondary school students in Koibatek District, 132 Mathematics teachers and 9 head teachers. The data for the research was collected by use of three questionnaires; student, teachers and head teachers questionnaires. Percentages were used to analyse data. The sample population was not given in this study and the influence of FSE

policy on Students' Academic Achievements was not determined. The study focused on performance and influence of poor performance in Baringo County.

A study done by Soi, Barmao and Ngeno (2013) on the influence of school type on girls' attitudes towards mathematics in Ainamoi Division, Kericho District, Kenya revealed that there was no significant difference between girls' attitude towards mathematics in girls' only schools and girls in Co-educational schools. However it revealed that there was a statistically significant difference at 0.05 alpha levels in girls' perception of their ability between girls in girls' only schools and those in Co-educational schools in favor of those in girls' schools. A total of 200 girls (80 from girls only schools and 120 from Co-educational schools) responded to a three-point rating scale instrument that measured attitudes towards mathematics. Descriptive survey was adopted. Correlation design should have been proper since the analysis determine the relationship. This study focused on girls schools only in Ainamoi Division but did not determine the influence of FSE policy on Students' Academic Achievements.

A study done by Ngeno, *et al* (2013) on the determinants of girls achievement in mixed day and boarding secondary schools in Kericho District indicated that Fee problem, Indiscipline, Family problems, The entry behaviour of the child, Lack of interest on the girls side to complete their work. It further revealed that the attitude some parents have towards the girl child compared to the boy child and Lack of required books. This study adopted ex-post facto and descriptive research designs. The study population was 6 schools and all the schools were used. Data was analyzed using percentages and emergent themes for qualitative data.

The instruments used were appropriate and focused on mixed day and boarding secondary schools. This study did not determine the influence of FSE policy on performance in Kericho district since it was done after it was introduced.

Ngeno, Simatwa and Soi's (2012) study carried out in Kericho District focused on cost effectiveness of educating girls in day and boarding secondary schools. They did not take into account the influence of FSE so as to indicate what it accounted for in performance of the girl child. Nanda's (2011) study carried out in India was an exploratory study and revealed very important information that despite free education interview by levying tax to fund education the level of literary had not improved as a learning outcome. The study by Macharia (2013) revealed that FSE policy had enhanced academic performance in day secondary schools. However, Macharia (2013) used a small sample size that was not representative of the study population. That is the sampled 8 secondary schools from 23 secondary schools. The study should have used saturated sampling technique. The study by Soi, Barmao and Ngeno dealt with girls attitude towards mathematics in a division in Kericho County. These studies did not address the influence of FSE policy on students academic achievement in Kericho county. This is the knowledge gap this study attempted to fill.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlines the procedures and strategies that were used in the study. It focuses on the research designs, the target population, sources of data, sampling procedures, description of research instruments, administration of the instruments, an outline of the methods which were used to collect, analyze and present data.

3.2 Research Designs

Ex post facto, descriptive survey and correlational research designs were used in this study. Ex post facto research design seeks to discover possible causes of behaviour, which has already occurred and cannot be manipulated (Gall, Gall & Borg, 2007). For the purpose of this study ex-post facto research design allowed the researcher to get all the relevant information on gender parity, repetition, dropout, wastage and KCSE mean scores for two cohorts before and after the FSE policy in Kericho County. This was done through use of relevant documents like registers, school fees registers and admission books. Descriptive survey research design involves careful description of education phenomena and reports the way things are. The descriptive survey is able to explore the relationship between variables in their natural setting as they occur (Leedy &Ormrod, 2005). The design was appropriate because it allowed the use of questionnaires and interviews schedules as research instruments for collecting data at a given point in time. Questionnaire is widely used in the descriptive research because they help obtain facts and figures about current conditions and are useful in making inquiries concerning their views and opinions (Mugenda & Mugenda, 2003). This enabled the researcher to get the relevant information to compute gender parity, repeater rate,

dropout rate, wastage rate and students academic achievement. The weaknesses in the questionnaires were dealt with by the use of interview schedule.

According to Mugenda and Mugenda (2003) correlational research design is used to establish relationship between variables. Correlational involves collecting data in order to determine whether and to what degree a relationship exists between variables. The degree of relationship is expressed as a correlation coefficient (r). The design was relevant in this study because it assisted in establishing the influence of FSE fund on Gender Parity Index, Repeater rate, dropout rate, wastage rate, and students' academic achievement.

3.3 Area of Study

The study was done in Kericho County (Appendix XI). It is situated in the southern part of the Rift Valley province. It lies between longitude 35°E and 35°50'E and latitude 0^0 and $0^\circ30$ 'S. It borders the following counties; Nandi to the North, Uasin Gishu and Baringo to the North East, Nakuru to the East and South East, Bomet to the south, Nyamira and Homa-Bay to the South West and Kisumu County to the West and North West. It covers an area of $2,479km^2$; the capital of the County is Kericho town. Kericho County consists of five sub counties Ainamoi, Belgut, Bureti, Londiani and Kipkelion. The County has a population of 758,339 (male-50%, female-50%), population density is 306 people per km^2 out of these population 49,386 (48.75%) were male and 51,945 (51.26%) are female between the ages of 14 to 19 years (Republic of Kenya, 2010 a) this group of children are supposed to be in secondary schools.

Liston (2006) indicated that 45.22% people were poor in the County and the poverty index was 42.8% as stated by the Kericho strategic plan (2010) which was an improvement from 2006. This County has 45 secondary schools had form one to form four classes in existence in 2004. Thus they presented candidates for KCSE in 2004. The choice for schools which had candidates in 2004 was because they had the proximity closes to 2008 cohort. This means that the drastic variation in factors that could affect the variables was minimal except the FSE policy. The FSE policy which is an independent variable was the subject of study in relation to the dependent variables that is gender parity, repeater rate, dropout, wastage rate and students academic achievement in terms of mean scores.

The gross enrolment data in Kericho County was found in the five districts currently sub counties that formed the current Kericho County. The gross enrolment by gender in the county revealed that the students ranged from 35,269 to 39,465 from 2004 to 2007. The boys were 20,135 (57.09%); 22,363 (61.49%); 22,785 (61.40%) and 22,083(58.27%) respectively. For the girls the enrolment was as follows; 15,134 (42.91%); 14,005 (38.51%); 15,126 (40.98%) and 16,382 (41.51%) respectively. The gender parity index was 0.75, 0.63, 0.66, and 0.71 respectively. This is lower than the nationally GPI which ranged from 0.89, 0.89, 0.89 and 0.85 respectively. Republic of Kenya (2010 a) shows that in the 2009 census 49, 386 (48.75%) were male and 51,945 (51.26%) are female between the ages of 15 to 19 years in Kericho County this group are supposed to be in secondary school. This shows that most children who were supposed to be in school were not in school in Kericho County compared with the 2009 census especially the girls.

Gross enrolment in terms of form to form transition revealed that the 2004 cohort transited as follows 9,103; 9,333; 9,217 and 9,281, the 2005 cohort transited as follows: 9,434; 9,329 and

9,237 and the 2006 cohort transited as follows: 10,516 and 10,637. The fluctuations could be attributed to repetitions, drop outs and wastage because on the whole a general decline can be observed as students transited from form one to form four for the 2004 cohort. This trend was of concern because with introduction of FSE policy the participation rates were expected to increase and be sustained. FSE policy was introduced to enhance transition of pupils from primary schools to secondary schools, improve on quality of secondary education and reduce wastage.

The first cycle of students who benefitted from FSE policy in Kenya, Kericho county inclusive graduated in 2011. The national mean Gender Parity Index (GPI) for 2004 to 2007 was 0.88 while in Kericho County it was 0.69 lower than national. The form to form transition fluctuated as between 9,103 and 9,333 in Kericho County while Students' mean scores in Kenya Certificate of Secondary Education on average was 5.39. This means that GPI, repetition, dropout, wastage and students academic achievements were concerns that were to be addressed by FSE policy, however, its influence was unknown.

3.4 Study Population

The study population consisted of 45 secondary school principals, 45 Director of Studies, 5 District Quality Assurance Standards Officer and 4,362 form four 2011 students drawn from 45 secondary schools in Kericho County. The DQASOs in this study was selected because they are directly involved in assessment of quality in schools and they were capable of giving the relevant information on the influence of FSE policy on gender parity, repetition, dropout,

wastage and students academic achievement in Kericho County. They represented the five sub counties in Kericho County.

The school principals were selected as respondents since they were the school accounting officers and they are in a better position to avail all the information required on gender parity, repetition, dropout, wastage and students academic achievement in terms of mean scores. The principals had all the required documents required for instance KCSE results, class registers, admission books, accession registers and fees registers. With the experience they had had over the years the school principals were better placed to give the relevant information.

Director of Studies were also used as respondents representing the teachers. These are senior teachers in the schools and in some schools they were referred to as examination officers. The Director of studies had enough experience and they were in a better position to provide the required data. They gave all the relevant information on the influence of FSE policy on gender parity, repeater rate, dropout rate, wastage rate and students academic achievement in terms of mean scores in Kericho County.

The students who were in form four in 2011 were used as respondents since they had been through the system and they were in a position to give information on the influence of FSE policy on gender parity, repeater rate, dropout rate, wastage rate and students academic achievement in the county, with regard to the first cycle of FSE policy (2008 -2011).

3.5 Sample Size and Sampling Procedure

The units of analysis, that is, individual units that were used in the study to generate data in order to aggregate the characteristics so as to describe the variables were secondary schools. The data on FSE funds, students by gender, repetition, dropout, wastage and students academic achievement were derived from schools. It was therefore imperative to determine the sample size that was representative on the basis of units of analysis. In this case the decision on sample size was based on Gay (1987) who states that in general the minimum number of subjects believed to be acceptable for a study depends upon the type of research involved. For descriptive research, a sample of 10% of the total population is considered minimum. For smaller population 20% may be required. For correlation studies at least 30 subjects are needed to establish the existence or non existence of the relationship. Experimental studies with tight experimental controls may be valid with as few as 15 subjects per group.

The research designs were *ex post facto*, descriptive survey and correlational. In view of Gay's (1987) recommendation with regard to descriptive survey and correlational research designs 45 secondary schools were considered on the basis that they had form four candidates in existence in 2004 that would be used as a cohort closest to the 2008 when FSE policy was launched and biases would be minimized; and the secondary schools from which the respondents could be realistically selected. The next stage was to decide on the actual respondents that would be used in gathering data. In this respect the sample size for the students was determined using the formula by Israel (1992) .Thus: $n = \frac{N}{1 + N(e^2)}$

Where: n is the sample size, N is the population size, and e is the level of precision.

This formula was applied in this study to determine the students sample size. The students study population was 4,362 form IV students.

$$n = \frac{N}{1 + N(e^2)}$$

$$n = \frac{4362}{1 + 4362(0.05)^2} = 366$$

However, 400 students were sampled in this study to ensure that the minimum sample size was maintained in the event some respondents would fail to participate in the focus group discussion due to one reason or another since they had already completed their studies and left their respective secondary schools. The 400 respondents were selected from the 40 schools with a population of 3957 as the other 5 secondary schools with a population of 405 were involved in the pilot study (Table 3.1).

Table 3.1 Sample Frame

Category of Respondents	Target population	Sample size
	(N)	(n)
School Principals	45	40
Directors of Studies	45	40
Form fours (2011)	4362	400
District Quality Assurance & Standards Officers	5	5

Saturated sampling technique was used to select the 5 DQASOs, 40 Director of Studies and the 40 School Principals. Saturated sampling is whereby the whole population is used because it is too small to be sampled (Mugenda & Mugenda, 2003). This was adopted in this study to select the DQASOs, Director of Studies and school principals as their populations were too small to be sampled.

Snowball sampling technique was used to select the students who were part of the 2008 cohort. The 400 students were selected from the 40 schools with a population of 3957 whose principals had been sampled to participate in the study. Orodho (2004) defined Network or Snowball sampling technique as a strategy in which each successive participant or group is named by a proceeding group of individual. The researcher thus focused on a section of respondent group or individuals on the basis of participants' referrals. This occurs most frequently when a respondent or group possessing the attributes required by a researcher suggesting as potential respondents an individual or group possessing the same attributes or experiences. This was used by the researcher to trace the form IV students of 2011 in each of the 40 schools with the help of the principal who contacted the students to come for the focus group discussion. The students that were selected from each school was 10.11% of the students to form focus group discussion. The 10.11% was arrived at by dividing the 400 students by the total population of the form students in the 40 secondary schools which was 3957 and multiplying by 100. This enabled proportionate sampling of the students from the 40 schools. The focus group discussion were 51 in number with the smallest focused group discussion consisting of 5 and the highest consisted of 10 with some schools having as many as three focus discussion group.

3.6 Instruments for Data Collection

Questionnaire, interview schedule, Observation Guide, Focus Group Discussion Guide and document analysis guide was used in this study. Questionnaire is widely used frequently in the descriptive research because they obtain facts about current conditions and are useful in making inquiries concerning their views and opinions (Mugenda & Mugenda, 2003). The instrument was selected because it gives the respondent adequate time to give the relevant

information required and make it possible for anonymity. Documents used were class registers, fees registers, KCSE results, library records, accession registers, inventories, ledgers and admission books was used to collect data required so as to enable the analysis of Gender Parity, repeater rate, dropout rate, wastage rate and students academic achievement. Interview was used for the DQASO, Director of Studies, school principals and students during focus group discussion. Interview is where the respondent is asked a series of questionnaires depending on the information required (Mc Burney & White, 2010).

3.6.1 Principals' Questionnaire

The questionnaire was administered to each school Principal from the selected 40 schools. Questionnaires were important in this study because they are widely used frequently in the descriptive research because they obtain facts about current conditions and are useful in making inquiries concerning their views and opinions (Mugenda & Mugenda, 2003). This was adapted in this research, the Principals questionnaires was given to the sampled school principals who gave the researcher permission to access the relevant documents to get data on gender parity, repeater rate, dropout rate, wastage rate and students academic achievement in terms of KCSE mean scores in Kericho County (Appendix I).

3.6.2 Document Analysis Guide

A document analysis guide was used to assist the researcher examine the relevant documents and the get the relevant information. Documents used were the admission books, class registers, fees registers, library records and KCSE results were used to get information on gender parity, repeater rate, dropout rate, wastage rate and students academic achievement in terms of KCSE mean scores in Kericho County as presented by the school Principal.

Documents in the library were also accessed by the researcher to get information of the relevant number of reading materials, Book student Ratio (BSR) in general and per subject. The number of teachers and students in the entire school was given by the school principals. There was some demographic data also that were asked and the principals provided the information. The entire process took between two hour to three hours per school depending on how fast the documents were provided and the school size. The schools with few students took a shorter time while the schools with a high population of students took longer (Appendix 11).

3.6.3 Observation Guide

Observation was used to get data on input meant to improve students' academic achievement in Kericho County; this was to be enable the researcher confirms what was given in the questionnaire and interview. According to Punch (2005) in naturalistic observation, observers neither manipulate nor stimulate the behavior of those whom they are observing in contrast with some other data gathering technique. Mc Burney and white (2010) indicates that observation involves recording ongoing behavior without attempting to influence it. This also implies to the collection of information by way of own investigation without interviewing the respondents (Orodho, 2004). The information obtained relates to what is currently happening and is not complicated by either past behavior or future intentions or attitudes of the respondents. The information given here is limited to what is happening currently. This was applicable in this study when determining gender parity, repeater rate, dropout rate, wastage rate and students' academic achievement in terms of KCSE mean scores in Kericho County. This was done by observing the current maintenance of buildings and availability of other services influencing students' academic achievement in secondary schools (Appendix III).

3.6.4 Interview Schedules for the Principals, Directors of Studies and DQASOs

The Principals, Director of Studies and DQASOs were interviewed to cater information on what influences gender parity, repeater rate, dropout rate, wastage rate and students academic achievement in terms of KCSE mean scores in Kericho County. The interview is one of the main data collection tools in qualitative research and it is a very good way of accessing people's perceptions, meaning, definition of solutions and construction of reality (Punch, 2005). Many people are willing to communicate orally than in writing and in this way they will provide data more readily and fully in an interview than in a questionnaire (Nsubuga, 2000). The investigator in an interview is able to encourage the respondents and to help them probe more deeply into a problem. In this type of interview the reliability of the information gathered is high, it also give in depth information about particular cases of interest to the researcher, it is systematic and it is time saving since the researcher answers what has been asked. The researcher also gets a complete and detailed understanding of issues from the respondent therefore it is comprehensive (Kombo, & Tromp, 2006).

It was therefore used to get information from all the 40 school Principals, 40 Director of Studies and 5 DQOSA in Kericho County. The information collected on the influence of FSE policy on gender parity, repeater rate, dropout, wastage and students academic achievement in Kericho County. The respondents were approached by the researcher and informed of the intention of the research was given earlier. The respondent is then taken through face to face interview where all the relevant questions on the influence of FSE policy on gender parity, repeater rate, and dropout, wastage and students academic achievement. The respondents gave the information required freely. The interview took between 30 minutes and one hour (Appendices IV, V and VI).

3.6.5 Students Focus Group Discussion Guide

Students focused group discussion was carried out and the students who participated were 400 who were in form four in 2011. The participants were traced by the school principals from the selected 40 school. The students were put into groups of between 5 and 10 depending on the school's student population. Kombo and Tromp (2006) define focus group discussion as individuals who share certain characteristics, which are relevant for the study. Mc Burney and white (2010) indicate that it is where the researcher works with several people simultaneously, rather than just one. This method was adopted in this study because it solicits a lot of information quickly and is good for identifying and exploring beliefs, ideas or opinions in a community. The discussion was carefully planned and designed to obtain information on the participants' beliefs, ideas and perceptions on a defined area of interest. The topics to be discussed are decided beforehand (Kombo & Tromp, 2006). This was important because quality pieces of information were collected other than perception. This gave the true picture of what was really happening in the county in terms of influence of FSE on gender parity, repeater rate, dropout rate, wastage rate and students academic achievement in terms of KCSE mean scores in Kericho County Secondary Schools.

The students who participated were selected using snowball sampling technique. Network or Snowball sampling technique is a strategy in which each successive participant or group is named by a proceeding group of individual. The researcher thus focuses a section of respondent group or individuals on the basis of participants' referrals (Orodho, 2004). Therefore this method was applied to get the 10.11% students from each of the 40 selected schools. The class registers and relevant contacts were used by the school Principals to select students to participate. The instrument was prepared early. Therefore the students were

engaged in discussion and they gave the information on the gender parity, repeater rate, dropout rate, wastage rate and students academic achievement in terms of KCSE mean scores in Kericho County basing on each objective (Appendix VII).

3.7 Validity of Instruments

The instruments that were validated were questionnaire, interview schedule, Focus Group Discussion, observation guide and Document Analysis Guide. Validity of a measurement instrument is the extent to which the instrument measures what it is supposed to measure. Validity takes different forms, each of which is important in different situations (Leedy & Ormrod, 2005, Mugenda & Mugenda, 2003, Mc Burney & White, 2010, Punch, 2005 Orodho, 2003). Face and content validity of the instruments were determined. Face validity is the extent to which on the surface an instrument looks it is measuring a particular characteristic but because it relies entirely on subjective judgment, it is not, in and of itself convincing fully that an instrument is truly measuring what the researcher wants to measure. Content validity is the extent to which a measurement instrument is a representative sample of the content area or domain being measured. A measurement instrument has high content validity if its items are in appropriate proportions central to that domain. Mugenda and Mugenda, (2003) indicated that validity can be done by the experts or supervisors. This was adopted in this study. The supervisors' recommendations were incorporated to make them valid.

3.8 Reliability of Principals' Questionnaire

Reliability of a measurement instrument is the extent to which it yields consistent results when the characteristic being measured has not changed. Like validity, reliability takes different forms in different situations (Leedy & Ormrod, 2005). Test – retest method was adopted in this study because the instrument was to be administered on different occasions in a spread of six months. The instrument was used whereby the instruments were administered to the same respondent twice at an interval of two weeks in 5(10%) of the principals and Pearson product moment correlation coefficients was used to compute the correlation coefficient. The correlation coefficient was 0.8 at a set p-value of 0.05. This means the instrument was reliable as the calculated coefficient was greater than 0.7. Two weeks were found to be standard for these instruments to piloted again (Mugenda & Mugenda, 2003).

3.9 Data Collection Procedures

Before undertaking the study in respective public secondary schools in Kericho County, the researcher obtained permission from the County Director of Education. Once the permission was granted the researcher informed the principals of the selected schools through written letters three weeks before the study was undertaken. The researcher called the school Principals a day to the intended date with the school to remind the school principals of the intention to collect data the next day and requirement of the respondents. The DQASO were also given an appointment to be interviewed a day to. The Principals were also reminded to inform the Director of Studies and the students for interview for interview and focus group discussion.

Qualitative data was collected by the researcher. Creswell (2009) indicates that in qualitative research the researcher is the key instrument and it further explains that qualitative researcher collect data themselves through examining documents, observing behavior, or interviewing participants. They may use an instrument for collecting data but the researchers are the ones who actually collect the information and they do not rely on questionnaires or instruments developed by other researchers (Creswell, 2009). Since this involved both quantitative and qualitative research the researcher personally visited all the sampled schools and administered the questionnaires to the school Principals and the researcher was given permission to access the class registers, admission books, fees registers, accession registers, ledgers, inventories and KCSE results print out in the schools. The questionnaires were collected from the principals at the end of the day after interviews and Focus Group Discussion.

The data was required in computing gender parity; repetition, dropout, wastage and students academic achievement was collected from the class registers, fees registers, inventory, ledgers, accession registers and KCSE results print by the researcher personally with the help of the school principal. This information took a minimum of 2 hours and a maximum of 4 hours depending on the organization of the school records, easy accessibility and the school size. Some data was obtained from to the school achieves to get the old registers to trace the cohorts. To get the school mean scores we obtained from school records.

The Principals, Director of Studies, DQASO and students during interview and focus group discussions provided data on gender parity, repeater rate, dropout rate; wastage rate and students academic achievement in terms of KCSE mean scores in Kericho County. The interview with the Director of Studies and DQASO took between 30 minutes to one hour

each to give the relevant information on gender parity, repeater rate, dropout, wastage and students academic achievement in Kericho County. The focused group discussion with the students took 80 minutes with each group. The form IV students for 2011 were traced with the assistance of the school principals and invited to school for the focused group discussions. Observation was done to confirm the information given by the respondents on maintenance, repairs and improvement and other services catered by FSE policy.

3.10 Data Analysis

Quantitative data was analyzed using descriptive and inferential statistics (Table 3.3). Descriptive statistics in form of frequency counts, percentages, gender parity index, cohort analysis and Inferential Statistics in form of Pearson product moment Correlation coefficients. To get gender parity index two cohorts were taken and then using the formula given by UNESCO (2009b) was used to get gender parity index for two cohorts 2004 to 2007 and 2008 to 2011 before and after FSE policy. To actualize the intent of the study the following factors were adopted.

Gender Parity Index was done computing the difference between boys and girls enrolled in secondary schools before and after FSE policy. This was done inform of ratios. According to UNESCO (2009b), Gender Parity Index (GPI) is the ratio of female to male values of a given indicator and a GPI of 1 (or within the band of 0.97 to 1.03) indicates parity between the sexes. A GPI of above 1 indicates a disparity to the disadvantage of boys, while a GPI of below 1 indicates a disparity to the disadvantage of girls. UNESCO (2009b) defines gender parity index as the ratio of female to male values of a given indicator. It indicates the use of the following method divide the female value of a given indicator by that of the male.

Formula:

$$GPI_i^t = \frac{F_i^t}{M_i^t}$$

Where

 GPI_i^t = Gender parity index of a given indicator *i* in year *t*

 F_i^t = Female value of a given indicator *i* in year *t*

 M_i^t = Male value of the same indicator *i* in year *t*

This was adopted in computing GPI in Kericho County and per school. Pearson Correlation (r) was then done to determine the influence FSE policy has on Gender Parity Index in Kericho County.

Education wastage is when the education resources are wasted due to the completion rate slowed down by repetition or when the students drop out before completing the system and acquiring the relevant skills. To measure how internally an education system is repeater rate, dropout rate and wastage rate was computed. Cohort analysis was employed. Owalabi (2006) indicates that education wastage is a situation where some children repeat grades and some drop out before completing the cycle leading to wastage of resources, repeaters use more resources while the drop outs cause wastage because they leave the education system before acquiring the required necessary skills. To reduce on education wastage drop out and repetition should be minimized. Education wastage was computed in Kericho County by getting repeater rates, dropout rates and wastage rates for two cohorts before and after FSE policy.

UNESCO (2009 b) defined repeater rates as the proportion of pupils from a cohort enrolled in a given grade at a given school year who studies in the same grade the following school

year. This affect internal efficiency of education and it was calculated by dividing the number of repeaters in a given grade school year t+i by the number of pupils from the same cohort in the same grade in the previous school year t.

Formula:

$$RR_i^t = \frac{R_i^{t+1}}{E_i^t}$$

Where

 RR_i^t Repetition Rate at Grade *i* in school year *t*.

 R_i^{t+1} Number of pupils repeating grade i in school year t

 E_i^t Number of pupils enrolled in grade i, in the school year t

Grade to grade repeater rate was computed to determine the specific grades repeater rates highly affects. UNESCO, (2009b) indicates that when compared across grades, the patterns can indicate the specific grade for which there is high repetition, hence requiring more in depth causes and possible remedies. The total Repeater rates for the 2008 cohort were further computed in the county and per school. According to UNESCO (2009 b) repeater rate can be calculated for the whole level of education by dividing the sum of repeaters in all grades of the given level by the total enrolment of that level of education and multiple Cumulative repeater rate for the county was computed to determine the total number of students who repeated in the 2004 cohort in the county and per school.

The formula by UNESCO, (2009 b):

Cumulative Cohort Repeater Rate =
$$\frac{R_i^{t+1} + R_i^{t+2} + R_i^{t+3} + R_i^{t+4}}{E_i^t} \times 100$$

Pearson Correlation (r) coefficient was then done to determine the influence FSE policy has on repeater rate. This was adopted to get the sum percentage of repeaters per school for the 2008 cohort. Repetition rate should approach 0%. Since high repetition indicates problems of internal efficiency. This was applicable in this study because the rates were calculated in percentages for each grade. Then the sum of repeaters was done as a whole in each of the 40 schools. Pearson Correlation (r) was then done to determine the influence FSE policy on repeater rate.

Dropout rate according to (UNESCO, 2009 b) is defined as the Proportion of pupils from a cohort enrolled in a given grade school year who are no longer enrolled in the following school year. This is calculated by subtracting the sum of promotion rate and repetition rate from 100 in the given school year. For cumulative dropout rate in primary education is calculated by subtracting the survival rate from 100 in the given grade. For cumulative dropout rate it is calculated by subtracting the sum of survival/promotion rate and repeater rate is subtracted from 100 for the whole level of education. For this study it was done by following a cohort from form one to form four to get dropout per school.

Formula

 $DR_i^t = 100 - (PR_i^t + RR_i^t)$

 DR_i^t Dropout rate at grade i in school year t

 PR_i^t Promotion rate at grade i in school year t

 RR_i^t Repetition rate at grade i in school year t

According to UNESCO (2009 b) the dropout rate should approach 0% if it high it reveals a problem of internal efficiency. To compute dropout rate it was necessary to calculate promotion rate by Grade (PR).

Promotion Rate by Grade (PR)

According to UNESCO (2009 b) promotion rate is the proportion of pupils from a cohort enrolled in a given grade a given school year who study in the next grade in the following school year.

$$PR_i^t = \frac{NE_{i+1}^{t+1}}{E_i^t}$$

 PR_i^t Promotion Rate at Grade *i* in school year *t*.

 NE_{i+1}^{t+1} New entrants to grade i+1 in school year t+1

 E_i^t Number of pupils enrolled in grade i in the school year t

To get the promotion rate we divide the number of new enrolments in a given grade in school year t+1 by the number of pupils from the same cohort enrolled in the preceding grade in the previous school year t. The rate should approach 100%; a high rate reflects high internal efficiency of the education system (UNESCO, 2009b). This was applicable in this study in getting dropout rate in percentages.

Cumulative cohort dropout rate in Kericho County was computed by using UNESCO (2009 b) formula. That is, cumulative dropout rate in education is calculated by subtracting the survival rate plus repeater rate from 100 at a given level. Survival rate is calculated on the basis of the reconstructed cohort method which uses data on enrolment and repeaters for consecutive years (UNESCO, 2009 b). This was computed to determine the actual cumulative cohort dropout rate in Kericho County and per school before FSE policy. The survival rate was computed using the following formula given by (UNESCO, 2009 b) guideline was then adopted.

$$SR_{g,i}^{k} = \frac{\sum_{t=1}^{m} p_{g,i}^{t}}{E_{g}^{k}} * 100$$
 where: $P_{g,i}^{t} = E_{g,i+1}^{t+1} - R_{g,i+1}^{t+1}$

i grade (1,2,3.....n)

t year (1,2,3.....m)

g pupil cohort

 $SR_{g,i}^k$ Survival Rate of pupil-cohort g at grade i for a reference year k

 E_a^k Total number of pupils belonging to a cohort g at a reference year k

 $P_{g,i}^t$ Promoters from E_g^k who would join successive grades *i* throughout successive years *t*

 R_i^t Number of pupils repeating grade i in school year t

Cumulative dropout rate was computed as follows

Cumulative dropout rate = 100- $(SR_{g,i}^k + R_{g,i+1}^{t+1})$

$$SR_{g,i}^{k} = \frac{\sum_{t=1}^{m} p_{g,i}^{t}}{E_{g}^{k}} * 100$$

Where: $P_{g,i}^t = E_{g,i+1}^{t+1} - R_{g,i+1}^{t+1}$

Pearson Correlation (r) was then done to determine the influence FSE policy has on dropout rate in Kericho County.

Wastage rate was computed in Kericho County Owolabi (2006) indicates that wastage rate is the number of student-years they have spent in total is calculated and compared it with what is theoretically possible. The cohort analysis method is used where it is reconstructed using successive class data on enrolment and repeaters. A chart is constructed on the basis of promotion, repetition and dropout rates to show the flow of students. The following four assumptions are made using this method.

- (a) Promotion and repetition rates are held constant throughout the period.
- (b) All the students have the same likelihood of repeating, dropping out or being promoted;

- (c) A class can be repeated 2 times;
- (d) There are no other entrants to the system apart from the original entrance.

The following formula was used; For example where the optimum input-output ratio in a cycle of 6 years is 6:1 (Owolabi, 2006).

Ideal = input- output ratio
$$=\frac{\text{input}}{\text{output}} = \frac{6}{1} = 6$$

Actual = input- output ratio =
$$\frac{total\ no.of\ student\ years}{total\ no\ of\ graduates}$$

Wastage rate
$$= \frac{Actual\ Input-Output\ Ratio}{Ideal\ Input-Output\ Ratio}$$

In ideal situation the wastage rate is equal to 1. This formula was applicable in this study in calculating the wastage rates where the cycle takes 4 years to complete. Pearson Correlation (r) was then done to determine the influence FSE policy has on wastage rate in Kericho County.

Students academic achievement was measured in terms of KCSE mean scores. The inputs to improve on academic achievement were analyzed by computing textbook ratio, class size, and pupil/teacher ratio and its output in terms of KCSE mean scores. This was because FSE fund caters for this inputs which is meant to improve students' academic achievement. UNESCO (2012) indicates that quality is often estimated by analyzing at pupil/teacher ratios, on the basis that the more pupils there are per teacher, the less each pupil learns. But quality of education goes beyond that, other factors that determine quality, articulated in the African Union's Second Decade of Education, are class size; textbook availability and access to basic services affect learning. This study therefore measured students' academic achievement by analyzing the class size, textbook ratio and performance in terms of mean scores in Kericho

County. Teacher student ratio and non-teaching staff ratio were determined by the formula by UNESCO (2009 b).

Formula

$$PTR_h^t = \frac{E_h^t}{T_h^t}$$

Where:

 PTR_h^t = Pupil teacher ratio at level of education h and year t

 E_h^t = Total number of pupils or (students) at level of education h in the school year t

 T_h^t = Total number of teachers at level of education h in school year t

The following formula was applicable in calculating non teaching staff pupil ratio using the formula given by UNESCO (2009b) and the Book Student Ratio was also done to determine the influence of FSE policy on students' academic achievement before and after FSE policy. Pearson Correlation (r) was then done to determine the influence FSE policy on Students academic achievement in Kericho County. Cohort analysis was done to determine cumulative cohort GPI, repeaters, dropouts, wastage and students academic achievement using the formula given by UNESCO guideline (2009b). While the wastage rate was done using the formula given by Owalabi (2006) and interpretation by World Bank (1980). Two cohorts were also used to compute this to get the influence before and after FSE policy.

Tables were drawn and used by the researcher in making descriptive report and discussion of the findings of the study. Tabulation is a part of the technical procedure wherein the classified data are put in forms of tables (Orodho, 2004). This was done after computation of various percentages, Gender parity Index (GPI), wastage rates, students' academic achievement and correlations to present the findings.

Pearson product moment Correlation was used to determine the influence of FSE policy on gender parity, repeater rate, dropout rate, wastage rate and students academic achievement in Kericho County Secondary Schools. Pearson product moment Correlation coefficient is a measure of linear relationship between two variables Creswell (2009). Mugenda and Mugenda, (2003) indicates that the test of significance of the correlation coefficient can be set at 0.05 or 0.01. This study adopted a set value of 0.05 to test the significance level. According to Mc Burney and White (2010) defines it as a measure between variables and the correlation is expressed as a number that can take any value between +1.0 and -1.0. In this study the variables were gender parity, repeater rate, dropout rate, wastage rate and students' academic achievement in terms of KCSE mean scores and FSE fund. Correlation coefficients (r) were therefore interpreted to determine the influence of FSE policy on the dependent variables in terms of direction and strength of relationship Elifson, Runyon and Haber, 1990; Leedy and Ormrod, 2005) interpretation guidelines used was as shown in Table 3.2.

Table 3.2

Interpretation of Pearson Correlation Coefficients (r)

Strength of the relationship	Positive (+)	Negative (-)
Weak/low/small	0.01 - 0.30	0.01 - 0.30
Moderate/ medium	0.31 - 0.70	0.31 - 0.70
Strong/high	0.71 - 0.99	0.71 - 0.99
Perfect relationship	1.00	1.00
No relationship	0.00	0.00

Source: Adapted from Elifson, Runyon and Haber (1990); Leedy and Ormrod (2005)

From Table 3.2, it can be observed that Pearson's (r) between + or - 0.01 - 0.30 is a weak/low/small relationship, between + or - 0.31 - 0.70 is a moderate/medium, while relationship between + or - 0.71 - 0.99 is a strong/high relationship. Perfect relationship is where it is positive or negative 1.00 while 0.00 means there is no relationship. Coefficient of determination R^2 is the square of the Pearson's r which tells how much of the variation accounted for by the correlation which is expressed in percentages while the other remaining percentage could be due to other factors (Leedy & Ormrod, 2005). This was adopted in the interpretation of Pearson's (r) and coefficient of determination R^2 in this study.

The intervening variable namely, school levies was controlled by establishing its dominant direction of influence. It was also intergraded with FSE fund and correlated together, and separately to establish its mediating effect on the influence of FSE policy on gender parity, repeater rate, dropout rate, wastage rate and students academic achievement (Mugenda & Mugenda, 2003; Best, 1977).

Qualitative data was transcribed, analyzed and reported in emergent themes and sub themes. According to Creswell (2009) in qualitative research data analysis involves collecting open ended data, based on asking general questions and developing and analysis from the information supplied by the participants. Orodho (2004) explains that data is sort under the major topics or themes identified such that all the materials relevant to a particular topic are placed together (Table 3.3).

3.11 Data Analysis Matrices

The analytical tools were used in this study to analyze quantitative data while qualitative data was analyzed for content as shown in Tables 3.3 and 3.4.

Table 3.3

Quantitative Data Analysis Matrix

Objectives	Independent	Dependent	Statistical
	variable	variable	Tools
Determine the influence of FSE policy on gender parity in education in Kericho County.	FSE Policy	Gender parity Indices	Descriptive statistics in form of frequency counts, percentages, gender parity index, cohort analysis, Pearson coefficient correlation and coefficient of determination.
Determine the influence of FSE policy on repeaters rate in Kericho County.	FSE Policy	Repeater rates	Descriptive statistics in form of frequency counts, percentages, repetition rate by grade, cohort analysis, Pearson Coefficients correlation and coefficient of determination.
Determine the influence of FSE policy on dropout rates in Kericho County.	FSE Policy	Dropout rates	Descriptive statistics in form of percentages, repetition rate by dropout by grade, promotion rate by grade and cohort analysis, Pearson coefficient correlation and coefficient of determination
Determine the influence of FSE Policy on wastage rates in Kericho County.	FSE policy	Wastage rates	Descriptive statistics in form of frequency counts, percentages, wastage rates, cohort analysis, Pearson coefficient correlation and coefficient of determination.
Establish the influence of FSE Policy students' academic achievement of in Kericho County.	FSE Policy	Students academic achievement	Descriptive statistics in form of frequency, counts, percentages, mean, Student/teacher ratio, book/student ratio student/subordinate ratio, cohort analysis, Pearson coefficient correlation and coefficient of determination.

Table 3.4 Qualitative Data Analysis Matrix

Transcript	Themes/sub themes	Codes
Notwithstanding the FSE policy, Kericho County has always had fewer girls in secondary schools compared to the boys yet when they are admitted to join form one they are the same number and at times the girls are even more than the boys. It is unfortunate that when we get statistics from the schools the boys are always more than the girls despite the FSE policy in place. DQASO4	Gender Parity Index Students enrolment	GPI
Despite FSE policy being in place we were still forced to repeat if we had grades below what was set by the school. Student ₂₀	Repeater rate.	RR
Though part of our school fees had been paid by the government through FSE policy, five of our classmates did not complete form four they just left school. Two boys got employed as motorbike operators. While the others where girls and two got married while one become pregnant and never came back. Student4	Dropout rate Intervening variables	DR IV
FSE policy was introduced in Kenya to reduce wastage rates and improve on equity and access. Unfortunately wastage is still a problem in the county because when we do or receive statistics from schools the students who enroll in Form one either repeat or drop out without completing especially the boys because of indiscipline. The money the government has spent on these students goes to waste and it also makes our education inefficient. DQASO1.	Wastage rate Intervening Variables	WR IV
During our routine quality assessment we have discovered that schools have reasonable number of text books, teaching learning materials and good facilities which have made learning for the students effective. The teachers also find it easy to do	Students academic achievement	SAA
their work because the required teaching and learning materials in most schools are available. With this support from the government through the FSE Fund, performance in the County has been improving over the years though it has not been steady and it could be due to the influence of other factors a part from the learning materials. DQASO ₃	Intervening variables	IV

3.11 Ethical Considerations

Before undertaking the study in respective public secondary schools in Kericho County, the researcher obtained permission from the County Director of Education. Once the permission was granted the researcher informed the principals of the selected schools through written letters three weeks before the study was undertaken. The researcher called the school Principals a day to the intended date with the school to remind the school principals of the intention to collect data the next day and what was expected of the respondents. The DQASOs were also given an appointment to be interviewed a week to. The Principals were also reminded to inform the Directors of Studies and the students of the interviews and focus group discussion. While in schools consent to participate in the research was sought and obtained from the respondents. The researcher then disclosed the real purpose of the research to allay fear and anxiety. The respondents were assured of the confidentiality and privacy of the information they would provide and that it would be used strictly for the purpose of the study. Thus, the data collected would not be mishandled to cause physical, emotional and psychological harm to the respondents. The researcher assured the respondents of their anonymity which encouraged honest responses. The researcher also avoided asking embarrassing questions, expressing shock and disgust while collecting data. The researcher informed the respondents that the new knowledge generated would be shared with them.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Introduction

This chapter presents the demographic data of the respondents; results and discussion of the findings of the study. The findings and discussions are presented according to the study objectives under the following themes:

- (i) Influence of Free Secondary Education policy on gender parity in secondary school education in Kericho County.
- (ii) Influence of Free Secondary Education Policy on secondary school repeater rates in Kericho County.
- (iii) Influence of Free Secondary Education Policy on secondary school dropout rate in Kericho County.
- (iv) Influence of Free Secondary Education policy on secondary school wastage rates in Kericho County.
- (v) Influence of Free Secondary Education Policy on the students' academic achievement in Kericho County.

4.2 Return Rate of the Questionnaire

The return rate of principals' questionnaire was as shown in Table 4.1.

Table 4.1

Return Rate of the Principals Questionnaire used for Data Collection

Respondents	Issued	Number Returned	Percentage (%)
Principals	40	40	100
Totals	40	40	100

From Table 4.1 it can be observed that all principals' returned the questionnaire as was required. The rate of return for the questionnaires was 100%. This data on return rates helps to justify the validity of the data that was used in this study and the new knowledge generated.

4.3 Demographic Characteristics of the Respondents

The respondents in this study included school Principals, Director of Studies, DQASO and students. Their demographic characteristics were as shown in Tables 4.2 to 4.12.

Table 4.2
Principals' Gender and Headship Experience (n=40)

Demographic characteristics	Frequency	Percentage
	(f)	(%)
Gender		
Male	30	75.00
Female	10	25.00
Total	40	100.00
Headship Experience in years		
5	1	02.50
6-10	12	30.00
11-15	17	42.50
16-20	10	25.00
Total	40	100.00

Table 4.2 indicates that out of all the 40 (100%) school Principals involved in the study 30 (75%) were male while 10 (25%) were female. This shows that very few female teachers are as appointed school Principals in Kericho County. This is in agreement with the study carried out in a sampled number of schools in Kenya by Bosire *et al* (2009) where it was indicated

that out of the 30 sampled school Principals 22(79%) were male while 6 (21%) were female. The school principals' leadership experience was also indicated and one (2.50%) had headship experience between 5 years, 12 (30.00%) had an experience of 6-10years, 17 (42.50%) has an experience of 11-15 years while 10 (25.00%) had an experience of 16-20 years.

From the findings in Table 4.2, most school principals had headship experience of 6 years and above. This shows that they had enough experience in school management and they were able to give the relevant information on gender parity, repeater rate, dropout rate, wastage rate and students academic achievement in Kericho County. Principals with experience can be relied on for the authenticity of data collected. They were also better placed given that the data required dated back to the year 2004 that required experience in school administration.

Table 4.3

Teaching experience before being Appointed as School Principals (n=40)

Years	Frequency	Percentage
	(f)	(%)
5-10	2	5.00
11-15	5	12.50
16- 20	24	60.00
21-25	9	22.50

Table 4.3 indicates the school Principals teaching experience before they reached the level of school principal. Those principals with a teaching experience of between 5 -10 years were 2(5%) between 11-15 years were 5 (12.50%), while 24(60%) had a teaching experience between 16-20 and 9 (22.50%) had a teaching experience of between 21-25 years. This shows that these School Principals had gone through all the ranks in the teaching profession and had experience to be appointed as the school Principals. According to Education Portal

(2014) in the US most Principals enter the profession after obtaining enough experience as teachers. This is in agreement with the findings of this study and it shows that the principals were able to answer questions on gender parity, repeater rate, dropout, wastage rate and students academic achievement in Kericho County. This is vital in determining the validity of data that was generated in this study.

Table 4.4

School Principals' Highest Professional Qualifications (n=40)

Highest Qualification	Frequency (f)	Percentage (%)
BED, BSC +PGDE, BA +	15	37.50
PGDE, B.COMM + PGDE		
M.ED	25	62.50
Total	40	100.00

Table 4.4 indicates the education level of the school principals. Fifteen (37.50%) had a bachelors degree while 25 (62.50%) had Masters Degree. Basing on the findings in Table 4.4 it is clear that all the Principals had the required level of education. Education Portal (2014) shows that in the US the requirement to be a School Principals is a Bachelor of Education degree. This is also applicable in this study and in agreement with The Basic Education Act 2013 (Republic of Kenya, 2013). These principals were in a position to understand and give the relevant information on gender parity, repeater rates, dropout rates, wastage rate and students academic achievement in Kericho County, given their academic credentials.

Table 4.5 School Levies incurred by Parents on average in four years before introduction of FSE Policy for the 2004 cohort (n=40)

Type of School	Amount (Kshs)
Days scholars in mixed schools	63,617.11
Boarders in mixed schools	96,954.05
Girls boarding	105,299.00
Boys boarding	115,234.00

Table 4.5 indicates the costs incurred by parents in terms of school fees and levies before FSE policy in 2008. The day scholars in mixed schools paid on average Kshs.63, 617.11 in four years while boarders in mixed schools paid Kshs.96, 954.05 in their four years of study. The students in single sex schools paid higher than these other schools. The girls paid Kshs.105, 299 on average while the boys paid Kshs.115, 234 on average for the four years they were in school. This data was important as it assisted to understand the genesis of FSE policy on GPI, repetition rate, dropout rate, wastage rate and students' academic achievement. It also helped to justify its inclusion in the study as an intervening variable.

Table 4.6

FSE Fund and School Levies incurred in four years on average for 2008 Cohort after introduction of FSE policy (n=40)

Type of School	FSE in 4	Percentage	Costs incurred by	Percentage	Totals in
	year	(%)	parents in 4 years	(%)	Kshs.
	(Kshs.)		(Kshs.)		
Days scholars in	41,060	40.43	60,509.65	59.57	81,569.65
mixed schools					
Boarders in	41,060	27.40	108,803.85	72.60	112,863.85
mixed schools					
Girls boarding	41,060	25.62	119,178.57	74.38	160,238.57
Boys boarding	41,060	24.88	123,964.43	75.12	165,024.43

Table 4.6 indicates the costs incurred by the government and the parents after FSE policy in Kericho County. The government spent Kshs.41, 060 for four years while the parents spent Kshs.60, 509.65 on average for four years in mixed day schools, and for boarders in mixed schools they spent Kshs.108, 803.85. In girls boarding and boys boarding they spent Kshs.119, 178.57 and Kshs.123, 964.43 respectively.

Day school students were not given any guideline on the amount of levies the parents were to pay while parents in boarding schools were to pay Kshs.18,627 per year which would add up to Kshs.74,508 in four years. Table 4.6 shows how much the parents paid and it was more than the given figure and parents in day schools paid yet there was no guideline for them. This data was relevant in this study because it helped in establishing the influence of FSE policy on GPI, repetition rate, dropout rate, wastage rate and students academic achievement.

4.4 Influence of FSE Policy on Gender Parity in Secondary School Education in Kericho County

The research question responded to was: What is the influence of FSE policy on gender parity in secondary school education in Kericho County?

To establish the influence of FSE on gender parity for cohorts 2004 and 2008, before and after introduction of FSE policy, Principals were in the questionnaire requested to indicate enrolments. Data obtained and used to compute gender parity were as shown in Tables 4.7, 4.8, 4.9 and 4.10. Table 4.7 presents reconstructed data for the 2004 cohort.

Table 4.7

Reconstructed Cohort Students Enrolment by Gender in Kericho County before introduction of FSE policy 2004 cohort (n=40)

Year		For	m I	Form II		Form III		Form IV	
		Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
2004	E	2207	1396						
	R	7	6						
	N	0	0						
2005	\mathbf{E}	2231	1401	2004	1300				
	R	9	5	17	10				
	N	0	0	188	164				
2006	E			2031	895	1739	1061		
	R			18	12	56	42		
	N			191	161	383	236		
2007	\mathbf{E}					1766	1063	1425	883
	R					49	40	61	35
	N					376	245	506	141

Key: R: Repeaters N: New students E: Enrolment

Table 4.7 shows how the 2004 cohort of students who did not benefit from FSE Policy from form I to form IV for progressed. The rationale for including this cohort was to serve as a control group in order to establish the influence of FSE policy on GP. Those enrolled in form one were 2207 boys and 1396 girls. By the time they were in form two the boys were 2004 while the girls were 1300 showing that the number had reduced less repeaters found in that class. In form three and four the survival rate was lower. The boys were 1739 and 1425 while the girls were 1061 and 883 respectively. This study specifically followed a cohort leaving out any new students or those who transferred. Enrolment for the boys was higher than girls at all stages.

Gender Parity in Kericho County was determined by computing the Gender Parity Index (GPI). According to UNICEF (2009) Gender Parity Index (GPI) is the ratio of female to male values of a given indicator. A GPI of 1 (or within the band of 0.97 to 1.03) indicates parity between the sexes. A GPI of above 1 indicates a disparity to the disadvantage of boys, while a GPI of below 1 indicates a disparity to the disadvantage of girls. UNESCO (2009 b) defined gender parity index as the ratio of female to male values of a given indicator. It indicates the use of the following method: divide the female value of a given indicator by that of the male.

Formula:

$$GPI_i^t = \frac{F_i^t}{M_i^t}$$

Where

 GPI_i^t =Gender parity index of a given indicator i in year t

 F_i^t = Female value of a given indicator *i* in year *t*

 M_i^t = Male value of the same indicator *i* in year *t*

In this study the Gender Parity Indices for the 2004 cohort over the four years were computed as follows; the details of which were as presented in Table 4.8.

2004 Form
$$1 = \frac{1396}{2207} = 0.63$$

2005 Form
$$2 = \frac{1300}{2004} = 0.65$$

2006 Form
$$3 = \frac{1061}{1739} = 0.61$$

$$2007 \text{ Form } 4 = \frac{883}{1425} = 0.62$$

Table 4.8 present the Gender Parity Indices in Kericho County before FSE policy from the 2004 cohort.

Table 4.8

Gender Parity Index in Kericho County before Introduction of FSE Policy (n=40)

Years	Form	Gender	Number of	Percentage	Gender
			Students	(%)	Parity index
2004	1	Boys	2207	61.25	0.63
		Girls	1396	38.75	
2005	2	Boys	2004	60.65	0.65
		Girls	1300	39.35	
2006	3	Boys	1739	62.11	0.61
		Girls	1061	37.89	
2007	4	Boys	1425	61.74	0.62
		Girls	883	38.26	
Average					0.63

Table 4.8 indicates the Gender Parity Index (GPI) seems not to have changed much from form one in 2004 to form four in 2007. Before FSE the GPI were as follows in 2004 the GPI was 0.63, in 2005 it was 0.65 while 2006 and 2007 it was 0.61 and 0.62 respectively. The

average GPI before FSE policy was 0.63. These indices were the same as students moved from form one to form four.

These findings reveal that for every 100 boys in 2004 only 63 were girls, while in 2005 for 100 boys in form two the girls were 65. While these students in 2006 the girls had reduced from 65 to 61 for 100 boys. In 2007 when they were in form four the boys had reduced slightly more than the girls since for 100 boys the girls were now 62. The above findings indicate that the gender parity index in Kericho county secondary schools was low. A study carried out by World Bank (2005) showed that countries like Benin, Cote d'Ivoire, Ethiopia, Guinea, Mali and Togo had their parity index of 60 girls for every 100 boys. This is in agreement with that of Kericho County which ranged from 61 to 65 from 2004 to 2007. This was the situation before FSE policy was introduced to intervene and increase GPI. In West Africa in 2007 their percentage for the girls in secondary school was 44% while the boys were 56% with a GPI of 0.78 which was approaching 100. This does not concur with that of Kericho County since in 2007 it was 0.61to 0.65 which was still far from 100.

To establish the influence of FSE policy on GPI, first data on enrolment by gender was collected for the 2008 cohort and the outcome was as shown in Table 4.9.

Table 4.9

Reconstructed Cohort Students Enrolment by Gender in Kericho County after
Introduction of FSE policy (n=40)

Years		Form I		Form II		Form III		Form IV	
		Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
2008	E	2919	1696						
	R	7	6						
	N	0	0						
2009	\mathbf{E}	2923	1691	2610	1487				
	R	7	5	95	11				
	N	0	0	212	18				
2010	\mathbf{E}			2611	1487	2183	1237		
	R			100	23	68	46		
	N			191	161	501	234		
2011	\mathbf{E}					2189	1063	1656	1083
	R					71	40	96	38
	N					178	245	561	269
2012	\mathbf{E}							1650	1075
	R							98	38
	N							561	261

Key: R; Repeaters N; New Students E; Enrolment

Table 4.9 shows the transition of the students after introduction of FSE policy between 2008 and 2011. When these students joined form one as a cohort the boys were 2919 while the girls were 1696. In form two the boys were 2610 while the girls were 1487. The repeaters were 95 boys and 11 girls. In form three the boys had reduced to 2183 while the girls were 1287. The repeaters also increased to 163 boys and 64 girls. In form four the survivors were reducing while those who transferred from other schools and repeaters their numbers went up. The survivors in form four in this cohort were 1656 boys and 1083 girls. Those who joined them were 566 boys and 259 girls. The repeaters increased to 259 boys and 95 girls. The purpose of FSE policy was to improve on GPI therefore it was computed after FSE policy in Kericho County.

Table 4.10 show the gender parity index for the cohort who benefitted from FSE Policy in 2008 to 2011. The formula by UNESCO (2009 b) was used to determine the parity index after FSE policy.

$$GPI_i^t = \frac{F_i^t}{M_i^t}$$

Where

 GPI_i^t =Gender parity index of a given indicator i in year t

 F_i^t = Female value of a given indicator i in year t

 M_i^t = Male value of the same indicator *i* in year *t*

In this study the Gender Parity Indices for the cohort over the four years were computed as follows; the details of which were as presented in Table 4.10.

2008 Form
$$1 = \frac{1696}{2919} = 0.581$$

2009 Form
$$2 = \frac{1487}{2610} = 0.570$$

2010 Form
$$3 = \frac{1237}{2183} = 0.566$$

2011 Form
$$4 = \frac{1083}{1656} = 0.654$$

Table 4.10

Gender Parity Index in Kericho County after Introduction of FSE Policy (n=40)

Years	Form	Gender	Number of students	Percentage	GPI
				(%)	
2008	1	Boys	2919	63.25	0.58
		Girls	1696	36.75	
2009	2	Boys	2610	63.37	0.57
		Girls	1487	36.29	
2010	3	Boys	2183	63.83	0.57
		Girls	1237	36.17	
2011	4	Boys	1656	60.46	0.65
		Girls	1083	39.54	
Average					0.59

Table 4.10 shows that in form one, 2008 the gender parity index was 0.58, while in form two, 2009 it was 0.57. The gender parity index for 2010 and 2011 was 0.57 and 0.65 respectively in forms three and four. The findings in Table 4.10 indicate that for every 100 boys there were 58 girls while in 2009 for every 100 boys the girls were 57. In 2010 the parity index remained the same as to 2009, that is, for every 100 boys there were 57 girls which was still below the required 50/50. In 2011 the parity index improved from 0.57 to 0. 65. The average GPI for this cohort was 0.59 meaning for every 100 boys the girls were 59. Since this was a cohort study it shows that the boys reduced in form three and four more than the girls. This is an indication that the wastage rates for the boys was higher than that for the girls in form three and form four. Table 4.11 presents the two sets of GPI before and after FSE policy.

Table 4.11

Gender Parity Index before and after Introduction of FSE Policy in Kericho County

Form	GPI before FSE	GPI after FSE
1	0.63	0.58
2	0.65	0.57
3	0.61	0.57
4	0.62	0.65
Average	0.63	0.59

Table 4.11 shows that in Kericho County the GPI was 0.63 in form one before FSE and 0.58 with introduction of FSE. This shows that before introduction of FSE, the GPI showed that for every 100 boys there were 63 girls while with FSE policy in place the GPI reduced to 0.58 meaning for every 100 boys there were 58 girls. For form two the GPI was 0.65 before and 0.57 after this shows that for every 100 boys before FSE the girls were 65 and after they were 57 girls for 100 boys. In form three it was 61 and 57 girls for 100 boys respectively before and after. While in form four the GPI before was 0.62 and 0.65 meaning for 100 boys

there was 62 girls before and 65 girls after FSE policy. The average GPI for before and after FSE policy was 0.63 and 0.59 respectively. There was a slight improvement in form four. This shows that perhaps FSE policy had some little positive influence. Basing on these findings FSE policy has not had the desired outcome in Kericho County. These show that of FSE policy may not influenced GPI positively but instead it may have influenced it negatively. These findings indicate that the desired objective of FSE policy on improvement of G.P in Kericho County had not been achieved.

This means that the policy had little positive influence against the expected results according to the Task force report (MOE, 2007). This finding is consistent with the studies done by (UNESCO, 2009 a) where they indicated that 64% of the worldwide illiterate populations were women. In 2010 the Kenya's GPI for those who did KCSE in 2009 according to Kenya National Examinations Council, 2010 cited in the Standard Newspaper (2010, March 1st) the boys were 55% while the girls were 45% meaning that the GPI was 0.82. These does not concur with the current study in Kericho County since it had a GPI of 0.56 in 2009 indicating that FSE policy had very little influence in the county. While the GPI of Nyanza and North Eastern Province in 2010 stood at 70:30 GPI of 0.42 meaning for 100 boys there were 42 girls. This is lower than the gender parity index in Kericho County. This is also not in agreement with the Ministry of Education Strategic plan 2006-2011 whereby it indicated that out of 926,149 secondary school students before FSE in 2004 was 48% were girls while 52% were boys this is a GPI of 0.92. Republic of Kenya (2010) census shows that in 2009 out of the 49,386 children aged between 14 to 19 years 51.26% were female and 48.75% were male with a GPI of 1.05 of the populations of children who are supposed to be schools. This shows

that many girls who are supposed to be in school are out of school basing on the findings in Kericho County.

UNESCO (2010 a) in its studies revealed that in South and West Asia along with Sub-Saharan African Countries girls accounted for 44% of students in secondary education in 2007 while the boys were 56% having a GPI of 0.79 which was approaching 100. This is did not concur with that of Kericho County since the girls in secondary schools ranged from 37.89%, 38.26%, 38.75% and 39.35% respectively before FSE and 36.75%, 36.20%, 37.09% and 39.65% after FSE Policy for the cohorts 2004 and 2008. The GPI for these cohorts were 0.65, 0.65, 0.61 and 0.62 while after FSE policy they were 0.58, 0.57, 0.57 and 0.65. The findings of this study concur with World Bank (2005) studies on gender in junior and senior secondary school education in sub-Saharan African countries which shows that out of 56% of children with disparities girls are normally disadvantaged. Studies in Uganda by Takashi and Asankha (2011) after the introduction of FSE policy revealed the opposite that the girls benefits more than the boys. In Benin, Cote'd' Ivoire, Ethiopia, Guinea, Mali and Togo have 60 girls per 100 boys entering secondary school. This is similar to findings in Kericho County and those of Paul (2008) which revealed that in Migwani Division boys in secondary schools were more than the girls.

In order to establish the influence of FSE policy on gender parity for 2008 cohort, data on GPI per school, FSE fund and school levies were computed and the results were as shown in Tables 4.12 and 4.13.

The formula by UNESCO (2009 b) was used to determine the parity index after FSE policy per school for 2008 cohort.

$$GPI_i^t = \frac{F_i^t}{M_i^t}$$

Where

 GPI_i^t =Gender parity index of a given indicator i in year t

 F_i^t = Female value of a given indicator *i* in year *t*

 M_i^t = Male value of the same indicator *i* in year *t*

This formula was used to compute GPI in Kericho County per school (Table 4.12) in order to establish the influence of FSE policy on GPI.

Table 4.12

GPI in Kericho County per School for 2008 cohort (n=40)

GPI	Number of Schools	Percentages (%)
0.00-0.29	22	55
0.30-0.49	6	15
0.50- 0.69	6	15
0.70-0.89	3	7.5
0.90-1.09	1	2.5
1.10-1.29	1	2.5
1.30-1.49	0	0.0
1.50-1.69	1	2.5

Source: Field data, 2013

Table 4.12 indicates the GPI per school as indicated by the school principals in Kericho County after the introduction of FSE policy in 2008. Twenty (55%) of the schools had a GPI ranging from 0.00 to 0.29, six (15%) ranged from 0.30-049, another 6 (15%) had a GPI between 0.50-0.69, three (7.5%) schools had a GPI of between 0.70-0.89, one (2.5%) of the

schools had a GPI ranging from 0.90 to 1.09. While one (2.5%) had a GPI of 1.10 to 1.29 and one (%) had a GPI between 1.50-1.69.

The FSE funds received per school (Table 4.13) were computed to help in computing the influence of FSE policy on GPI.

Table 4.13
FSE Fund received by Secondary Schools for the 2008 cohort (n=40)

Amount (KSHS.)	No. of Schools (f)	Percentages (%)
350,000- 749,999.99	12	30
750,000-1,149,999.99	12	30
1,150,000-1,549,999.99	7	17.5
1,550,000-1,949,999.99	2	5
1,950,000-2,349,999.99	3	7.5
2,350,000-2,749,999.99	2	5
2,750,000-3,149,999.99	2	5
Total	40	100

Source: Field data, 2013

Table 4.13 indicates the amount of FSE funds paid to schools depending on the number of students. Twelve (30%) of the schools received money ranging from Kshs.350,000 to 749,999.99, another 12(30%) received FSE funds ranging from Kshs.750,000 -1,149,999.99, 7 (17.5%) received Kshs.1,150,000 to 1,549,999.99, two (5%) received between Kshs.1,550,000 to 1,949,999.99, three (7.5%) received between Kshs.1,950,000 to 2,349,999.99, two (5%) received between Kshs.2,350,000 to 2,749,999.99 while another 2 (5%) received between Kshs. 2750,000 to 3,149,999.99. Since each student receives Kshs.

10,265/= per year this indicates that the higher the number of students the more the money received in a school. This indicates that every school received FSE fund at the rate Kshs.10, 265 per year this funds cater for tuition, repair maintenance and improvement, local and travel and transport, administration cost, electricity, water and conservancy, activity fees, personal emolument and medical expenses in order to improve GPI. School levies received per school (Table 4.14) were computed to help compute the influence of school levies on GPI as an intervening variable.

Table 4.14
School Levies received by Secondary Schools for the 2008 cohort (n=40)

Amount (KSHS.)	No. of Schools (f)	Percentages (%)
Below 1,999,999.99	20	50
2,000,000- 3,999,999.99	10	25
4,000,000- 5,999,999.99	4	10
6,000,000-7,999,999.99	3	2.5
8,000,000-9,999,999.99	1	2.5
10,000,000-11,999,999.99	1	2.5
Above 12,000,000	1	2.5

Source: Field data, 2013

Table 4.14 indicates the school levies received by the schools depending on the number of students. Twenty (50%) of the schools received Kshs. 1,999,999.99 and below, 10 (25%) received levies ranging from Kshs.2,000,000-3,999,999.99 four (10%) received Kshs.,4,000,000 to 5,999,999.99, three (7.5%) received between Kshs. 6,000,000 to 7,999,999.99, one (2.5%) received between Kshs. 8,000,000 to 9,999,999.99, two (2.5%) received between Kshs. 10,000,000 to 11,999,999.99 while another one (2.5%) received between Kshs. 12,000,000 to 13,999,999.99. These were the amount of school levies the schools received for the 2008 cohort from the parents. FSE fund and school levies combined,

received per school (Table 4.15) were computed to help determine the influence of FSE fund on GPI.

Table 4.15

FSE Fund and School Levies received by Secondary Schools for the 2008 cohort (n=40)

Amount (KSHS.)	No. of Schools (f)	Percentages (%)
Below 3,999,999	23	57.50
4,000,000- 7,999,999	13	32.50
8,000,000-11,999,999	3	7.50
12,000,000-15,999,999	0	0.00
Above 16,000,000	1	2.5

Source: Field data, 2013

Table 4.15 indicates the FSE fund and school levies received by the schools depending on the number of students. Twenty three (57.50%) of the schools, FSE fund and school levies below 3,999,999.99, thirteen (32.50%) ranged from Kshs. 4,000,000 -7,999,999.99 three (7.50%) received Kshs. 8, 000,000 to 11,999,999.99, one (2.5%) received FSE fund and school levies above 16,000,000. The data was correlated to establish the influence of FSE policy on GPI (Table 4.17). Correlation coefficients (r) were interpreted using Elfison, Runyon and Haber (1990) and Leedy and Ormrod interpretation guideline (Table 3.2).

Table 4.16

Pearson Product Moment Correlation (r) Matrix for FSE fund, School levies and GPI in Kericho County

		GPI
FSE fund	Pearson Correlation	44
	Sig. (2-tailed)	.01
	N	40
School levies	Pearson Correlation	45
	Sig. (2-tailed)	.01
	N	40
FSE Fund and school levies	Pearson Correlation	47
	Sig. (2-tailed)	.00
	N	40

Table 4.16 indicates that there was a moderate negative relationship between FSE funding and GPI as signified by Pearson's coefficient of -.44. Elifson. This relationship was significant at .05 level of significance. This means that an increase in FSE funding would reduce GPI. Since FSE policy aimed at increasing GPI, but the outcome is an inverse relationship, it means other factors influenced the GPI strongly. School levies; and a combination of FSE funding and school levies had moderate negative relationships to with Pearson's r coefficients of -.45 and -.47 and significant at .05 respectively. Overall, these outcomes mean that there are pre-requisites that should be in place first for FSE policy to have a positive influence. The other factor could be that the FSE funding did not reach the threshold. This means that a significant increase in the FSE funding could increase the GPI to a reasonable level.

To account for the influence of FSE on GPI Pearson's r was squared. The coefficient of determination $R^2 = 0.19$ which meant that FSE accounted for 19% of the variation negatively in GPI. School levies which were an intervening variable had a negative moderate influence

of 0.45. Coefficient of determination $R^2 = 0.20$ which meant that FSE accounted for 20% of the variation in negatively GPI. When school levies were combined together with FSE fund as it had a moderate negative influence of 0.47. Coefficient of determination $R^2 = 0.22$ which meant that FSE fund combined with school levies accounted for 22% of the variation negatively in GPI. This means that school levies had little mediating effect that is 0.03 which translated to 3% on the influence of FSE policy on gender parity. This means that FSE fund, school levies and both combined were statistically significant. The other factors could be due to motorbike business, early marriages, FGM, poverty and discrimination by parents as revealed by interview findings that they mediate negatively against FSE policy as demonstrated by the intervening variable, school levies. This finding concurs with that in Table 4.11 of the control group, cohort 2004 having a higher GPI than the 2008 cohort that had a lower GPI. The interview findings revealed that FSE policy had little influence on GPI. The DQASO during interview revealed that despite FSE policy being in place the GPI had not improved in any way, instead the girls were few in the county secondary schools.

In fact one of the DQASO said,

Notwithstanding the FSE policy, Kericho County has always had fewer girls in secondary schools compared to the boys yet when they are admitted to join form one they are the same number and at times the girls are even more than the boys. It is unfortunate that when we get statistics from the schools the boys are always more than the girls despite the FSE policy in place.

This is an indication that FSE policy had little influence on gender parity. Another DQASO further said, "FSE fund had a lot of influence in enrolment when it was adopted especially in day schools but it's unfortunate that the girls enrolled in school are very few compared to the boys". All the DQASOs from the five sub counties believed that FSE had not influence gender parity as expected in Kericho County since it was one of FSE policy objectives. There

was another DQASOs who said, "during the beginning of the year as we enroll form ones the girls are almost equal in numbers to the boys, but as they move to the next classes most of them dropout because of some many other factors". This is an indication that despite FSE policy being in place there are other factors working against it in Kericho County.

During interview with the Director of studies they gave the view that FSE policy had not influenced gender parity index in the county. The director of studies in mixed schools revealed that girls do not report to school yet during form one selection they are all given equal chances. In fact one the Director of Studies said, "These girls do not report to school in form one instead some get married to the village men or get employed as house helps". This shows that the girls are engaged elsewhere that is why they do not enroll in school as expected especially considering that the girls according to the census are more than the boys in that age bracket (Republic of Kenya, 2010 a).

There was also another Director of Studies, who said,

During form one admission in our school the girls and the boys enrolled were almost equal in numbers. Unfortunately as they proceeded to form four the girls reduced in numbers and since our school is mixed school many of them had dropped out due to so many other factors. This still is the case despite the FSE policy being in place because the trend is the same.

This shows that these girls could be affected by other factors apart from FSE policy. The directors of studies felt that FSE policy had little influence on gender parity. This was further explained by one of the Director of Studies who said, "we do our form one selection equally for both boys and girls without being biased, but the girls reporting to school are almost the same number as before FSE policy". This implies that the girls' enrolment is still the same

despite FSE policy being in place. This means that the enrolment trends are still the same for both the boys and girls in Kericho County.

During focus group discussion with students, they revealed that the boys in secondary schools in Kericho County were more than the girls. In fact one of the girls said, "The boys were more than us in school, we thought that FSE policy was going to make more girls come to school but unfortunately we were still very few". This is an indication that gender parity is still a problem despite FSE policy being in place.

There was another student who said, "Despite FSE policy being in place, out of the forty five students whom we were enrolled together in form one. Thirty students completed form four nine being girls while the boys were twenty one. I believe the FSE policy did not improve in ensuring that the girls are enrolled in secondary schools". This means that in the county FSE policy had very little influence on gender parity and that there could have been other factors affecting the GPI in the county. The students in single sex schools revealed that in their schools enrolment has gone up for both boys and girls. This is because single sex schools are the performing schools and most students are from private primary schools. Their parents are financially stable and they can afford education unlike in mixed day schools where most students are from public primary schools and most of their parents struggle to educate them.

There were other factors that seemed to be influencing GPI as were given by the respondents during interview and focus group discussion. The DQASOs, directors of studies and students further gave the following reasons or factors that affect gender parity despite the FSE policy. They felt that girls do not enroll in school despite the FSE policy.

Discrimination was one of the reasons mentioned by the all the 5 DQASO, 40 Directors of Studies and the focus discussion groups of students. They explained that the girls were discriminated against by their own parents. In fact one of Director of Studies said, "When the parents are not in a position to provide for their children the first child to be compromised in terms of education is the girl". This shows that the girl child is always looked down upon in the county compared to the boy child. Interview findings also supported the questionnaire findings in this respect. In fact another Director of Studies in a mixed school emphasized,

Notwithstanding the FSE subsidy, some students were sent home continually during the term and it happen that the same students were sent throughout the year making them not come back again since they have lost hope and this mainly affects the girls like during KCSE registration a parent had two children; a boy and a girl and had not cleared fees for both so he told the girl to stay home or repeat form 3 to allow the brother proceed to form four compromising the girls' education.

This is an indication that the girls are highly discriminated in terms of education by their own parents. This could be the reason these girls do not enroll in school despite FSE policy being in Place. This finding is in agreement with the studies carried out by UNESCO (2011 a) in which they concluded that in Seychelles and South Africa boys were given a priority compared to the girls who are rarely given a chance by the parents to go to school. But it differs with the studies carried out by UNICEF (2009) in their analysis revealed that boys' enrolment rates were significantly lower than those of girls in Malaysia, Mongolia, the Philippines and Thailand. United Nations Girls' Education Initiative (2011) undertook a research review to investigate the issue of boys' underperformance in these four countries. The findings of these underlying gender dynamics where boys are considered more independent, believed to be less interested in learning, and have the potential to earn money while working mean that boys are more likely to leave school. This is also in agreement with

Kenya Education Partnerships (2010) when it revealed that in many families there remains a clear preference towards educating boys, while girls drop out and pregnancy is among the factors. It also concurs with the (MOE, 2008) that Gender disparity remains a challenge in some regions despite FSE subsidy where boys are preferred against girls in accessing education. Murunga, Kilaha and Wanyonyi, (2013) in central Kenya also found a similar situation the boys leave school because of hawking business, Tea/coffee plucking and others joining mungiki sect which is an illegal movement. The students also indicated during focus group discussion that the girls were highly discriminated against and they mentioned that the school levies they were required to pay were high.

School levies was another reason that was cited as affecting GPI yet FSE policy was in place leading to discrimination. The DQASOs, all the students groups and all the Director of Studies explained that there has been a problem with school levies. The government pays less than what the schools require to provide education comfortably for these children. In fact one of the students explained that, "were always sent home to get school fees which at times our parents we not able to raise this was a repeated process until some of us drop out unfortunately the girls were affected more". School levies is also a big challenge to the parents and they find it had to raise the required amount. This is because the parental obligations were a big burden to the parents. For instance FSE caters for only 40.43% of the require fee by the day scholars while the parents cater for 59.57%. Parents with children who are boarders in mixed school cater for 72.60% while government pays 27.40%. For the single sex schools the girls and the boys' schools the government caters for 25.62% and 24.88%, while the parents cater for 74.38% and 75.12% for girls' and boys' schools respectively

(Table 4.6). This study concurs with the findings by ILO (2010) in Kwale District which revealed that reasons for non enrolment in school was because of were lack of funds.

Early employment is another reason mentioned by the all the DQASO, Director of Studies and the group of students who explained clearly that some students opt to stay out of school to be employed to earn a living for their families despite the FSE policy. This affects the girls and also some boys who are hired to earn a living for the entire family. In fact one of the girls explained that,

Two of my school mates in primary were employed as house helps away in the big towns when we finished our KCPE and they were to join form one. This is because their parents were of the idea that they can earn money to take care of the rest of the children if they were employed. At the end of the month the parents are sent money by these employers, this made them not continue with their education.

There was another student who said,

In spite of the government having put in place FSE policy, we have boys who have been employed in the farms especially tea farms and others are employed by the motorbike business men. Some of them come back to school after a while but others did not turn up at all and they opt to drop out. The parents are less concern about these boys instead some of them expects money from them to sustain their families. Parents also do not see how FSE can help them.

Child labour seems to be a trend in the county the main contributor being the motorbike business and the tea farms where these students are employed. This study concurs with the one done by UNGEI (2011) it undertook a research review to investigate the issue of boys' underperformance in these four countries. The findings of these underlying gender dynamics where boys are considered more independent, believed to be less interested in learning, and have the potential to earn money while working mean that boys are more likely to leave school. Murunga, Kilaha and Wanyonyi (2013) observed that in central Kenya a similar situation the boys leave school because of hawking business, Tea/coffee plucking and others

joining mungiki sect which is an illegal group. This study concurs with the studies done by ILO (2010) in Kwale District which revealed that reasons for non enrolment were because early employment for the girls as house helps.

Poverty was another reason mentioned clearly by the all DQASO who explained that it has led to students dropping out and not enrolling back to school later. In fact one of the DQASO said.

Despite the well intentional of FSE subsidy Students drop out because of poverty in their homes and some stay at home; some get employed while some girls get married. A few boys come back after many years working some plucking tea to get money to pay their schools fees but the girls rarely come back because most of them will have been married or have lost interest.

Poverty is also another factor that is working against FSE policy intention. These findings concur with that of Onyango (2003) on factors that influence girls' performance in mathematics in Nyanza Province and he noted that drop-out rates, particularly for girls are still too high. Dropping out of school was due to a life of poverty for these girls, and many of them also end up being HIV positive because the male female power dynamics become even more slanted against them. It also concur with the studies done by State University (2002 b) where it revealed that in United states of America many children do not have equally opportunities to learn because of poverty. It is also in agreement with the study carried out in America by the Asia Society (2014) when it revealed that there is a problem of underachievement of America students especially those with low income minority children. It also concurs with the one done by (Murunga, Kilaha & Wanyonyi, 2013) in central Kenya also found a similar situation in whereby the boys leave school because of Tea/coffee plucking.

Early marriage and pregnancies were mentioned largely by the all the group of students and the DQASOs as affecting the gender parity index despite FSE policy in Kericho County Secondary schools. The girls get pregnant especially when they are reporting back to school from holidays. This was further explained by one of the DQASOs, who said,

Many girls who have just completed class eight and have not joined secondary school are not necessary out due to poor performance in KCPE. Most of them could be due to pregnancy or early marriage. This makes them not enrol in school because of these responsibilities.

This is in agreement with the findings by Achoka (2007) when it revealed in a study of over a period of 10 years that early pregnancies and early marriages were causes why girls fail to be in school. It is also in agreement with the studies by Musyimi (2011) in Makueni County when it revealed that teenage pregnancies were one of the factors affecting continuity in secondary education in spite of the FSE subsidy in the county. This is also in agreement with the report by MOE (2008) on gender disparity remains a challenge in some regions in Kenya where boys are preferred due to early marriages. This also concurs the studies done by ILO (2010) in Kwale District which revealed that reasons for non enrolment was because of pregnancies

Indiscipline was mentioned by all DQASO and they said it mainly affected the boys and not the girls. The all Director of Studies during interviews explained that indiscipline was one of the factors students' that affected gender parity index in the schools. Most of the students also mentioned that the cases of indiscipline made some of them not to come back to school. This mainly affected the boys compared to the girls especially the senior class. This explains why the GPI seem to be improving in form four yet those boys and girls who survive to this

class were reducing for both boys and girls. This show that wastage rate for boys is high. In fact one of the DQASO explained that,

The boys in the senior classes became more indiscipline and some did not want to be in school, eventually they drop out because of these indiscipline cases. This is one of the factors that explain why when these boys reached form three and four the numbers reduce compared to the girls, although the government pays for them tuition fee through FSE subsidy.

This explains why the GPI for the girls seem to be improving in form four after FSE, though the numbers are reducing for both the girls and boys. This is an indication that the boys are affected by indiscipline cases in form three and four. These findings concurs with that of Musyimi (2011) done Makueni County when it revealed that indiscipline was one of the factors that lead to drop out and eventually affecting Gender parity Index in Secondary Schools.

Motor bike transport business was another factor mentioned highly by all the DQASOs who talked of the business being the major influence of students not being in school especially the girls despite the FSE policy. This had led to the girls being misled by these men because of poverty at home resulting into pregnancies and early marriages. This also applied to those who were supposed to join form one but because they are pregnant they end up not joining secondary school. This led to girls' lower enrolment compared to the boys. During the interview with the Director of Studies they explained that it had really influenced the enrolment of students in school and they felt that girls were also affected in a big way. In fact one of the Director of Studies explained that,

FSE subsidy was meant to improve GPI but, Motor bike business really confused the students especially the girls in day schools where the motor bike business men led them to engage in sexual activities in exchange of money

and other cheap favors. In the end they get married, pregnant and fail to complete secondary schools.

During the focus group discussion with the students most of them mentioned that the girls were affected mainly by the men who confuse them especial Motor bike business men who gave them money and influenced them to engage in sexually activities after class eight hence making them not join secondary school because either they are married or pregnant. In this respect one of the student stated,

We have a girl who is our neighborhood who had just done her KCPE and she was to join form one. She was cheated by the motor bike business men to engage in sexual activities so that he can take care of their financially needs since she comes from a needy family. Initially he would buy her a few basic needs and things like snacks, but when the girl became pregnant he disappeared leaving the girl frustrated and she cannot go to school because of her state, yet FSE would have helped her to pursue her education.

Indeed there is tendency for school girls to be impregnated by motor bike business men operators. The school head teacher indicated that a 13 year old girl had dropped out of school because she had been impregnated by a motor bike business man and so many other girls have dropped out. He further explained that it affects the girls from single parent families where parents are very busy struggle to earn a living and provide for their children in the process leaving their children unattended to.

Peer pressure was one of the factors that were mentioned as influencing the GPI in schools in the county by all the DQASOs, Director of Studies and all the students focused group discussion during interview and focused group discussion. They mentioned that some students tended to admire students who were not in school and they tried emulating them by not going to school despite the FSE policy. For instance one of the students said, "most girls were influenced by their friends to engage in sexual activities to get money and hence

making them pregnant hence not enrolling in secondary schools, although there is FSE fund to help them progress with their education for better life". This finding concur with that of Musyimi (2011) done in Makueni County when it revealed that peer pressure was one of the factors that lead to drop out and eventually affecting Gender parity Index in Secondary Schools. It also concurs with the study by Achoka (2007) which revealed the causes of students drop out of school which affect the parity index. Peer pressure was one of the factors contributing to these situations.

Poor performance was another factor mentioned by all the DQASOs, Director of Studies and all the groups of student. They explained that the students do not join secondary schools because of poor performance in KCPE and it is worst for the girl child like one of the Director of Studies said, "The girls who do not do well in KCPE are sent by their parents as house helps to generate income for the family or married off so that they can get dowry forgetting that FSE was meant to help them proceed with education." This shows that these girls are either employed or married early when they are still young and for the boys they are left to do or some responsible parents try and find a way out. There was also another Director of Studies who said.

The girls are affected mainly by the KCPE poor performance because when the girls reach home in the evening instead of being allowed to read and do their homework they are asked to do domestic chores first and by the time they settle down to read they are exhausted and tired unlike the boys who are given enough time. This makes them perform poorly in school making them not to proceed to secondary school, despite the fact that the government launched FSE to help them.

From this finding it is clear that the girl child is rarely given an ample time to concentrate in their studies making them perform poorly hence the low gender parity index in secondary schools in the county in spite of FSE policy. This study is in agreement with the study carried out in America by the Asia Society (2014) which revealed that there is a problem of underachievement of America students especially those with low income minority children. This is also in agreement with the studies done by Musyimi in Makueni County when it revealed that poor performance have led to lack of consistence in secondary education in this county.

Boy/girl relationship was also mentioned as influencing the parity index by all the DQASOs all the groups of students and all Director of Studies mentioned that it has influenced parity index one of the Director of Studies said, "The students engage in boy/girl relationships and unfortunately the girls are the ones who face the consequences, they get pregnant and some even get married making most girls not join secondary schools". This is common in mixed day schools.

Family responsibilities were mentioned by all the DQASO, Director of Studies and students groups as one of the factors affecting the girls for instance when a family member is sick especially a parent the girls take up the family responsibilities negating the purpose of FSE policy. In fact one of the Director of Studies said,

The girls are asked to take care of the sick and also provide for the entire family making them not to enroll in school especially secondary education despite FSE policy. By the time they were to go to their former colleagues have moved on, so they opt to stay out of school.

This is in agreement with the studies done by ILO (2010) in Kwale District which revealed that a reason for non enrolment in school was because of domestic work.

Drug abuse was also mentioned by the all the Director of Studies and DQASO as affecting the students especially the boys and a few girls. This mainly affects the boys' enrolment in school. The Director of Studies in one of the schools said, "There are quite a number of boys who are sent home in form three and four because of drug abuse in our school and it's unfortunate that they influence the other boys". These explain why the gender parity index seems to be improving yet the students enrolment in these classes is decreasing, despite the FSE policy. This study is in agreement with the Achoka (2007) findings which revealed the causes of students drop out of school which affect the parity index. Drug abuse was one of the factors contributing to these situations.

Students' attitude was also mentioned as affecting the student enrolment. These influences the girls' enrolments especially in some areas where they see most of their friends are not in school in spite of the FSE policy. This makes them not to go to school because of this change of attitude hence the girls' low enrolment in secondary school in the county. A student in one of the day schools said, "Girls in our village have a negative attitude towards school despite FSE policy because their friends are not in school or they are married". These findings concur with those of Achoka (2007) which revealed the causes of students drop out of school which affects the parity index. Student attitude was one of the factors contributing to these situations.

Female Genital Mutilation (FGM) and other cultural practices were factor affecting the GPI in Kericho County as indicated by all the DQASOs, Director of Studies and all the focused

groups; the practice has misled the girls in some parts of the county in spite of FSE policy. A Director of Studies in a rural mixed school said,

Practice of FGM in this area is common and it affects girls in classes 6, 7 and 8, this makes them not to go back to school because they are made to belief they are women and hence ready to get married. This has lead to low enrolment among the girls in secondary schools in spite of FSE subsidy influencing the GPI negatively in this County.

This is in agreement with the report by MOE (2008) on gender disparity which indicates that GP remains a challenge in some regions in Kenya where boys are preferred due cultural practices and early marriages, hence the need for FSE policy. This also concurs with the studies done by ILO (2010) in Kwale District which revealed that reasons for non enrolment was because cultural beliefs and practices.

These findings show that the factors given affect the students' enrolment highly especially the girl child. FSE launch seem to have coincided with increased use of motor bike transport such that the boys drop out of school to do the business. The boys seem to be avoiding school because of peer pressure, poor performance, drug abuse, fees problem and indiscipline. While the girl child is affected mainly by, family responsibilities, fee problem, motor bike business, poor performance, pregnancies, FGM and early marriages. The issue of fee problem shows that much as the government is paying fees through FSE policy for these children the parents still pay a higher portion for other requirements which negatively affect influence of FSE policy. The other factors that were mentioned by very few students were the issue of uniform and some books they are required to buy like literature set books. They mentioned that some of them have been affected by this issue of books and lack of uniforms despite FSE policy. Basing on the above findings FSE Policy has not influenced gender

Parity in Kericho County instead of improving the parity index has gone down compared to before FSE policy was introduced in 2008.

Overally, interview and focus group discussion findings explain further why FSE policy had a negative influence on GPI. Thus the girl child being vulnerable was not given a chance like the boy child to take advantage of the FSE policy. The consequences were that more boys enrolled compared to girls so as to survive. The interview and focus group discussion findings also helped to clarify the correlation output by indicating that factors like child labour, early marriages, school levies negatively affected gender parity. This means that they had a stronger influence than FSE policy on gender parity.

This findings revealed that FSE policy had a negative moderate relationship as signified by a correlation of -0.44 which significant at 0.05. This indicates that GPI was affected by these other factors that were mentioned during interview and focused group discussions and should also be addressed to improve on GPI. This acquired knowledge will be used to establish ways of improving GPI in the county.

4.5 Influence of FSE Policy on Secondary School Repeater Rates in Kericho County

The research question to respond to was:

What is the influence of FSE policy on secondary school repeater rate in Kericho County?

To establish the influence of FSE policy on secondary school Repeater rates data on enrolment was collected for two cohorts 2004 and 2008 before and after FSE policy from the school Principals in Kericho County. Grade repeater and cumulative repeater rates were

computed in Kericho County. The Grade repeater rate was computed so that the repetition patterns can indicate specific grades for which there is high repetition (UNESCO, 2009 b). The cumulative repeater rate was computed to establish the total repeaters for the county and per school. The enrolments obtained were used to compute repeater rates. The results were as shown in Tables 4.17, 4.18, 4.19, 4.20 and 4.21.

Table 4.17

Reconstructed Cohort Students Enrolment and Repetition in Kericho County before

Introduction of FSE Policy (n=40)

Years		Form I	Form II	Form III	Form IV
2004	E	3603			
	R	13			
	N	0			
2005	${f E}$	3632	3304		
	R	14	27		
	N	0	352		
2006	${f E}$		2926	2800	
	R		30	98	
	N		352	619	
2007	${f E}$			2829	2308
	R			89	96
	\mathbf{N}			621	647
2008	${f E}$				2341
	R				113
	N				509

Key: R; Repeaters N; New Students E; Enrolment

Table 4.17 indicates the number of repeaters in a class before FSE Policy in Kericho County. It was done basing on their enrolments as a cohort and any new students who joined after the admission was left out. Two cohorts were taken so as to capture the students who repeated a class when the rest moved to the next class. This was done by getting the admission numbers

and the year they were admitted in the school using the school registers and admission books from form one to form four.

According to UNESCO (2009b) repeater rate by grade is by dividing the number of repeaters in a given grade **t+1** by the number of pupils or students from the same cohort enrolled in the same grade in the previous school year **t.** Repetition rate should ideally approach zero percent since high repetition rate indicates poor internal efficiency of education (UNESCO 2009b). For this cohort the students for the cohort from 2004 to 2007 the repeaters were traced by looking at the repeaters in 2005 cohort because these repeaters belong to the 2004 cohort.

Repeater Rates

The formula used here to determine the repeaters rates by grade was adapted from UNESCO (2009b) education indicators technical guideline.

Formula:

$$RR_i^t = \frac{R_i^{t+1}}{E_i^t}$$

Where

 RR_i^t Repetition Rate at Grade i in school year t.

 R_i^{t+1} Number of pupils repeating grade i in school year t

 E_i^t Number of pupils enrolled in grade i, in the school year t

The total Repeater rates for the 2004 cohort were further computed in the county and per school. According to UNESCO (2009 b) cumulative cohort repeater rate can be calculated for the whole level of education by dividing the sum of repeaters in all grades of the given level by the total enrolment of that level of education and multiple by 100. This was adopted in computing the total cohort repeater rate in that county and per school.

In this study the Repeater rates were for the cohort 2004 were computed as follows. The details were as presented in Table 4.18.

Repeater Rates for the students from form I-IV

Form one 2004

$$RR_i^t = \frac{R_i^{t+1}}{E_i^t} = \frac{14}{3603} \times 100 = 0.39\%$$

Form two 2005

$$RR_i^t = \frac{R_i^{t+2}}{E_i^t} = \frac{30}{3304} \times 100 = 0.91\%$$

Form three 2006

$$RR_i^t = \frac{R_i^{t+3}}{E_i^t} = \frac{89}{2800} \times 100 = 3.18\%$$

Form Four 2007

$$RR_i^t = \frac{R_i^{t+4}}{E_i^t} = \frac{113}{2308} \times 100 = 4.90\%$$

Cumulative repeater rate for the county was computed to determine the total number of students who repeated in the 2004 cohort. The formula by UNESCO, (2009 b):

Cumulative Cohort Repeater Rate =
$$\frac{R_i^{t+1} + R_i^{t+2} + R_i^{t+3} + R_i^{t+4}}{E_i^t} \times 100$$
 was used, that is,
$$= \frac{14 + 30 + 89 + 113}{3603} \times 100$$
$$= 6.83\%$$

The results were as presented in Table 4.18.

Table 4.18

Students Repetition rates in Kericho County before Introduction of FSE policy (n=40)

Form	Repetition Rates in Percentages (%)
1	0.39
2	0.91
3	3.18
4	4.90
County Cumulative Repeater rate	6.83

Table 4.18 shows the percentage of repeaters before the introduction of FSE Policy in 2008. This is a cohort that did not benefit from the FSE policy, they joined form one in 2004 and completed in 2007. For Form one 2004 the repeater rates were 0.39%, in 2005, the repeaters in form 2 were 0.91% while in form 3 and form 4 they were 3.18% and 4.90% respectively. County Cumulative Repeater rate was 6.80.

Table 4.19

Reconstructed Cohort Students Enrolment and Repetition in Kericho County after

Introduction of FSE Policy (n=40)

Years		Form I	Form II	Form III	Form IV
2008	E	4615			
	R	13			
	\mathbf{N}	0			
2009	${f E}$	4614	4097		
	R	12	106		
	N	0	230		
2010	\mathbf{E}		4098	3420	
	R		123	114	
	N		352	734	
2011	${f E}$			3252	2739
	R			111	134
	N			423	830
2012	\mathbf{E}				2725
	R				136
	N				822

Key: R; Repeaters N; New Students E; Enrolment

The repeater rates were computed in Kericho County after the introduction of FSE policy in the county using the cohort enrolled together leaving out the new students. Two cohorts were used so as to trace the repeaters of that cohort who remained behind as the rest moved to the next class. UNESCO (2009 b) indicated that the repeater rates can be calculated for the whole level of education system by dividing the sum of repeaters in all grades of the given level of education and multiply the result by 100. While repeater rate by grade is by dividing the number of repeaters in a given grade **t+1** by the number of pupils or students from the

same cohort enrolled in the same grade in the previous school year **t.** Repetition rate should ideally approach zero percent since high repetition rate indicates poor internal efficiency of education (UNESCO, 2009b). This method was very relevant to this study and the repeaters used were those of the same cohort who were left behind when the rest moved to the next classes. This study used the number of students enrolled together in form one as a cohort and left form four together. The repeaters factored in were those left behind when the rest moved to the next classes from 2008 to 2011. To trace these repeaters data for 2009 to 2012 was used. The repeaters were used divided by the number of students enrolled in form one and the same were done for all the classes. This was done for the students in the county after FSE Policy in 2008. The following formula was also adapted as given by UNESCO (2009b) and it was expressed in percentages.

Formula:

$$RR_i^t = \frac{R_i^{t+1}}{E_i^t}$$

Where

 RR_i^t Repetition Rate at Grade *i* in school year *t*.

 R_i^{t+1} Number of pupils repeating grade i in school year t

 E_i^t Number of pupils enrolled in grade i, in the school year t

In this study the Repeater rates for the cohort 2008 were computed as follows:

Repeater Rates for the students from form I-IV after FSE policy

Form one 2004

$$RR_i^t = \frac{R_i^{t+1}}{E_i^t} = \frac{12}{4615} \times 100 = 0.26\%$$

Form two 2005

$$RR_i^t = \frac{R_i^{t+2}}{E_i^t} = \frac{123}{4097} \times 100 = 3.00\%$$

Form three 2006

$$RR_i^t = \frac{R_i^{t+3}}{E_i^t} = \frac{111}{3420} \times 100 = 3.25\%$$

Form Four 2011

$$RR_i^t = \frac{R_i^{t+4}}{E_i^t} = \frac{136}{2739} \times 100 = 4.97\%$$

Cumulative repeater rate for the county was computed to determine the total number of students who repeated in the 2004 cohort. The formula by UNESCO, (2009 b):

Cumulative Cohort Repeater Rate =
$$\frac{R_i^{t+1} + R_i^{t+2} + R_i^{t+3} + R_i^{t+4}}{E_i^t} \times 100 \text{ was used, that is}$$
$$= \frac{12 + 123 + 111 + 136}{4615} \times 100$$
$$= 8.28\%$$

The results were as presented in Table 4.20.

Table 4.20
Students Repetition rate in Kericho County after Introduction of FSE policy (n=40)

Form	Repetition Rates in Percentages (%)
1	0.26
2	3.00
3	3.25
4	4.97
County cumulative Repeater rate	8.28

Table 4.20 shows the percentage of repeaters after the introduction of FSE Policy in 2008. This is a cohort that benefited from the FSE policy, they joined form one in 2008 and completed in 2011. The aim of FSE policy according to the Task Force Report (2007) was to improve on entry and completion in the system. Form one 2008 the grade repeater rate were

0.26%, in form two it was 3.00% while in form three and four they were 3.25% and 4.97% respectively.

Table 4.21

Comparison of the Repeaters before and after Introduction of FSE Policy for the students in Kericho County (n=40)

Form	Before FSE Policy	After FSE Policy
1	0.39	0.26
2	0.91	3.00
3	3.18	3.25
4	4.90	4.97
County Cumulative Repeater Rate	6.83	8.28

Table 4.21 shows the repeaters before and after the introduction of FSE policy. Before FSE repetition rates was low but after it went up especially in form two it went up from 0.91% to 3.00% and in for three and four it was 3.18% and 4.90% before FSE while after it went up to 3.25% and 4.97% respectively. County Cumulative Repeater Rate was 6.80 before and 8.28 after introduction of FSE policy. These findings indicate that FSE policy did not reduce repeater rate as was intended.

These findings agree with studies carried out worldwide by Huebler (2010) who found out that 7.8% of secondary students repeat a grade. However they do not concur with the findings by UNESCO (2012) which showed that the highest secondary school repeater rates exists elsewhere, that is, Congo (30.80%), Iraq (27.50%) and Algeria (27.2%). In secondary school, the highest repetition rates were observed in West and Central Africa (18.8%), the

Middle East and North Africa (12.0%), and in Eastern and Southern Africa (12.3%). In East Asia and the Pacific, Eastern Europe and Central Asia, the industrialized countries, and South Asia, not more than 5% of pupils at the primary or secondary level repeat a grade.

These findings are also in agreement with those by UNESCO (2006 a) which indicated that grade repeaters are more likely to affect the students in the upper class. It also concurs with the study carried out in South Africa on basic education (2011) which revealed that 9% of the learners who enroll in school repeat the grade they were in the previous year. The repetition was high on the higher grades than the lower grades. There is also a similarity between this study and that done by UNESCO (2004) which revealed that worldwide 7.8% of secondary school students repeat a grade.

SACMEQ (2012) showed that in Zanzibar repetition rates stood at 4.9% per annum while in Kenya it stood at 2.6% annual according to Onsume and Muthaka (2008). These studies were done annually and it is a general view of repetition while the one in Kericho County was done per grade and overall before and after introduction of FSE Policy. It concurs with the study done in Muranga County by Macharia, (2013) which indicated that in the period between 2008 and 2011 repeater rates greatly increased. It also concluded that the FSE policy had contributed negatively to internal efficiency of day schools negatively through increased repeater rates.

In order to establish the influence of FSE policy on repeater rate for 2008 cohort, data on repeater rate, FSE fund and school levies per school were computed and the results were as shown in Tables 4.22 and 4.23. According to UNESCO (2009 b) cumulative cohort repeater

rate can be calculated for the whole level of education by dividing the sum of repeaters in all grades of the given level by the total enrolment of that level of education and multiplied by 100. This was adopted to get the cumulative cohort repeater rate per school for the 2008 cohort. The following formula by (UNESCO, 2009 b) was adopted.

Cumulative cohort Repeater Rate =
$$\frac{R_i^{t+1} + R_i^{t+2} + R_i^{t+3} + R_i^{t+4}}{E_i^t}$$
 x100

Table 4.22

Cumulative Repeater Rates in Kericho County per School after Introduction of FSE Policy (n=40)

Repeater Rates (%)	Frequency (f)	Percentages (%)
0.00-9.999	21	52.50
10.00-19.99	9	22.50
20.00-29.99	6	15.00
30.00-39.99	4	10.00
40.00-49.99	1	2.50

Table 4.22 indicates the repeater rates in Kericho County as indicated by the school principals in the 40 schools. Twenty one (52.50%) of the schools had repetition ranging from 0.00 to 9.99, nine (22.50%) ranged from 10.00 to 19.99, six (15.00%) ranged from 20.00 to 29.99, while four (10.00%) had repetition ranging from 30.00 to 39.99. The repeater rates per school, FSE fund (Table 4.13), school levies (Table 4.14) and combination of school levies and FSE fund (Table 4.15) was used to correlate. Interpretation was done using Table 3.2.

Table 4.23

Pearson Product Moment Correlation (r) Matrix for FSE fund and Repeater Rate in Kericho County

		Repeater rate
FSE fund	Pearson Correlation	.04
	Sig. (2-tailed)	.80
	N	40
School levies	Pearson Correlation	.04
	Sig. (2-tailed)	.81
	N	40
FSE Fund & School Levies	Pearson Correlation	.05
	Sig. (2-tailed)	.78
	N	40

Table 4.23 indicates that the relationship between FSE policy and repeater rates was weak and positive with a coefficient of .04. This relationship was not statistically significant at a set p-value of 0.05. According to Elifson, Runyon and Haber (1990) guidelines Correlation coefficients (r) interpretation indicated that this was a weak positive influence. This means that increases in FSE funding cause increases in repeater rate. Coefficient of determination R^2 is the square of the Pearson r which tells how much of the variance is accounted for by the correlation which is expressed in percentages (Leedy & Ormrod, 2005). To account for the influence of FSE on repeater rate Pearson r was squared. The coefficient of determination $R^2 = 0.0016$ which meant that FSE accounted for 0.16% of the variation in repeater rate. This means that FSE funding was not responsible for the diagnosed repeater rates, rather other factors were responsible. Such factors may have been motorbike business, pregnancies/early marriages, personal effects FGM, poverty and discrimination by the parents. School levies which were an intervening variable had a positive weak of 0.04. Coefficient of determination $R^2 = 0.0016$ which meant that FSE accounted for 0.16% of the variation in students repeater

rate. When school levies were combined together with FSE as FSE fund and school levies it had a weak negative influence of 0.05. Coefficient of determination $R^2 = 0.0025$ which meant that school levies accounted for 0.25% of the variation in students repeater rate. This means that school levies had very little mediating effect that is 0.0009 which translated to 0.09% on the influence of FSE policy on repeater rates. This shows that FSE fund and school levies did not influence repeater rates rather motorbike business, pregnancies/early marriages, personal effects, FGM, poverty and discrimination by the parents influenced repeater rates.

The interview findings revealed that FSE policy had not influenced repetition in Kericho County. Students were still repeating based on school ethos and FSE policy had no influence at all (Table 4.21). During interview with the DQASO it was very evident that repetition was very common in schools. This was due to some many factors despite FSE policy being in place. This has made FSE fail in its objective of ensuring students are able to access secondary education to enroll and complete. A DQASO said,

Every year we have several students who come with complaints that they have been forced to repeat or register for the national examination in another schools because of their performance. This has discouraged many students who had the intentions of completing secondary education, on time.

This is an indication that schools still forced students to repeat classes in Kerchoo county. The Directors of Studies were also interviewed concerning the influence of FSE policy on repetition. Most of the Directors of Studies revealed that repetition was still very common in their schools despite FSE policy being in place. In fact one of them said, "we have students who repeat when the parents demanded or on their own because they want better grades to enable them do" superior courses at university level this shows that the students and parents

also contributes to repetition rates in the county. There was also another Director of Studies who said, "we have come up with a policy to try and ensure the learners work hard and we encourage them to get a C minus so that they can move to the next class. Any student who gets below this grade automatically repeats a class because they have not attained the required mean score." This shows that performance has great influence repetition in these schools. Another Director of Studies revealed that, "some of these students disappear from school due to other reasons and when they report back to school they have lost a lot making them repeat to catch up. In these schools FSE policy has little influence on repetition because of other reasons a part from these funds."

During the focus group discussion with the students they felt that repetition was made almost compulsory for them during their time. In fact one of the students said, "Despite FSE policy being in place we were still forced to repeat if we had grades below what was set by the school". This shows that the schools administrators and parents contributes to repetition in schools making it had for FSE policy objectives to be achieved.

Despite FSE policy, this study established that there were other underlying factors that were negating the influence of FSE policy on repetition, since FSE policy was meant to eradicate repetition. All the DQASO, Director of Studies and students during focus group discussion and interview confirmed that repetition was still practiced in the schools despite all the measures by the government. They further explained that schools were struggling with performance forgetting the fact that students should go through the system so that education can be internally efficient. Some of the Director of Studies especially from single sex schools

revealed that students repeater in their schools. In fact one of the Directors of Studies said, "FSE policy has not reduced repetition in any way because currently more students are repeating. This is because there are other factors that contribute to these apart from FSE fund being in place". They further gave the following reasons that had contributed to repetition in the county through interview and focus group discussion. They indicated that motor bike business was the main contributor of repetition since most student do the business during their free time and holidays hence leading to poor performance due to lack of concentration. A director of studies strongly said,

The parents are to blame for the motor bike influence on their children since some of them find that this is a source of income to the family hence they allow the boys to engage in it making them not to do well in school because of lack of concentration in class. This leads to being forced to repeat.

The girls were also affected but by the motor bike business men who enticed them with money so as they can engage in sexual activities leading to pregnancy and early marriage. This leads them to repeat if they come back to school because of lack of consistency. The other reason that was mentioned largely by all the DQASOs, Director of Studies and Students in focus group discussion was poor performance leading to forceful repetition especially in single sex boarding schools where the students are forced to repeat by the teachers so that their school could be in a good position when they do KCSE. In fact one of the DQASO said, "Performance has played a big role because the parents and the teachers ensure that if the children do not perform well they are forced to repeat so that they can do better and also to ensure the school mean is high". The Director of Studies and students also mentioned largely that the issue of performance had affected the repetition rates in the county despite the introduction of FSE policy which was meant to counter it. A student mentioned

that their schools they have devised ways of making the students repeat despite the government policy against it. The student said,

Whenever some students perform below the school standard their parents are called to sign in form two that if they do not meet the target in form three they should repeat leaving them with no option but repeat form three or form two because they will affect the school means score.

There was also another student who said,

When we did not perform well in class our parents are called and asked to take us to another schools or sign a form stating that they want their child to repeat and the student is given a similar form to sign. This leaves us with no option but to repeat suggesting that fees were no longer a big burden as FSE was in place".

This shows that school in the county still make their students repeat despite the government policy that the children should be allowed to proceed to avoid wastage due to high repetition rates in form three and form four. This seems to happen because the schools want their schools to excel as compared to the other schools. This is in agreement with the findings by Musyimi (2011) in Makueni County which revealed that repetition was caused by poor performance and forced repetition.

School levies despite FSE policy was also indicated by all the Director of Studies and largely by the students as a factor influencing repetition. The students believe that it has led to their repetition since every time they are sent home they miss out on syllabus coverage this makes them perform poorly leading to repetition. In fact one of the students during focused group discussion said, "We were always sent home in spite FSE policy being in place to get money during the term and we end up losing a lot in class leading to some of us repeating." School levies is one of the major contributors of repetition. For instance FSE policy caters for only 40.43% of the required levies by the day scholars while parents cater for 59.57%. Parents

with children who are boarders in mixed school cater for 72.60% while government pays 27.40%. For the single sex schools the girls and the boys' schools the government caters for 25.62% and 24.88%, while the parents cater for 74.38% and 75.12% for girls' and boys' schools respectively (Table 4.6). This finding is in agreement with the studies done by ILO (2010) in Kwale District which revealed that one of the reasons which influence repetition was lack of funds.

Indiscipline is also another factor that was indicated largely by all the DQSAOs and Directors of Studies when they were interviewed. They believed that since students were sent home for disciplinary cases especially the boys they missed a lot leading to poor performance and finally repetition. During the students' focus group discussion a student said, "Indiscipline led to repetition since those students who were not disciplined were always sent home because of mistakes and they also lack concentration in class leading to repetition". This is an indication that indiscipline played a role in influencing repetition despite FSE policy being in place.

Students transfer from school to school despite FSE policy, was mentioned by all the DQASOs and Director of studies during the interview that it has also led to repetition. The students also during their focus group discussion mentioned that the students who come from different schools always come and repeat a class in their schools. A DOS explained that, "Some parents kept transferring their children from one school to another and it affected the continuity of the child in terms of syllabus coverage because schools are not at par when it comes to the syllabus coverage". This shows that transfer has an influence on repetition in

secondary schools, because as the students struggle to fit in their new schools some repeat in the process.

Pregnancy and boy/girl relationship was also mentioned as influencing repetition especially in day schools. All the DQASO, groups of students and Director of Studies all mentioned that it has influenced repetition in secondary schools because out of these relationships the girls are the ones who face the consequences. In fact one of the Director of Studies said, "the students who engage in boy/girl relationship always lack concentration in class leading to poor performance. Others get pregnant making most girls drop out and when they get back to school they repeat their former classes". The DQASO and the students gave the same factor as influencing the girls' education more than the boys. This is in agreement with the findings by Musyimi (2011) in Makueni County which revealed that repetition was caused by teenage pregnancies. This is in agreement with the studies done by ILO (2010) in Kwale District which revealed that reasons for reasons which leads to repetition was pregnancies due to weddings and funerals that take long.

Family responsibilities were indicated by all the DQASO, Director of Studies and students during interview and focus group discussion pointed out largely as one of the factors affecting the girls. This makes them absent from school missing out on the syllabus coverage and makes them not perform well in class like their colleagues who are in school the whole time. Due to this most of the girls are forced to repeat to learn what they had missed out. For instance a Director of Studies said,

When a family member is sick especially a parent the girls take up the family responsibilities. The girls are asked to take care of the sick and also

provide for the entire family making them not perform well in school leading to repetition this is common in day schools.

This finding is in agreement with the findings of studies done by ILO (2010) in Kwale District which revealed that reasons which leads to repetition was domestic work which has led them not to perform well in their academic work.

Drug abuse was also mentioned by all the Director of Studies and DQASOs as affecting the students especially the boys and a few girls. This mainly affects the boys' performance in school making them repeat a class because of this poor performance which negates the purpose of FSE policy. The Director of Studies talked of quite a number of boys who were sent home in form three and four because of drug abuse. This explains why the repetition is high in the upper class especially among the boys. In fact one of the Director of Studies in one of the schools said, "I was a class teacher in one of the classes in that cohort and I had students who were struggling with drug abuse and they had not been performing well leading to them repeating." This is in agreement with the findings by Musyimi (2011) in Makueni County which revealed that repetition was caused drug abuse.

Students' attitude towards their studies has influenced repetition in spite of FSE policy due to poor performance in school. This was mentioned by the entire DQASO and Director of Studies during interview. Attitude made the students to hate school, some even their teachers and eventually because of these it led to poor performance and finally repetition despite FSE policy. This came up clearly also during the students focused group discussion. One of the DQASO said,

Attitude influenced both the boys and the girls in secondary schools despite FSE policy whereby they tend to develop a negative attitude towards certain subjects affecting their overall grades hence poor performance leading to repetition. We have always tried to discourage repetition but there are still a number of schools who do it against the regulations.

This is in agreement with the findings by Musyimi (2011) in Makueni County which revealed that repetition was caused students attitude.

Absenteeism was also mentioned by all the Director of Studies and students as one of the factors leading to repetition. This is was common during the beginning of the term whereby some students do not come to school so as to avoid entry examinations. This makes them perform poorly at the end of the term. A director of studies from one of the boys' school said, "in spite of FSE policy the boys did not come to school at the beginning of the term because they had not prepared for the entry exam and this made some of them perform poorly at the end of the year leading to repetition." This shows that there were students who deliberately stayed away from school making them perform poorly. This was due to lack of preparation on the side of the students during their holidays. This is in agreement with the findings by Musyimi (2011) in Makueni County which revealed that repetition was caused by chronic absenteeism. This is in agreement with the studies done by ILO (2010) in Kwale District which revealed that one of the reasons which lead to repetition was absenteeism.

Sickness was also another factor that has led to repetition despite FSE policy being in place. This was mentioned by all the Director of Studies and students during the interview and focus group discussion respectively. They mentioned that there are students who have been sick most days of the term making them miss out on syllabus coverage, with time these students repeat because they are not at par with the rest of the class. This finding concur the study done in western Kenya by Achoka (2007) which revealed that HIV/AIDS influence wastage. This finding is in agreement with the studies done by ILO (2010) in Kwale District

which revealed that reasons which lead to repetition were sickness. The other factors mentioned by some students were lack of school uniform, books and inadequate teachers.

The interview and focus group discussion findings were crucial in this study as they helped to verify the correlation output which indicated that FSE policy had very low influence on repeater rates. Thus they indicated that there were other factors that highly influenced repetition of students. These factors included; students' attitude, sickness, poor academic performance, school policy on academic performance and motor bike business. These factors seem to have had stronger influence than FSE policy on repetition of students.

The finding revealed that FSE policy has very little influence on repeater rate as signified by the correlation of 0.0016. This indicates that these other factors revealed by FSE policy plays a role and proper measures should be put in place to address it.

4.6 Influence of FSE Policy on Secondary School Drop-Out Rates in Kericho County The research question responded to was;

What is the influence of FSE policy on secondary school drop-out rate in Kericho County? To establish the dropout rate in Kericho county data on enrolment for two cohorts 2004 and 2008 that is before and after FSE policy was collected from the school Principals in 40 schools in the county. Dropout by grade and cumulative dropout rate were computed in the county and per school. According to UNESCO (2009 b) cumulative dropout rate in education is calculated by subtracting the survival rate and cumulative cohort repeater rate from 100 at a given level. Survival rate is calculated on the basis of the reconstructed cohort method which uses data on enrolment and repeaters for consecutive years. The data was computed

and presented as in Tables 4.24, 4.25, 4.26, 4.27 and 4.28. The 2004 cohort was treated as a control group.

Table 4.24

Reconstructed Cohort Students Enrolment matrix in Kericho County before

Introduction of FSE Policy (n=40)

Years		Form I	Form II	Form III	Form IV
2004	E	3603			
	R	13			
	N	0			
2005	E	3632	3304		
	R	14	27		
	N	0	352		
2006	E		2926	2800	
	R		30	98	
	N		352	619	
2007	E			2829	2308
	R			89	96
	N			621	647
2008	E				2341
	R				113
	N				509

Key: R; Repeaters N; New Students E; Enrolment

According to UNESCO (2009 b) dropout rate by grade is calculated by subtracting the sum of promotion rate and repetition rate from 100 in the given school year. This dropout rate should ideally approach zero percent if it is high it indicates problems with internal efficiency of education. The formula by UNESCO (2009 b) was used to compute dropout rate in

Kericho County for two cohorts 2004 to 2007 and 2008 and 2011 that is before and after introduction FSE policy. The students enrolled in Form one in 2004 to left form 4 in 2007 were used as a cohort to determine the dropout rate before the introduction of FSE Policy was computed by first calculating the Promotion rate by grade using the following formula.

$$PR_i^t = \frac{NE_{i+1}^{t+1}}{E_i^t}$$

 PR_i^t Promotion Rate at Grade i in school year t.

 NE_{i+1}^{t+1} New entrants to grade i+1, in school year t+1

 E_i^t Number of pupils enrolled in grade i, in the school year t

The next step was to calculate the grade dropout rate and the following formula was adapted where the percentage repeater and those promoted were added together less 100.

Formula

$$DR_i^t = 100 - (PR_i^t + RR_i^t)$$

 DR_i^t Dropout rate at grade i in school year t

 PR_i^t Promotion rate at grade i in school year t

 RR_i^t Repetition rate at grade i in school year t

In this study the formula was applied as follows:

Promotion rates for students for the cohort 2004 to 2007

Between form 1 and 2 (2005) =
$$\frac{3304}{3603}$$
 x 100 = 91.70%

Between form 2 and 3 (2006) =
$$\frac{2800}{3304}$$
 x 100 = 84.75%

Between form 3 and 4 (2007) =
$$\frac{2308}{2800}$$
 x 100 = 82.43%

The next step was to compute grade dropout rate for the students

$$DR_i^t = 100 - (PR_i^t + RR_i^t)$$

Between form 1 and 2 (2005) = 100 - (91.70 + 1.30) = 7%

Between form 2 and 3(2006) = 100 - (84.75 + 3.18) = 12.07%

Between form 3 and 4 (2007) = 100- (82.43 + 4.90) = 12.67%

Cumulative cohort dropout rate in Kericho County was computed using UNESCO (2009 b) formula. That is, cumulative dropout rate in education is calculated by subtracting the survival rate from 100 at a given level. Survival rate is calculated on the basis of the reconstructed cohort method which uses data on enrolment and repeaters for consecutive years (Table 4.28). This was compute to determine the actual cumulative cohort dropout rate in Kericho County and per school before FSE policy. The survival rate was computed using the following formula given by (UNESCO, 2009 b) guideline was then adopted.

$$SR_{g,i}^k = \frac{\sum_{t=1}^m p_{g,i}^t}{E_g^k} * 100$$
 where: $P_{g,i}^t = E_{g,i+1}^{t+1} - R_{g,i+1}^{t+1}$

- *i* grade (1,2,3.....n)
- *t* year (1,2,3.....m)
- g pupil cohort

 $SR_{g,i}^k$ Survival Rate of pupil-cohort g at grade i for a reference year k

 E_q^k Total number of pupils belonging to a cohort g at a reference year k

 $P_{g,i}^t$ Promoters from E_g^k who would join successive grades i throughout successive years t

 R_i^t Number of pupils repeating grade i in school year t

Cumulative dropout rate was computed as follows

Cumulative dropout rate = 100-($SR_{g,i}^k + R_{g,i+1}^{t+1}$)

$$SR_{g,i}^k = \frac{\sum_{t=1}^m p_{g,i}^t}{E_g^k} * 100$$

Where:
$$P_{g,i}^t = E_{g,i+1}^{t+1} - R_{g,i+1}^{t+1}$$

Cohort Survival rate=
$$\frac{2308}{3603}$$
 x $100 = 64.06\%$

Cohort Repeater Rate =
$$\frac{14+30+89+113}{3603}$$
 x $100 = 6.80\%$

Dropout Rate =
$$100 - (64.06 + 6.80)$$

$$= 29.14\%$$

The results were as presented in Table 4.25.

Table 4.25
Students Dropout rate in Kericho County before Introduction of FSE policy (n=40)

Form	Dropout Rates in percentages (%)
1-2	7.00
2-3	12.07
3-4	12.67
County cumulative dropout rate	29.14

Table 4.25 shows the percentage of dropout before the introduction of FSE Policy in 2008. This is a cohort who did not benefit from the FSE policy, they joined form one in 2004 and completed in 2007. Between Form one and two the drop outs were 7.00%, in form two and three they were 12.07% in form three and four they were 12.67%. Kericho County cumulative dropout rate was 29.14%.

Table 4.26
Reconstructed Cohort Students Enrolment matrix in Kericho County after
Introduction of FSE Policy (n=40)

Years		Form I	Form II	Form III	Form IV
2008	E	4615			
	R	13			
	N	0			
2009	${f E}$	4614	4097		
	R	12	106		
	N	0	230		
2010	${f E}$		4098	3420	
	R		123	114	
	N		352	734	
2011	${f E}$			3252	2739
	R			111	134
	N			423	830
2012	${f E}$				2725
	R				136
	N				822

Key: R; Repeaters N; New Students E; Enrolment

Table 4.26 shows the two cohorts that were used to compute dropout rates after FSE policy from 2008 to 2011 to determine the cohort dropout rate in Kericho County. These two cohorts were also used to determine the students who left the system in that cohort. The use of two cohorts allowed the researcher trace the students who left the system since the repeaters were already identified. The formula by UNESCO (2009 b) guideline was used to determine the dropout rates. This study finding was determined using this UNESCO guideline (2009). The students enrolled in Form one in 2008 and completed form 4 in 2011

were used as a cohort to determine the dropout rate before the introduction of FSE Policy was computed by first calculating the Promotion rate by grade using the following formula.

$$PR_i^t = \frac{NE_{i+1}^{t+1}}{E_i^t}$$

 PR_i^t Promotion Rate at Grade *i* in school year *t*.

 NE_{i+1}^{t+1} New entrants to grade i+1, in school year t+1

 E_i^t Number of pupils enrolled in grade i, in the school year t

The next step was to calculate the grade dropout rate and the following formula was adapted where the percentage repeater and those promoted were added together less 100.

Formula

$$DR_i^t = 100 - (PR_i^t + RR_i^t)$$

 DR_i^t Dropout rate at grade i in school year t

 PR_i^t Promotion rate at grade *i* in school year *t*

 RR_i^t Repetition rate at grade i in school year t

In this study the formula was applied as follows:

Promotion Rates for the students for cohort 2008 to 2011

Between Form 1 and
$$2 = \frac{4097}{4615} \times 100 = 88.78\%$$

Between form 2 and
$$3 = \frac{3420}{4097} \times 100 = 83.48\%$$

Between form 3 and
$$4 = \frac{2739}{3420} \times 100 = 80.09\%$$

The next step was to compute grade dropout rate for the students

$$DR_i^t = 100 - (PR_i^t + RR_i^t)$$

Between form 1 and 2 = 100 - (88.78 + 3.26) = 7.96%

Between form 2 and 3 = 100 - (83.48 + 3.25) = 13.27%

Between form 3 and 4 = 100 - (80.09 + 4.97) = 14.94%

Cumulative cohort dropout rate in Kericho County was computed by using UNESCO (2009 b) formula. That is, cumulative dropout rate in education is calculated by subtracting the survival rate plus repeater rate from 100 at a given level. Survival rate is calculated on the basis of the reconstructed cohort method which uses data on enrolment and repeaters for consecutive years (Table 4.31). This was computed to determine the actual cumulative cohort dropout rate in Kericho County and per school before FSE policy. The survival rate was computed using the following formula given by (UNESCO, 2009 b) guideline was then adopted.

$$SR_{g,i}^k = \frac{\sum_{t=1}^m p_{g,i}^t}{E_g^k} * 100$$
 where: $P_{g,i}^t = E_{g,i+1}^{t+1} - R_{g,i+1}^{t+1}$

i grade (1,2,3.....n)

g pupil cohort

 $\mathit{SR}^k_{g,i}$ Survival Rate of pupil-cohort $m{g}$ at grade $m{i}$ for a reference year $m{k}$

 E_q^k Total number of pupils belonging to a cohort g at a reference year k

 $P_{g,i}^t$ Promoters from $\pmb{E_g^k}$ who would join successive grades \pmb{i} throughout successive years \pmb{t}

 R_i^t Number of pupils repeating grade i in school year t

Cumulative dropout rate was computed as follows

Cumulative dropout rate = 100- $(SR_{g,i}^k + R_{g,i+1}^{t+1})$

$$SR_{g,i}^k = \frac{\sum_{t=1}^m p_{g,i}^t}{E_g^k} * 100$$

Where:
$$P_{g,i}^t = E_{g,i+1}^{t+1} - R_{g,i+1}^{t+1}$$

Cohort Survival rate=
$$\frac{2739}{4615}$$
 x $100 = 59.35\%$

Cumulative Cohort Repeater Rate
$$=\frac{12+123+111+136}{4615} \times 100 = 8.28\%$$

Cumulative cohort Dropout Rate = 100- (59.35 + 8.28)

$$= 32.37\%$$

The results were as presented in Table 4.27.

Table 4.27

Students Dropout rate in Kericho County after Introduction of FSE policy (n=40)

Form	Dropout Rates in percentages (%)
1-2	7.96
2-3	13.27
3-4	14.94
County cumulative Dropout rate	32.37

Table 4.27 shows the percentage of dropout after the introduction of FSE Policy in 2008. This is a cohort who benefited from the FSE policy, they joined form one in 2008 and completed in 2011. Between Form one and two the drop outs were 7.96%, in form two and three they were 13.27% in form three and four they were 14.94%. Kericho County cumulative Dropout rate was 32.37%.

Table 4.28

Comparison of the Dropout Rates before and after Introduction of FSE Policy for the students in Kericho County (n=40)

Form	Before FSE in percentages	After FSE in percentages
	(%)	(%)
1-2	7	7.96
2-3	12.07	13.27
3-4	12.67	14.94
County Cumulative	29.14	32.37
dropout rate		

Table 4.28 shows that drop rate before and after FSE policy in Kericho County were as follows: Between form one and two the dropout rate for the students 7% while after FSE it increased to 7.96% while between forms two and three it was 12.07% after FSE increased to 13.27% and between forms three and four it went up from 12.67% to 14.94% after FSE Policy. FSE policy did not reduce the dropout rate for the country as was expected. That is, the 2004 cohort was county cumulative dropout rate was 29.14 whereas that of 2008 cohort was 32.37 being slightly higher than the former. The objectives of FSE policy was to ensure that the students enter secondary schools and complete. This finding shows that after FSE policy the students who dropped out are more than before the introduction of FSE policy in Kericho County. This shows that FSE had little influence on dropout rates in the county.

These findings concurs with the findings by State University (2002 b) as 13.1 % in 2000. It did not concur with that of U.S Department of Education (2011) when it revealed that dropout had declined from 11% to 8% in Kericho County dropout is increasing. It is also concurs with the household survey done in south Africa when it revealed that had increased

to almost 12% in both grades 10 and 11. A study by Comboni Mission Kenya (2012) indicated that 22% of secondary students drop out of secondary school before completing form four. This is higher than the dropout rate in Kericho County. In Zanzibar SACMEQ (2012) showed that dropout rate was 7.3% per annum. This rate was done per annum while the one in the county was done per grade.

Study by SACMEQ on the Kenyan secondary schools showed that dropout rate for girls and boys stood at 20% and 14% in 2007 respectively. This finding differs with that of Kericho County since the study was done on students generally. Musyimi (2011) carried out a study in Kathonzeni district; Makueni County on wastage rates found that dropout rate was high in form 3 and 4. The rate for the boys was 24.1% while for the girls it was 22%. This indicates that the boys are dropping out of school compared to the girls the same way in Kericho County. It does not concurs with the studies carried out by Achoka (2007) in western Kenya which indicated that the dropout rates for Kenya stood at 20% for girls and 14% for boys for this study the boys drop out is higher than that for the girls.

In order to establish the influence of FSE policy on dropout rate for 2008 cohort, data on dropout rate, FSE fund and school levies per school were computed and the results were as shown in Table 4.11. The dropout rate per school after the introduction of FSE policy was computed using UNESCO guideline (2009) was adopted. That is, cumulative dropout rate in education is calculated by subtracting the survival rate from 100 at a given level. Survival rate is calculated on the basis of the reconstructed cohort method which uses data on enrolment and repeaters for consecutive years.

$$PR_i^t = \frac{NE_{i+1}^{t+1}}{E_i^t}$$

 PR_i^t Promotion Rate at Grade *i* in school year *t*.

Cumulative dropout rate per school was computed as follows using the formula given by (UNESCO, 2009 b) guideline was then adopted.

$$SR_{g,i}^k = \frac{\sum_{t=1}^m p_{g,i}^t}{E_g^k} * 100$$
 where: $P_{g,i}^t = E_{g,i+1}^{t+1} - R_{g,i+1}^{t+1}$

i grade (1,2,3.....n)

t year (1,2,3.....m)

g pupil cohort

 $SR_{g,i}^k$ Survival Rate of pupil-cohort g at grade i for a reference year k

 E_g^k Total number of pupils belonging to a cohort g at a reference year k

 $P_{g,i}^t$ Promoters from E_g^k who would join successive grades *i* throughout successive years *t*

 R_i^t Number of pupils repeating grade i in school year t

Cumulative dropout rate was computed as follows

Cumulative dropout rate = 100- $(SR_{g,i}^k + R_{g,i+1}^{t+1})$

$$SR_{g,i}^{k} = \frac{\sum_{t=1}^{m} p_{g,i}^{t}}{E_{g}^{k}} * 100$$

Where: $P_{g,i}^t = E_{g,i+1}^{t+1} - R_{g,i+1}^{t+1}$

Table 4.29

Dropout Rates per School in Kericho County after Introduction of FSE Policy 2008

Cohort (n=40)

Dropout Rate (%)	Frequency (f)	Percentages (%)
0.00-19.99	14	35.50
20.00-39.99	12	30.00
40.00-59.99	12	30.00
60.00-79.99	1	2.5
80.00-99.99	1	2.5

Table 4.29 indicates the dropout rates per schools as indicated by the school Principals in Kericho County. Fourteen (35.00%) of the schools had dropout rates ranging from 0.00 to 19.99. Twelve (30.00%) ranged from 20.00 to 39.99, twelve (30.00%) ranged from 40.00 to 59.99, 60.00 to 79.99 and 80.00 to 99.99 had one (2.5%) school each. The repeater rates per school, FSE fund (Table 4.13), school levies (Table 4.14) and combination of school levies and FSE fund (Table 4.15) was used to correlate. Interpretation was done using Table 3.2.

Table 4.30

Pearson Product Moment Correlation (r) Matrix for FSE fund and Dropout Rate in Kericho County

		Dropout
FSE fund	Pearson Correlation	31
	Sig. (2-tailed)	.05
	N	40
School levies	Pearson Correlation	26
	Sig. (2-tailed)	.10
	N	40
FSE fund and school levies	Pearson Correlation	29
	Sig. (2-tailed)	.07
	N	40

Table 4.30 indicates that the relationship between FSE policy and dropout rates was moderate and negative. The relationship was significant with a coefficient of -.31 at a set p-value of 0.05. According to Elifson, Runyon and Haber (1990) and Leedy and Ormrod (2005) guideline Correlation coefficients (r) interpretation indicated that this was a negative moderate influence. This means that FSE funding accounted for a decrease in dropout rates. Coefficient of determination R^2 is the square of the Pearson r which tells how much of the variance is accounted for by the correlation which is expressed in percentages (Leedy &

Ormrod, 2005). To account for the influence of FSE on dropout rate Pearson's r was therefore squared. The coefficient of determination $R^2 = 0.10$ which meant that FSE accounted for 10% of the variation in dropout rates. School levies which were an intervening variable had a negative weak influence of 0.26. Coefficient of determination $R^2 = 0.07$ which meant that school levies accounted for 7% of the variation in students dropout rates. When school levies were combined together with FSE fund it had a weak negative influence of -0.29. Coefficient of determination $R^2 = 0.08$ which meant that FSE fund and school levies accounted for 8% of the variation in students dropout rates. This means that the mediating effect of school levies on the influence of FSE policy on Dropout rate was 0.02 which translated to 2%. Overall, this means that FSE fund had influenced dropout rates to a small extent while other factors had grant influence of 90%. This influence was relatively too small. The other contributing factors could have been motorbike business, early marriages, personal effects, FGM, poverty and discrimination by the parents as was revealed by interview findings.

Interviews and focused group discussion revealed that FSE policy was not the main factor on retention of students in school. They further explained that FSE fund had little influence on dropout since the students still dropout despite FSE funding. This shows that FSE fund does not take precedence in terms of drop out. During interviews one of the Director of Studies said, "The students opt out of schools and you will always meet them outside the school especially in day schools. In fact there were other factors that influenced dropout rate in Kericho County despite FSE policy being in place". This was an indication and confirmation that there were other factors that worked against FSE policy in Kericho County.

One DQASO during interview said, "students are still dropping out in the county, in fact it is getting worst than before FSE policy was introduced." This shows that FSE policy has not played a big role to influence dropout in Kericho County. The students also agreed that in their classes there were a number of students who dropped out even though FSE policy was in place. There was a student, who said,

Though part of our school fees had been paid by the government through FSE policy, five of our classmates did not complete form four they just left school. Two boys got employed as motorbike operators. While the others where girls and two got married while one become pregnant and never came back.

There other factors or reasons that were mentioned during interview and focused group discussion that really influenced students dropping despite FSE policy being in place were: Economic factor was mentioned by the DQASO as influencing dropout rates in Kericho County particularly tea farming. One of DQASO explained clearly when he stated, "we have children from rich families who are given lot money by the parents and because of these comfort they do not find the need of going to school leading to them dropping out". This has tempted the children to drop out of school because they can easily access the money. This is an indication that some parents are very irresponsible and they do not value their children education.

Poverty was another factor mentioned during focused group discussion and interview that has led to drop out of student secondary schools. This shows that there are students who drop out in Kericho County because of excess money and others because of poverty. During interview the Director of Studies explained that it has led to this drop outs despite FSE policy. In fact one of the Director of Studies said,

We have quite a number of students every year in our schools that are not in a position to continue with their studies because their parents cannot pay the school levies and also provide for them the personal effects. This has made these students give up on their studies making them drop out because they have been sent home constantly to collect levies.

These findings concurs with the study done in western Kenya by Achoka (2007) when it revealed that dropout rates were due to poverty. Onyango (2003) found that in Nyanza province dropout rate for girls was high for girls due to poverty. These findings do not concur with those of this study in of Kericho County since the boys are affected more than the girls.

Cattle's rustling was another factor all the DQASOs explained as affecting the boys seriously in Kericho County secondary schools. These are incidences where the boys go to the neighboring communities to steal cattle and other livestock. In Kenya this is a crime and when these boys are caught by the law they are put in the cells. These have brought problems in the county over the years since the student do not concentrate because of these activities. Because of lack of concentration in class they end up not performing well leading to repetition and eventually drop out. In fact one of the DQASO came out strongly that and stated,

We have a number of students who get involved with cattle rustling and staying in the police cell for long. This has lead to a number of these boys dropping out of school because of such cases. Sometimes we try to rehabilitate them to get back to school, but because of the life style they are used to they find it hard to go back to school. The boys are also traumatized because of detention in the police cell.

These incidences are common in day school towards the bordering communities.

This finding agree with the report given by Comboni Missionaries Kenya (2012) on Turkana Districts where it indicates that cattle rustling has made parents here to retain their children at home because of increase insecurity so that the children can protect the cattle.

Motor bike business was mentioned largely by all the DQASOs, Director of Studies and students. This was emphasized as affecting both the boys and the girls. In fact a Director of Studies explained, "Some students did motor bike business and because of this exposure to money they end dropping out to carry on with the business". There are girls who are also affected by this business. One of the DQASO said, "We always had girls who drop out every term because of pregnancy and early marriages due to the influence of motor bike business men especially in day schools". Indeed girls in are impregnated by the motor bike business operators. This is usually reported in the media and since newspapers are not considered to be authentic, these cases are overlooked by researchers.

School levies was mentioned clearly as contributing to drop out in Kericho County secondary schools. All the 40 Director of Studies during the interview indicated that school levies have influenced the students' drop out in schools both boys and girls despite the FSE policy. The government pays very little through FSE policy compared to what the schools require to provide education comfortably for these children. In fact a Director of Studies said; "some students are sent home continually during the term and the same students are sent throughout the year making them not come back again since they have lost hope". The students also indicated during focus group discussion that school levies they are asked to pay is high and they also have personal effect to be bought for by their parents, this makes them drop out of school and look for early employment to sustain them. This finding concurs with the study done by Juma (2003) which showed drop out was due to lack of school fees and other levies, though this was before FSE policy.

Indiscipline was mentioned by all the DQASOs and they said it mainly affects the boys and not the girls. This was mentioned largely in most schools that it had lead to drop out of the students because when they are sent home most of the time due to indiscipline they tend to give up and drop out. In fact one of the DQASOs said, "We have boys who are always undisciplined in schools and because they are constantly suspended they end up dropping out because they feel they can not fit into the school system". One Director of Studies during the interview said indiscipline was one of the factors that have influenced the students drop out especially the boys in school. Most of the students also mentioned that the cases of indiscipline make some of them not to come back to school. This finding is in agreement with the study carried out in Kathonzeni districts; Makueni County on wastage rates by Musyimi (2011) which revealed that high dropout rates were due to indiscipline.

Peer pressure was one of the factors that were mentioned as influencing the dropout rate in the county. All the DQASOs, Director of Studies and students when they were interviewed mentioned that some students tend to admire students who are not in school and they try emulating them by dropping out to engaging in the various activities they are doing. For instance one of the students said, "Most girls were influenced by their friends to engage in sexual activities and hence making them pregnant hence dropping out of school". This finding is in agreement with the study carried out in Kathonzeni district, Makueni County on wastage rates by Musyimi (2011) which revealed that high dropout rates were due to peer pressure.

Poor performance was another factor mentioned by all the DQASOs, Directors of Studies and groups of students. They mentioned that the students who constantly perform poorly in

schools tend to drop out of school eventually. One of the Director of Studies said, "We have students who repeated more than twice and along the way some of them lost hope and dropped out of school". This finding is in agreement with the study carried out in Kathonzani district; Makueni County on wastage rates by Musyimi (2011) which revealed that dropout rates were due to poor performance.

Family responsibilities and lack of support from their parents were mentioned by most of the DQASOs, Directors of Studies and students during interview and focus group discussion as one of the factors affecting the girls for instance when a family member is sick especially a parent the girls take up the family responsibilities. In fact one of the students said, "The girls are asked to take care of the sick and also provide for the entire family making stay at home, this is common in day schools. By the time they are to go to school they will have lost interest and the rest have moved on they end up repeating and eventually dropping out of school". This finding is in agreement with the study carried out in Kathonzeni district; Makueni County on wastage rates by Musyimi (2011) which revealed that dropout rates were due to poor performance.

Drug abuse was also mentioned by all the Directors of Studies and DQASOs as affecting the students especially the boys and a few girls. This mainly affects the boys' enrolment in school. The teachers talked of quiet a number of boys are sent home in form 3 and 4 because of drug abuse and because of this trend these boys eventually drop out of school. This is in agreement with the dropout rates which are high in form three and four and especially for the

boys. These finding concurs with the study done in western Kenya by Achoka (2007) which revealed that dropout rates were due to drug abuse.

Students' attitude was also mentioned as affecting the student enrolment despite FSE policy. These influences the girls' enrolments especially in some areas where they practice FGM whereby in some places in Kericho County it is practiced and the girl who go are in class 6, 7 and 8. Those who are in their junior classes in secondary school were affected. A Director of Studies said, "When schools open these girls do not want to come back to school because they feel embarrassed of what the rest will say so they opt to drop out".

Boy/girl relationship was also mentioned as influencing the drop out this was because the girls engage in these relationships. The DQASO, the students and Directors of Studies all mentioned that it has influenced parity index in secondary schools because out of these relationships the girls are the ones who face the consequences, they get pregnant and some even get married making most girls drop out of school. The Director of Studies and the students gave the same factor as influencing the girls' education more than the boys.

In fact one of the Director of Studies in a day school said,

This year we have had five girls who were pregnant and unfortunately during our investigations we found that two of them were impregnated by their colleagues in school. These girls carry the burden and their studies are disrupted while their boyfriends continue with their studies.

Pregnancies were also mentioned by the Directors of Studies, DQASO and students as one of the factors that have led to the girls drop out in Kericho County. This problem was mentioned mainly in day mixed secondary schools. These shows that in boarding school the girls tend to concentrate in their studies compared to those in day schools. In fact a student said; "when schools are opening almost every term some students are found pregnant and some of them opt to stay home while others stay in school until they are almost delivering then they drop out of school". This finding concurs with the study done in western Kenya by Achoka which revealed that dropout rates were due to early pregnancies. It is also in agreement with the study carried out in Kathonzeni district, Makueni County on wastage rates by Musyimi (2011) which indicated that dropout rates were due to teenage pregnancies. The findings of this study also concur with the studies by ILO (2010) which revealed that in Kwale District pregnancies led to drop out.

Early marriages were mentioned as the factors that affect the girls mainly and a few boys who decide to get married and drop out of school. This factor was mentioned largely by the Director of Studies during the interview and students during the focus group discussion. The DQASO also come up with the same factor when they were interviewed. In fact one of the DQASOs said, "We are losing girls in this county at a tender age due to early marriages and some parents give out their girls to get married at an early age because of financial problem despite the FSE policy in place". These findings concur with the study done in western Kenya by Achoka (2007) which revealed that dropout rates were due to early marriages. It is also in agreement with the study carried out in Kathonzeni District, Makueni County on wastage rates by Musyimi (2011) which revealed that dropout rates were due to early marriages.

Low self esteem due to menstrual circles largely mentioned as affecting the girl child because of sanitary towels hence leading to their drop out. This was mentioned by the students during the discussion and it was found to be very common in day schools and rural schools. This

indicates clearly that children in day schools and rural schools come from homes where parents struggle financially.

For instance one of the girls said,

Some of my friends drop out of school since they were not able to come to school during their menstrual circles because their parents could not afford to buy for them sanitary towels they ended up missing a lot in school and they could constantly feel embarrassed so they decided not to come back to school at all.

This finding concurs the study done in western Kenya by Achoka (2007) which revealed that dropout rates was due to low self esteem and poverty. Onyango (2003) found that in Nyanza province dropout rate for girls was high for girls due to poverty.

Female Genital Mutilation (FGM) was another factor that has lead to drop among the girls in Kericho County. This is one of the cultural practices the government has stated as illegal but in the county there are people who still practice. This practice has an effect on the girls life and also psychologically. This was explained by the Directors of Studies and one of them stated clearly that, "some girls are still taken for FGM in our school and unfortunately when schools open because of embarrassment these girls end up not coming back opting to get married or just staying at home".

These findings show that the factors leading to students drop out highly especially the girl child were motorbike business, pregnancy, early marriages, relationship, family responsibilities, FGM, fee problem, menstrual circles and attitude. The boys were also dropping out because of indiscipline, absenteeism, performance, motor bike business and drug abuse. FSE launch seem to have concurred with increased use of motor bike business such that the boys drop out of school to do the business. The issue of fee problem shows that

much as the government is paying fees for these children the parents still pay a higher portion for other requirements. This finding indicate clearly that the FSE policy was introduced during a time when motor bike business was also introduced as a mode of transport affecting the students leading to most of them dropping out of schools and increasing education wastage in Kericho County.

The interview and focus group discussion findings were crucial in this study because they helped too understand the correlation output which indicated that FSE policy had a negative moderate influence on dropout rates. Thus they revealed that there were other factors that worked against the influence of FSE policy by accounting for increase in dropout. These factors included cattle rustling, school levies, female genital mutilation, pregnancies, early marriages, initiation in rituals, motor bike business and lack of basic needs.

4.7 Influence of FSE Policy on Wastage Rates in Secondary Schools in Kericho County

The research question responded to was: What is the influence of FSE policy on secondary school education wastage rates in Kericho County?

Wastage rate was computed in Kericho County using the formula by Owolabi (2006) which indicated that wastage rate is the number of student-years they have spent in total calculated and compared with what is theoretically possible. The following formula was given where the optimum input-output ratio in a cycle of 6 years is 6:1. This is a cohort analysis and the following four assumptions are made using this method.

(a) Promotion and repetition rates are held constant throughout the period.

- (b) All the students have the same likelihood of repeating, dropping out or being promoted;
- (c) A class can be repeated 2 times;
- (d) There are no other entrants to the system apart from the original entrance.

The following formula was given where the optimum input-output ratio in a cycle of 6 years is 6:1.

Ideal = Input- output ratio
$$= \frac{Input}{Output} = \frac{6}{1} = 6$$

$$Actual = Input-\ output\ ratio = \frac{Total\ No.of\ student\ years}{Total\ No.of\ graduates}$$

Wastage rate
$$= \frac{\text{Actual Input-Output Ratio}}{\text{Ideal Input-Output Ratio}}$$

This formula was applicable in this study in calculating the wastage rates where the cycle takes 4 years to complete. In Kericho County secondary schools the ideal situation is a cycle of 4 years is 4:1 and the following was adapted.

Ideal = input- output ratio
$$=\frac{Input}{Output} = \frac{4}{1} = 4$$

Actual = input- output ratio =
$$\frac{\text{total no.of student years}}{\text{total no of graduates}}$$

Wastage rate
$$= \frac{\text{Actual Input-Output Ratio}}{\text{Ideal Input-Output Ratio}}$$

In ideal situation the wastage rate is equal to 1. This formula was applicable in this study when calculating the wastage rates. Two cohorts were taken before and after FSE policy so as to trace the repeaters back. The repeaters for 2004 and 2007 cohort was further traced to confirm those who repeater twice, this was traced using the admission numbers to get those students belonging to 2004 and 2007 cohorts only. This was computed and presented in Tables 4.31, 4.32, 4.33, 4.34 and 4.35.

Table 4.31 Students Enrolment and Wastage in Kericho County before Introduction of FSE policy (n=40)

Years		Form I	Form II	Form III	Form IV
2004	E	3603			
	R	13			
	N	0			
2005	${f E}$	3632	3304		
	R	<u>14</u>	27		
	N	0	352		
2006	\mathbf{E}		2926	2800	
	R		30	98	
	N		352	619	
2007	${f E}$			2829	2308
	R			89	96
	N			621	647
2008	${f E}$			-	2341
	R			6	113
	N				509
2009	R				6

Key: R; Repeaters N; New Students E; Enrolment

Table 4.31 shows the students enrolments in Kericho County before FSE policy. The students were traced to the third cohort to establish those students who repeated twice. This was to determine the students who repeated and those who dropped out. The flow was then used to compute the student years and those students who completed so as to compute the wastage rate.

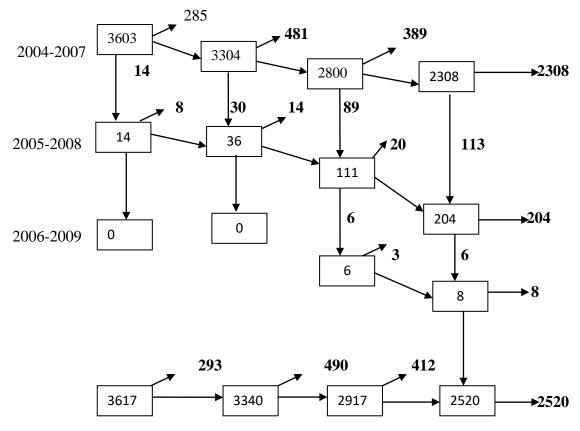


Figure 4.1: Evolution of the students' cohort before FSE policy

The evolution of these students was presented in Figure 4.1 to show the flow of the students. From Figure 4.1, the total inputs as well as the total outputs were calculated. The figures in the boxes are the student inputs in years. All the inputs are therefore summed up. Thus:

Form one	3,603 + 14	= 3617 student years
Form two	3304 + 36	= 3340 students years
Form three	2800 + 111+ 6	= 2917 student years
Form four	2308 + 204 + 8	= 2,520 student years
Totals		= 12,394 students years

The output = 2308 + 204 + 8 = 2,520 successful completers

The cohort flowed through a total of 12394 student years and graduated a total of 2520 students.

Actual = input- output ratio =
$$\frac{\text{Total No.of student years}}{\text{Total No.of graduates}} = \frac{12394}{2520} = 4.92$$

Ideal = input- output ratio = $\frac{\text{Total No.of student years}}{\text{Total No.of graduates}} = \frac{3603 \times 4}{3603} = 4$

Wastage rate = $\frac{\text{Actual Input-Output Ratio}}{\text{Ideal Input-Output Ratio}} = \frac{4.92}{4} = 1.23$

The wastage rate for the students before FSE policy was 1.23 this is an indication that the students took more than four years to graduate.

Table 4.32

Students Enrolment and Wastage in Kericho County after Introduction of FSE policy (n=40)

Years		Form I	Form II	Form III	Form IV
2008	E	4615			
	R	13			
	N	0			
2009	\mathbf{E}	4614	4097		
	R	12	106		
	N	0	230		
2010	${f E}$		4098	3420	
	R		123	114	
	N		352	735	
2011	${f E}$		-	3252	2739
	R		3	111	134
	N			423	830
2012	${f E}$			-	2725
	R			6	136
	N				822
2013	R				4

Key: R; Repeaters N; New Students E; Enrolment

Table 4.32 shows the students enrolled after FSE policy. These students were further traced to the third cohort using their admission numbers to establish those who repeater twice. This was to determine the students who repeated and those who dropped out of the system. The students' years were then computed and the students' years were also computed to get the wastage rate.

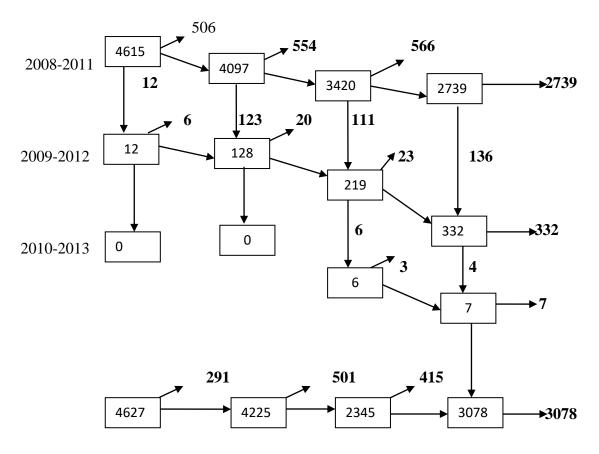


Figure 4.2: Evolution of the Students' Cohort after FSE policy (Figure 4.2)

The evolution of the cohort was then presented in Figure 4.2 to indicate to show the flow of the students. The total inputs as well as the total outputs were calculated. The figures in the boxes are the student inputs in years. All the inputs are therefore summed up. Thus:

Form one	4615 + 12	= 4627 student years
Form two	4097 + 128	= 4225 students years
Form three	3420 + 219+ 6	= 3645 student years
Form four	2739 + 332 + 7	= 3078 student years
Totals		= 15,575 students years

The output = 2739 + 332 + 7 = 3078 successful completers

The cohort flowed through a total of 15,575 student years and graduated a total of 3078 students.

Actual = input- output ratio =
$$\frac{\text{Total No.of student years}}{\text{Total No.of graduates}} = \frac{15575}{3078} = 5.06$$

Ideal = input- output ratio = $\frac{\text{Total No.of student years}}{\text{Total No.of graduates}} = \frac{4615 \text{ x 4}}{4615} = 4$

Wastage rate = $\frac{\text{Actual Input-Output Ratio}}{\text{Ideal Input-Output Ratio}} = \frac{5.06}{4} = 1.27$

The wastage rate for the students before FSE policy was 1.27 this is an indication that the students took more than four years to graduate.

Table 4.33 $\label{table 4.33} Wastage \ Rate \ in \ Kericho \ County \ Secondary \ Schools \ Before \ and \ after \ Introduction \ of \ FSE \ policy \ (n=40)$

Cohort	Wastage Rate		
Before FSE policy	1.23	_	
After FSE policy	1.27		

Table 4.33 indicates the wastage rate in Kericho County before and after FSE policy. Before FSE policy the wastage rate was 1.23 while after it was 1.27. This shows that after FSE policy wastage rate was slightly more by 0.05. This reveals that FSE fund had not reduced

wastage rates in the county. According to World Bank (1980) interpretation this is medium wastage rate and it is a waste of government and individual resources because the students took longer to complete their four cycles and others dropped out without completing. This findings concur with the study done in Nigeria by Adeyemi, (2012) on school variables and internal efficiency of secondary schools in Ondo state where it revealed that wastage rate was 1.17 indicating that students take 7.02 student years to complete against an ideal student years of 6 years. In Kericho County the wastage rate after FSE policy was 1.27 which was worst than before FSE policy, students took 5.06 student years to complete the cycle against the ideal 4 student years. FSE policy objective is to ensure the students entry and successful completion.

From the available data it is clear that FSE policy had little influence on educational wastage against the expectation that it would greatly lower the wastage rate. This is attributed to the fact that students only benefited from the FSE policy, the government subsidy only after meeting the requisite conditions to be in school. That is, personal effects, motivation levies; KCSE examination fees, mock fees, uniform fees, supplementary books levies, PTA projects levies and boarding fees for boarding schools. These study findings concur with the study done in the US by the UNESCO (2008) where it revealed that only about seven in 10 students are actually successfully finishing high school in four years meaning that 70% complete on time while the wastage rate is 30%. It also agrees with the studies done in the US's 50 largest cities where the graduation rate was 52% implying that the wastage rate was 48%. This study also concur with the studies by OECD (2011) where it revealed that Britain had more teenage drop-outs than in most other developed nations when it revealed that

almost one-in-five pupils (20%) currently leave school at 16 before taking A-level style qualifications. This shows that FSE policy has not been able to reduce wastage rate in Kericho County.

In order to establish the influence of FSE policy on wastage rate for 2008 cohort, data on FSE fund, school levies and wastage rates were computed per school and the results were as shown in Tables 4.34, 4.35, 4.36 and 4.37. Wastage rate per school was computed in Kericho County using the formula by Owolabi (2006). The results were as shown in Table 4.34.

Table 4.34

Wastage Rates in Kericho County after Introduction of FSE policy, the 2008 cohort (n=40)

Wastage rate	Frequency (f)	Percentages (%)
1.00-1.49	31	77.5
1.50-1.99	6	15
2.00-2.49	2	5
2.50-2.99	0	0
3.00 -3.99	1	2.5

Table 4.34 indicates the wastage rates in Kericho County after the introduction of FSE policy per school. Thirty one (77.5%) of the schools had their wastage rate below 1.49, six (15%) had wastage rate ranging from 1.50 to 1.99, two (5%) had wastage rate ranging from 2.00 to 2.49. while one (2.5%) of the schools had wastage above 3.00. The repeater rates per school, FSE fund (Table 4.13), school levies (Table 4.14) and combination of school levies and FSE fund (Table 4.15) was used to correlate. Interpretation was done using Table 3.2.

Table 4.35

Pearson Product Moment Correlation (r) Matrix for FSE fund, school levies and Wastage Rate in Kericho County

		Wastage rate
FSE fund	Pearson Correlation	22
	Sig. (2-tailed)	.18
	N	40
School levies	Pearson Correlation	20
	Sig. (2-tailed)	.23
	N	40
FSE fund & School levies	Pearson Correlation	22
	Sig. (2-tailed)	.17
	N	40

Table 4.35 indicates that the relationship between FSE policy and wastage rates was weak and negative with a coefficient of -.22. This relationship was not statistically significant at a set p-value of 0.05. According to Elifson, Runyon and Haber (1990) Leedy & Ormrod, 2005) guideline Correlation coefficients (r) interpretation indicated that this is a weak negative influence. This means that FSE funding accounted for a decrease in wastage rates though the influence was not significant. Coefficient of determination R^2 is the square of Pearson's r which tells how much of the variance is accounted for by the correlation which is expressed in percentages (Leedy & Ormrod, 2005). To account for the influence of FSE on wastage rate Pearson's r was therefore squared. The coefficient of determination $R^2 = 0.05$ meant that FSE accounted for 5% of the variation in wastage rate which was not statistically significant. School levies which were also an intervening variable had a negative weak of -0.20. Coefficient of determination $R^2 = 0.04$ which meant that FSE accounted for 4% of the

variation in students wastage rates. When school levies were combined together with FSE fund, it had a weak negative influence of -0.22. Coefficient of determination $R^2 = 0.05$ which meant that school levies and FSE fund accounted for 5% of the variation in students wastage rate. This means that the mediating effect of school levies on the influence of FSE policy on wastage rate was zero percentage. Therefore the 5% was the real percentage that FSE policy accounted for in the variation of wastage rate and 95% was accounted by other factors. This means that FSE funding had very little influence on wastage rates. Therefore other factors were responsible for wastage rates The other factors could have been motorbike business, pregnancies/early marriages, among others as revealed by the interview findings. During interviews all the DQASOs, Director of Studies and Students focus groups in 40 schools explained that wastage rates in Kericho County is still a problem and resources are not utilized well. In fact one of DQASO said,

FSE policy was introduced in Kenya to reduce wastage rates and improve on equity and access. Unfortunately wastage is still a problem in the county because when we do or receive statistics from schools the students who enroll in Form one either repeat or drop out without completing especially the boys because of indiscipline. The money the government has spent on these students goes to waste and it also makes our education inefficient.

This was an indication that despite FSE policy there other factors could have militated against the influence of FSE policy on wastage in the county and the study revealed the following factors. The factor that was mentioned clearly by all the DQASO and Directors of Studies in the 40 schools when they were interviewed was the issue of motor bike business that has really influenced wastage rate in Kericho County especially among the boys more so in day schools. This is so because FSE policy was started when the motorbike transported also came in place. In fact one of the DQASO said, "The motorbike business has lead to the

students to take longer to complete school in the required time and it has also contributed to students dropping out of school to do business especially the boys. The girls are also misled by these motorbike men and some of them get pregnant and others have gotten married early".

School levies was also mentioned as contributing to wastage in education in the county. This was suggested to have really affected the students in terms of class attendance and performance leading to repetition and finally to drop out. This was mentioned largely by all the Directors of Studies, DQASOs and the students during focus group discussion and interviews in the 40 schools. In fact one of the students stated, "Education is not free the way it is said we are always sent home to get school fees and to buy books especially literature books. Unfortunately some of our friends parents don't have money making them stay longer at home or some of them drop out because they have lost hope". This is an indication that much as the government is paying for tuition to ensure that all the children get access to education there are other levies the parents cater for and they are much higher compared to what the government is a paying. In fact in this respect another student said,

I am one student who took eight years to complete secondary education. This is because my parents could not afford to pay for my school fees. I dropped out in form two to work in the tea farms for three years to raise my school fees. When I came back I repeated form two so as to be relevant with my studies. Some of my classmates have cleared colleges.

This shows that school levies is still a problem despite FSE policy being in place. The amount the parents are expected to pay is high since they have other personal effects to take care of, this makes it difficult for these parents to sustain these children in school. The motor bike business had a lot of influence in education wastage in Kericho County being the current trend in transport. Another Director of Studies added: "FSE fund should be doubled from

10,265/= to 20,530/= this will help reduce the parents' expenses and they will only concentrate in providing the personal effects for the children. This will help to reduce drop out and repetition rates in secondary schools".

Cattle rustling were also mentioned by all the DQASOs and Directors of Studies in the 40 schools during interview. They clearly indicated it had highly contributed to wastage rate in the county since the students' dropout and due to poor performance they repeat classes. In fact one of the DQASOs indicated clearly;

Cattle rustling has influenced education wastage because these boys who are engaged in it in the boarders drop out of school and some when they come back to schools they repeat and some of them repeat twice before they complete their studies. This contributes to waste of resources greatly.

From this finding it is clear that FSE policy had not influenced wastage rate in Kericho County positively. Wastage rate was influenced mainly in this county by the dropout rates and repetition rates due to the influence of other factors that had clearly been mentioned by the DQASOs, Directors of studies and students during Focus group discussion and interviews. The emergence of motorbike business and also the economic situation in the county has contributed to these that is why the school levies paid by the parents is almost similar to what they paid before FSE policy.

4.8 Influence of FSE Policy on Students Academic Achievement in Kericho County

The research question responded to was:

What is the influence of FSE policy on Students Academic Achievements in Kericho County?

To establish the influence of FSE policy on Students Academic Achievement in Kericho County, the following key inputs that determine students' academic achievement were examined before and after the introduction of FSE policy. While trying to establish the influence of FSE policy on students academic achievement it was therefore, necessary to establish the utilization of FSE fund on educational inputs which was part of the package of FSE policy to enhance students' academic achievement. In this respect the study sought to establish the provision of the following inputs: Book Student Ratio (BSR); class size; Student Teacher Ratio (STR); Non Teaching Staff Ratio (NTSR); were investigated as they had a direct bearing on student academic achievement. This helped to explain the influence of FSE policy on students' academic achievement. KCSE mean scores were established to determine the influence of FSE funds on the students' academic achievement. The findings were as show in Tables 4.49 to 4.67 the following items and services were checked since FSE Policy was introduced to cater for the following factors in Kenya. Tuition fees which caters for books and other learning materials, LTT, RMI, EWC, administrative costs, medical and personal emolument. The input was determined by checking on these factors to find out whether there is an influence in students academic achievement after FSE policy. KCSE results before and after was also established to determine whether FSE fund had an influence on students' academic achievement in terms of mean scores. Pearson Product -moment correlation coefficient was computed to establish whether FSE policy had an influence on students' academic achievement in terms of KCSE mean scores. The findings are presented in Tables 4.36 to 4.37.

4.8.2 Book Student Ratio

Accession registers were used to establish the Book student ratio in the schools. The results were as shown in Table 4.36.

Table 4.36

Book Student Ratio (BSR) before and after Introduction of FSE Policy (n=40)

Ratio	Before FS	SE (2007)	After FSE (2011)		
	Frequency	Frequency Percentage		Percentage	
	(f)	(%)	(f)	(%)	
1:2	6	15.00	21	52.50	
1:3	13	32.50	14	35.00	
1:4	14	35.00	5	12.50	
1:5	6	15.00	0	00.00	
1:6	1	02.50	0	00.00	

Table 4.36 indicates the BSR before and after FSE policy in Kericho County. Before FSE policy 6(15.00%) had a BSR of 1:2, thirteen (32.50%) of the schools had a BSR of 1:3, fourteen (35%) of the schools had a BSR of 1:4, while 6 (15.00%) and one (2.50%) of the schools had a BSR of 1:5 and 1:6 respectively. After the introduction of FSE policy the ratio improved; twenty one (52. 50%) of the schools had a BSR of 1:2, while 14 (35.00%) and 5 (12.50%) of the schools had a BSR of 1: 3 and 1:4 respectively. From the findings given in Table 4.50 most of the schools had improved the ratio of text books among the students in Kericho County. This is clear because before FSE policy 27 (67.50%) of the schools had a BSR of 1:3 and 1:4 respectively. After FSE policy 21 (52.50%) of the schools had improved their BSR to 1:2, the other schools 14 (35.00%) and 5 (12.50%) had improved to 1:3 and 1:4 respectively.

The increment in the BSR was due to the ministry of education policy on the use of FSE funds that funds allocated for text books should never be put on any other use and must be accounted for to the letter. Indeed principals purchase books according to the MOE guidelines with an aim or reaching the recommended ratio of 1:1. Nevertheless this target had not been met in most schools due to factors like student transfers, theft and destruction of text books. The unprofessional conduct of librarians by failing to adhere book borrowing procedures a number of books are lost, furthermore most schools were found to have book stores rather than libraries and as such the wear and tear of books was rather high and increased the BSR accordingly. This in effect affects the students' academic achievement because most students would not make the best use of text books acquired through FSE funds. This however is the case in schools which do not have well managed libraries and book stores.

4.8.3 Book Student Ratios according to Subjects before and after Introduction of FSE Policy

The study used accession registers, inventories and ledgers to establish the BSR according to subjects. The results were as shown in Tables 4.37, 4.38, 4.39 and 4.40.

Table 4.37

Book Student Ratio in Mathematics and Science Subjects before and after Introduction of FSE Policy in Kericho County in 2007 and 2011(n=40)

Ratio	o Mathematics		Biology		Chemistry		Physics	
	B (%)	A (%)	B (%)	A (%)	B (%)	A (%)	B (%)	A (%)
1:1	00(00)	10(25)	00(00)	3(7.5)	00(00)	1(2.5)	00(00)	3(7.5)
1:2	13(32.5)	23(57.5)	12(30)	22(55)	7(17.5)	21(52.5)	10(25)	25(62.5)
1:3	16(40)	7(17.5)	12(30)	15(37.5)	14(35)	12(30)	13(32.5)	12(30)
1:4	10(25)	00(00)	15(37.5)	00(00)	18(45)	15(37.5)	17(42.5)	00(00)
1:5	1(2.5)	00(00)	1(2.5)	00(00)	1(2.5)	00(00)	00(00)	00(00)
Totals	40(100)	40(100)	40(100)	40(100)	40(100)	40(100)	40(100)	40(100)

Key: B: Before FSE policy A: After FSE policy

Table 4.37 indicates book student ratio (BSR) in mathematics, Biology, Chemistry and physics before and after introduction of FSE policy in Kericho County. In mathematics 13 (32.5%) of the schools had BSR of 1:2, while 16 (40%) had a BSR of 1:3, ten (25%) and one (2.5%) had their BSR of 1:4 and 1:5 respectively. After the introduction of FSE policy most schools improved in BSR in mathematics whereby 10 (25%) of the schools had a ratio of 1:1 while 23 (57.50%) of the schools had their book ratio of 1:2 and 7 (17.50%) of the schools had a BSR of 1:3. This was a big improvement in the BSR in mathematics as this shows that FSE had improved the text books in mathematics. Mathematics as a subject calls for individualized instruction as it is intensive exercise oriented. This means that the BSR should be 1:1. This enables the students to carry out exercises on mathematical problem solving and with practice the student masters the skills in mathematical problem solving independently. It also enables the teacher to freely give assignments to students which can be done during

class time and after. With this approach the performance in mathematics is likely to improve which translate to quality education in mathematics. This finding concurs with the interview findings in which Director of Studies acknowledged that performance in mathematics had improved with introduction of FSE policy. For instance one Directors of Studies stated, "In our school it is only after FSE that students started to obtain mean grades of A's and A minus even though we have not reached the target mean grade in most classes but it has improved. This was evident with the first cohort of students who benefitted from the FSE policy". These findings also concur with those of UNESCO (2012) whereby in Niger, Benin and Rwanda the mathematics BSR was 1:1 and corresponded with improvement in performance.

In Biology the trend was the same as in mathematics whereby before FSE policy, 12 (30%) of the schools had their BSR of 1:2, while another 12 (30%) had a BSR of 1:3, fifteen (37.50%) and one (2.5%) of the schools had their BSR of 1:4 and 1:5 respectively. After the introduction of FSE policy the BSR in these schools improved as 3 (7.5%) of the schools had BSR of 1:1 while 22 (55%) and 15 (37.5%) of the schools had BSR of 1:2 and 1:3 respectively. With improvement in BSR the students' academic achievement was bound to improve this is because students would have adequate reading materials in biology and the teachers could find it easy to facilitate the learning. This finding is corroborated by interview findings and focused group discussion in which all the Directors of Studies, the DQASOs and all the groups of students were of the view that improvement in BSR had led to improvement in performance of Biology in national examinations for the first cohort who benefitted from FSE policy. In this respect, one of the students said, "Our biology mean score

improved steadily and it was resulted in good scores in KCSE this was due to adequate recommended text books in Biology which the school bought for us".

In chemistry before the introduction of FSE policy 7 (17.70%) and 14 (35%) of the schools had a BSR of 1:2 and 1:3 respectively, while 18 (45.00 %) and one (2.50%) of the schools in the county had a BSR of 1:4 and 1:5 respectively. After the introduction of FSE policy most schools improved in BSR in Chemistry whereby one (2.5%) of the schools had BSR of 1:1 while 21 (52.5%) and 12 (30%) of the schools had BSR of 1:2 and 1:3 respectively. There were also 15 (37.5%) of the schools having their book ratio at 1:4. This was moderate improvement in BSR as a number of schools still had a BSR of 1:3 and even 1:4. This could be one of the reasons why performance in chemistry has not improved so much over the years. The low improvement in performance was however attributed to students' attitude by all the Directors of Studies during interviews. This was acknowledged by one of the Directors of Studies when he stated, "though chemistry is an elective subject, most schools had made it compulsory forcing students to take it who would have otherwise not, therefore the BSR is a non - issue because books are actually available for students use".

In Physics it was as follows; ten (25%) of the schools had their BSR at 1:2, while another 13 (32.50%) had a BSR of 1:3 and 17 (42.50%) had a BSR of 1:4. After the introduction of FSE policy the schools improved their BSR in the following way 3 (7.5%) of the schools had improved to 1:1, while 25 (62.50%) improved to 1:2 and 12 (30%) to 1:3. This was a big improvement in this subject and all the respondents supported these findings. In fact one of the DQASOs said, "Physics is one of the subjects that have been improving steadily over the

years in the county after the introduction of FSE policy". This shows that FSE policy had contributed to the improvement of this subject in the county.

Table 4.38

Ratio of Language Text books before and after Introduction of FSE policy in Kericho County (n=40)

Ratio	English		Kisw	ahili	French	
	B (%)	A (%)	B (%)	A (%)	B (%)	A (%)
1:1	00(00)	7(17.5)	00(00)	10(25)	0(00)	6(60)
1:2	11(27.5)	25(62.5)	13(32.5)	17(42.5)	2(100)	2(20)
1:3	22(55)	7(17.5)	20(50)	13(32.5)	0(00)	2(20)
1:4	7(17.5)	1(2.5)	7(17.5)	00	0(00)	00(00)
Totals	40(100)	40(100)	40(100)	40(100)	2(100)	10(100)

Key B: Before FSE policy

A: After FSE policy

Table 4.38 indicates BSR in languages this included English, Kiswahili and French before and after introduction of FSE policy in Kericho County. In English 11 (27.50%) of the schools had a BSR of 1:2, while 22 (55%) had a BSR of 1:3 and 7 (17.50%) of the schools had a BSR of 1:4. After the introduction of FSE policy most schools improved in BSR in mathematics whereby 7 (17.50%) of the schools had a BSR of 1:1 while 25 (62.50%) of the schools had their BSR of 1:2, another 7 (17.5%) and one (2.5%) of the schools had a BSR of 1:3 and 1:4 respectively. This was a big improvement in the BSR in English. Therefore this shows that FSE had improved the reading materials in English. Since English is a core subject because the other subjects are coordinated in English; if the students understand it well they will be in a position to understand the other subjects well leading to good overall performance. Since it involves a lot of Exercises which require the students to do it is very good now since 32 (80%) of the schools had a ratio of 1:1 and 1:2. This finding concurred

with the interview findings in which all the Director of Studies acknowledged that performance in English had improved with introduction of FSE. For instance one Director of Studies said, "In our school English did well after FSE policy this indicates that the more the reading materials the better the subject and unlike before FSE policy we get the books on time".

In Kiswahili the trend was the same as that of English before FSE policy, 13 (32.50%) of the schools had a BSR of 1:2, while 20 (50%) and 7 (7.5%) of the schools had a BSR of 1:3 and 1:4 respectively. After the introduction of FSE policy the BSR in these schools improved as 10 (25%) of the schools had BSR of 1:1 while 17 (42.50%) and 13 (32.50%) of the schools had BSR of 1:2 and 1:3 respectively. This was good because Kiswahili is one of the compulsory subjects in the Kenyan education system and since it is not an elective when it is improved it boost the overall grade for the student and the entire school. It is also exercise oriented which is good for this subject because 27 (67.50%) of the schools had a BSR of 1:1 and 1:2. This was also a good improvement in terms of quality of education as was revealed by interview findings and focused group discussion. All the Director of studies, DQASO and students focus groups during interview and focused group discussion indicated that improvement in BSR had led to improvement in performance of Kiswahili in their internal examination and national examinations. In fact one of the DQASO said, "Our schools really improved in the mocks in these subjects and even in the national examination after the introduction of FSE policy in 2008. The results for the first cohort were really good".

In French before the introduction of FSE policy 2 schools were taking French and had a BSR of 1:2. After the introduction of FSE policy most schools improved in BSR 6 (60%) of which

had attained a BSR ratio of 1:1, two (20%) of the schools had a BSR of 1:2 while 2 (20%) had a BSR of 1:3. French being a language it is also exercise oriented and it very important when the books is adequate and the number of students sharing should be at least 1:1 or 1:2. These will enhance the performance in this subject and also if the students do well it will open up more careers for them. This could be one of the reasons why performance in French has been very good as confirmed by all the students groups, Director of Studies and DQASO during interview findings and focused group discussion. However one of the Director of Studies commented that "Though French is one of the elective subjects the students who do it did very well after the introduction of FSE policy".

Table 4.39

Ratio of Humanities Text books before and after Introduction of FSE policy in Kericho

County (n=40)

Ratio	CRE		Geog	raphy	History		
•	B (%)	A (%)	B (%)	A (%)	B (%)	A (%)	
1:1	00(00)	4(10)	00(00)	10(25)	00	3(7.5)	
1:2	13(32.5)	25(62.5)	13(32.5)	23(57.5)	12(30)	27(67.5)	
1:3	13(32.5)	11(27.5)	17(42.5)	7(17.5)	12(30)	10(25)	
1:4	13(32.5)	00(00)	7(17.5)	00(00)	15(37.5)	00(00)	
1:5	1(2.5)	00(00)	00(00)	00(00)	1(2.5)	00(00)	
Total	40(100)	40(100)	40(100)	40(100)	40(100)	40(100)	

Key B: Before FSE policy **A**: After FSE policy

Table 4.39 indicates BSR in CRE, Geography and History before and after introduction of FSE policy in Kericho County. For CRE 13 (32.5%) of the schools had a BSR of 1:2, 13 (32.5%) of the schools had a BSR of 1:3. Thirteen (32.5%) and one (2.5%) of the schools had a BSR of 1:4 and 1:5 respectively. After the introduction of FSE policy most schools

improved in BSR in CRE 4 (10%) of the schools had attained a BSR of 1:1, the schools who had improved their BSR to 1:2 were 25 (62.5%) while 11 (27.5%) of the schools had a BSR of 1:3. This was a big improvement in CRE this shows that FSE had improved the reading books in CRE to a reasonable number for most students to read. With this improvement performance also in this subject is likely to improve. This finding concurred with the interview findings in which all Directors of Studies, DQASOs and groups of Students acknowledged that performance in CRE had equally improved with introduction of FSE policy during interview findings and focused group discussions. For instance one Director of Studies said, "In our school since 2008 the results of CRE have been good we even have mean grades of A's and A minus. The 2008 cohort did very well in this exam in KCSE". There also a student who strongly said, "CRE in our school performed well even though we were in a day school. This is because the text books were readily available since we shared 1:2 making the class comfortable to do the required work in the subject".

In Geography the trend was the same as CRE since before FSE policy there was no school with a ratio of 1:1, thirteen (32.50%) schools had a BSR of 1:2, while 17 (42.50%) and 7 (17.50%) had a BSR of 1:3 and 1:4 respectively. After the introduction of FSE policy, the BSR in these schools improved as follows; ten (25%) of the schools had BSR of 1:1 while 23 (57.50%) and 7 (17.50%) of the schools had a BSR of 1:2 and 1:3 respectively. This was a good improvement in this subject since it also requires a lot exercises due to map reading and understanding Geographical features. With such kind of improvement in reading materials it is likely that the subject will perform better that before FSE policy. This was also a good improvement in terms of quality of education and general improvement in the County. This

was supported by the all DQASOs, Directors of Studies and students during interviews and focus group discussions. It revealed that the performance in Geography has been slowly picking unlike the other subjects. It was further revealed that Geography was not well performed general and performance has not been steady though there is slight improvement despite FSE policy being in place. In this respect one of the students said,

Our Geography means scores was not good though there was a slight improvement compared to other subjects because of the students' attitude. This is because students found map work and Geographical features very difficult to understand. This led to many students selecting CRE and History instead of Geography.

History is also a humanity subject and before the introduction of FSE policy 12 (30%) had a BSR of 1:2, twelve (30%) of the schools had a BSR 1:3 While 15 (37.50%) and one (2.5%) of the schools had a BSR of 1:4 and 1:5 respectively. After the introduction of FSE policy most schools improved in BSR in History whereby 3 (7.5%) of the schools had BSR of 1:1 while 27 (67.5%) and 10 (25%) of the schools had BSR of 1:2 and 1:3 respectively. This was good improvement in BSR since 30 (75%) of the schools had a BSR of 1:1 and 1:2. The subject requires intensive reading since it is wide and involving. With improvement in reading materials in this subject it is likely to improvement because the students have enough reading materials to use. It also involves getting in touch with current issues like the constitution which is accessed easily now by all schools. This could be one of the reasons why performances in History had improved over the years as indicated by the all DQASOs, Directors of Studies and students during interview and focus group discussion. In fact one of the Director of Studies acknowledged that, "History has been performing well in our school since the introduction of FSE policy since most of the students now can access all the relevant and current reading materials required".

Table 4.40
Ratio of Technical Text books before and after Introduction of FSE policy in Kericho County (n=40)

Ratio	B/Studies		Agriculture		Computer		H/Science	
	B (%)	A (%)	B (%)	A (%)	B (%)	A (%)	B (%)	A (%)
1:1	4(10)	7(17.50)	3(7.5)	11(27.5)	00(00)	3(21.43)	00(00)	6(50)
1:2	14(56)	23(57.5)	17(42.5)	25(62.5)	00(00)	10(71.43)	8(66.67)	6(50)
1:3	18(45)	10(25)	10(25)	4(10)	00(00)	1(7.14)	4(33.33)	00(00)
1:4	4(10)	00(00)	10(25)	00(00)	00(00)	00(00)	00(00)	00(00)
1:5	00(00)	00(00)	00(00)	00(00)	00(00)	00(00)	00(00)	00(00)
Total	40(100)	40(100)	40(100)	40(100)	00(00)	14(100)	12(100)	12(100)

Key B: Before FSE policy A: After FSE policy

Table 4.40 indicates BSR in Technical subjects Business Studies, agriculture, Computer and Home Science. Starting with Business studies 4 (10.00%) of the schools had a BSR of 1:2, while 14(56%) of the schools had BSR of 1:3. Eighteen (45%) and 4 (10%) of the schools had a BSR of 1:3 and 1:4 respectively. After the introduction of FSE policy most schools improved in BSR 7 (17.5%) of the schools had attained a BSR of 1:1, the schools who had a BSR of 1:2 were 23 (57.5%) while 10 (25%) of the schools had improved to 1:3. This was a big improvement in the BSR in B/studies this shows that FSE fund had improved the reading materials in this subject. B/studies being and elective subject has a lot of calculations in Economics and accounting, it is very good when BSR is low like the case after FSE policy. The students therefore will be able to do enough reading and exercises because they have books to use leading to good performance in the subject. This finding concurred with the interview findings in which all the Directors of Studies and groups of students acknowledged that performance in B/studies have equally improved with introduction of FSE policy. All the DQASOs were also in agreement with these. For instance one DQASO said,

Business studies have been doing very well in our County especially after the introduction of FSE policy we rewarded severally schools and teachers because of the A and A minus they had produced in this subject because of good results in national examination.

In agriculture the trend indicated that before FSE policy, 3 (7.50%) of the schools had a BSR of 1:1, seventeen (42.50%) of the schools had a BSR of 1:2 while 10 (25.00%) and another 10 (25.00%) of the schools had a BSR of 1:3 and 1:4 respectively. After the introduction of FSE policy, the BSR in these schools improved as follows; eleven (27.50%) of the schools had attained a BSR of 1:1 while 25 (62.5%) and 4 (10%) had a BSR of 1:2 and 1:3. This was also a good improvement in terms of BSR in these schools. Agriculture also being an elect and more of a booster subject requires a student to perform very well. With the trend in improved text books the quality of education will improve in terms of performance. This revealed improved quality of education was confirmed during interviews and focus group discussion by all the Directors of Studies, DQASOs and the groups of students. In fact one of the students said.

I was an Agriculture student and we had enough books for reading which made us did well in the subject in most examinations we have been doing in class. Most of our school mates who did their KCSE did very well in the subject.

Computer was not offered before FSE policy in Kericho County. After the introduction of FSE policy the schools that introduced computer studies in Kericho County were ten. Three schools (21.43%) had BSR of 1:1 while 10 schools (71.43%) had BSR of 1:2 and one school (7.14%) had BSR of 1:3. This subject is one of the current subjects in the curriculum of secondary schools. This subject is very relevant when it comes improving in current trend worldwide in information communication technology (ICT). This will boost the students and will make them be at bar with the rest of the world in terms of ICT which is more of a

requirement that one should be computer literate. This was good improvement in BSR since most schools have a BSR of 1:1 and 1:2. During interview and focus group discussion with the all Directors of Studies, DQASOs and groups students they indicated that the subject has enough books but the practical part is the problem because of the machines required. In fact one of the DQASO said,

Most schools who have computer studies do not maintain their machines and some even do not have alternative source of energy like generators so that in case of an emergency especially during examination they should continue, unfortunately students have been going through difficult times especially during national examination leading to the subject not doing very well.

In Home Science it was also different from the other subjects since it was only 12 schools that were doing the subject, before FSE policy 8 (66.67%) of the schools had a BSR of 1:2, while 4 (33.33%) had a BSR of 1:3. After the introduction of FSE policy 6 (50%) of schools attained a BSR of 1:1 while 6 (50%) had a BSR of 1:2. Home science as one of the technical subjects is meant to make the students self reliant after completion of their secondary education since it involves textile, catering among others. This subject is also taken as one of the science for visually impaired students in the integrated schools in the County. If this subject is supported well in terms of reading and learning materials it is going to yield good results especially for the visually impaired. The Interview and focus group discussion supported these findings when it was revealed that the subject has been performing very well. In fact one of the Director of Studies in an integrated school said,

The subject has been boosting the grades of the visually challenged students since they take it as a science subject and they have been doing well especially after introduction of FSE policy. This has made books readily available and other reading and learning materials in this subject for these students which in the past was not easily available.

4.8.4 Influence of FSE Policy on provision of other Tuition Materials

FSE fund caters for other tuition materials in the schools. According to MOE, (2008) Kshs. 3,600/= caters for tuition materials per student in a year and it is meant for text books exercise books and other teaching and learning materials like chemicals in laboratories, equipment and exercise books. The Director of Studies was interviewed on these issues of tuition and they confirmed when they gave the following information;

The supply of exercise books was said to be good and received in good time as compared to before this was confirmed by all the Directors of studies. The Director of Studies in one of the schools confirmed that, "the students were supplied with the exercise books when they require. This improved in learning in the schools and no student was sent home because of lack of exercise books".

Laboratory equipment, chemicals and material was clearly mentioned that the supply was good and the practical are done regularly by all the classes who do science subjects. This will improve the performance in science subjects. But most of the Directors of Studies indicated that the practical's are at times skipped in some lesson because of the number of students. Observation revealed that laboratories were also found in all the schools used in the study and well equipped though 5 (12.50%) of the schools had very small laboratories. This finding is in agreement with the report by Kenya Education Partnerships (2010). When it indicated that Science practical examinations are a mandatory component of the national examinations, yet many students only have the opportunity to watch experiments prior to their examinations, and may never have conducted any themselves due to lack of usable equipment or furnished laboratories.

The library and book stores are very important facility in a school. The Director of Studies during the interview were also asked about the Library books and they confirmed that there is enough relevant and reference reading books in the library. They further explained that the maintenance was well done. This has made the schools improve in their performance and also ensure the students get wide knowledge. In fact one of the Director of Studies said, "FSE policy have done much in our school a part from the newspapers we use to get in the school before FSE policy we are now able to get more magazines and other revision books for our students to use". Observation revealed that 19 (47.50%) of the schools had well equipped libraries while 21 (52.50%) use books stores to keep text books and new exercise books. The schools with libraries have librarians while the ones with stores were using store keepers or clerks. The schools with libraries were organized and neat while those with stores were not well arranged and maintenance was not done well.

The issue of internal examination was also mentioned clearly by all the Directors of Studies that it is done well. This is one of the areas FSE policy caters for and the schools have improved in it. A Director of Studies from one of the day schools said,

Nowadays we do three quality papers in a term, we have entry, midterm and end term exams so as to evaluate our students well. This in return has boosted our students' confidence and performance in our school during the mocks and national examination.

Chalk was mentioned by all the Directors of Studies that it is well catered for by the school, chalk being one of the requirements offered by the FSE policy shows that the schools benefits from this policy. There was a Director of Studies, who said,

The quality of chalk we use these days is good and the supply is very steady especially after the introduction of FSE policy. For my case I am allergic towards dust and the current type of chalk has saved me for the problem I used to go through.

Photocopy materials was another thing which was important for learning in school to take place smooth. This is because they are used to reproduce examinations and other documents. The Directors of Studies were further asked about photocopy materials and most of them explained that it was not provided and if at all it was provided it was insufficient, one of the Director of Studies said,

The form one students are asked when being admitted to buy two reams of photocopy papers each as one of the requirements when they are admitted to the school. When they do not come with it they are sent back home to buy them.

With this information from the Directors of Studies it shows that photocopy materials are still insufficient in the schools despite the introduction of FSE policy. This has made the school tax the parents on the provision of these materials. The information given is an indication that FSE Policy has led to the improvement of these facilities in Kericho County. This shows that the schools do not struggle to ask the parents to pay for tuition fees for the students since the government fully pays for it except photocopy materials which parents purchase. This is a clear indication that it will eventually have an impact on the quality of education.

4.8.5 Influence of FSE policy on Repairs, Maintenance and Improvement of Physical Facilities in Secondary Schools

The amount of money that goes to Repair Maintenance and improvement (RMI) is Kshs. 400/= per student in a year (MOE, 2008). The DQASOs, Directors of Studies and students during the interview and focused group discussion were asked whether FSE policy has influenced RMI and the following were the findings;

The Directors of Studies were asked about the condition of the chairs and desks in the school some of them indicated that the repair and maintenance of the teachers' furniture were done

well and in good time. With the lockers the Directors of Studies explained that it was well taken care of except a few of them who said that in their schools it was not done well. The chairs used by the students in the classroom were well maintained as explained by the Director of Studies though the students said that it was not well maintained. There were other Directors of Studies who were not in agreement with these issues and also their students. In fact one of the students said, "The chairs were always broken in our class and when the form ones arrive they always stand in class for almost a month before they get chairs and desks since there are no chairs and lockers to use". Observation revealed that 33 (82.5%) of the schools have their desk and chairs well taken care, good in terms of quality and adequate for the students, while 7(17.5%) schools that had not maintained nor repaired some of the furniture.

The Classrooms are some of the areas the FSE policy takes care of it in terms of repair, maintenance and improvement since this where students learn. The Directors of Studies were asked about these and some of them said that it done well by the school while others indicated that in their schools RMI was not done well and the classrooms were in a very bad condition. There was a student who said, "In our classroom we had a hanging ceiling board and broken windows such that at night we really felt very cold." Observation was done and it revealed that 35 (87.5%) of the schools have their classroom well maintained, equipped and suitable for the learners. There were 5 (12.5%) of the schools however had broken doors, windows, poor lighting in the classroom and dirty walls that require painting.

Laboratories are used for the learners to do their science and other practice. Repair,

Maintenance and improvement of these Laboratories is also catered for by RMI vote head

and the Directors of Studies in these 40 schools were interviewed concerning these and some of them mentioned that it was well done at least to the level that the students can use comfortable. However, others of them revealed that in their schools their school laboratories were not done well. In fact one of them said, "The laboratories in our school are leaking and the students at times are flooded making learning very difficult for the students".

Observation revealed that 36 (90%) of the school had their laboratories well maintained and improved, even though some laboratories are very small. There were 4 (10%) schools which had a challenge in this area since the taps were leaking, the doors could not be locked properly and they missing other basics required in the laboratory like black curtains.

For the schools doing computers studies maintenance was done well in all the 20 (100%) schools. From the 20 schools 14 (70%) of the schools have acquired generators to substitute electricity in the event of black out while 6 (30%) of the schools still relied on electricity without any back up power. The library and book stores is another area FSE policy catered for in a school since this is one of the areas the students do their personal reading and get their references. The Director of Studies were then interviewed and the students during focus group discussions concerning the RMI of these building and most of them said that at least it was done well and they were able to use it comfortably. A Director of Studies in one of the day schools said, "We do not have libraries what we are using is a small store for books all these years". There was another Director of Studies who said, "The library in our school is well maintained, a reasonable size for our students and well stocked".

Observation revealed that only 19 (47.5%) of the schools had their libraries well maintained and well arranged for easy accessibility of the books. The other 15 (37.5%) have very small

libraries used only to store books to issue the students. The other 6 (15%) schools use to have good libraries but it is no longer functional hence it has been converted into stores. The students here just borrow books and read in the class rooms but not read there.

Maintenance of offices is a vote head meant to maintain the administration and other offices in the schools. Most of the Director of Studies mentioned that the maintenance is done regularly, but there was also quite a number of Directors of Studies in schools who mentioned that maintenances of offices was not well done in their schools. In fact some of the Directors of Studies in some schools felt that their offices were highly neglected. In fact one of them explained clearly that, "my office has always been neglected even small things like replacing a bulb takes a very long time to be done inconveniencing my work which is very demanding".

Observation revealed that repairs, maintenance and improvement of the offices and staffrooms were done well in 21 (52.5%) of the schools while 19 (47.5%) of the schools have not done proper maintenance. Some have bulbs that have not been replaced, hanging ceilings and the cleanliness was not done well. This is an indication that the facilities used by students for learning are well provided basing on these findings by the Directors of Studies. This indicates that students' academic achievement in Kericho County improved as evident by improved teaching/learning facilities after the introduction of FSE Policy. These findings concur with the findings by Muchiri (2012) and Muindi (2012) whereby they found that FSE has impacted negatively on classroom and desks.

4.8.6 Influence of FSE Policy on the provision of Water and Electricity in Secondary Schools

FSE policy pays Kshs. 500/= per child for electricity water and conservancy (MOE, 2008). The Director of Studies were interviewed on the provision of these services and the following were the responses; Water is one of the most essential things in any society and for a schools' activities to be carried well it has to be provided. The interview findings and focus group discussion revealed that water is now regularly supplied after FSE policy except in a few schools where the Directors of Studies mentioned that it was not regular in their schools. The Directors of Studies in one of the schools said," most of the time when it is not raining our students goes to the river for water and to do their laundry, this makes them waste a lot of time especially during week days when they are supposed to be in class". Some of the Director of Studies and students groups in some schools mentioned that their school do not have water problem. In fact one of the students said, "We use to go to the river before FSE policy but now a days the school decided to store water for us in a big tank". This shows that with water missing in school learning is disrupted in the schools and for the schools with constant water they learn without disruption. Observation revealed that all the schools have tap water. There were some of the schools had alternative sources of water to substitute some of them store rain water and others channel from the nearest rivers. However other of them still rely on tap water with storage of the same water in their tanks.

Electricity is a source of lighting, used for document reproduction and so many other services in the school this is important that is why FSE policy caters for the services. The Director of Studies was asked about these and most of them mentioned that it was provided adequately.

They further explained that they do not have a big problem when it comes to lighting. In fact 15(37.5%) case of any electricity disruptions most of the schools have generators for emergency. There were a few schools without electricity but the Director of Studies and students mentioned that they are provided by the schools with other means of lighting. In fact one of the students explained that, "we have a generator which was bought six years ago and we do not have a problem during preps". This shows that FSE has catered for lighting in the schools in Kericho County.

Observation revealed that lighting in all schools was there and there were schools that had generators especially those doing computer studies as a subject. There were 14 (35%) of the schools who had generators while 26 (65%) did not have. The above findings indicate that FSE policy has ensured that provision of electricity; water and other sources of lighting have been provided well by most of the schools. This has led to the improvement of quality in education in these schools.

4.8.7 Influence of FSE Policy on the provision of the co-curricular Activities and Medical services

Access to educational tours is also taken care of by the FSE policy out of the Kshs. 10, 265/= per students Kshs. 400/= caters for local travel and transport (MOE, 2008). These tours are meant to help students understand what they have been learning in class. When the Director of Studies were interviewed on the provision of these services some of them agreed that their students go for educational tours unlike before while others indicated that clearly that their students do not go for educational tours unless they have paid the money themselves. In fact one of the Director of Studies said, "This money is not sufficient to take the students on tours, since before we take our students out we are given little money and the students pay

some amount to be able to finance the tour." This shows that there are some schools that do not provide well for the service they are required to give.

Sports and other activities are there to help the learners develop their talents and grow up as a whole rounded person. The government gives Kshs. 600/= per child in a year to cater for this (MOE, 2008). When the Director of Studies were interviewed concerning the provision of these services most of them mentioned that they are well provided by the schools. Most of the Director of Studies mentioned that their students do participate in sports, music festivals, drama and any activity they are suppose to take part in, though there were a few number of Director of Studies who feel that these activities was not sponsored to the fullest by the schools. In fact one of them said, "We allow our students to go for sports and other activities but at times they are not allowed to go for other activities since the schools lack funds".

The other service catered by the FSE policy was medical services for the students. Kshs. 300/= is paid by the government towards this service (MOE, 2008). The Director of Studies were interviewed concerning the medical services in their schools and most of them explained that their students were provided well except in some cases where students are referred to the hospitals. There was a Director of Studies who said, "The students are only given pain killers when they are not well and nothing else making them go home to seek further medication when they are sick".

4.8.8 Influence of FSE fund Administration and non Teaching Staff Remuneration

There are other services provided by the FSE policy, they are administrative costs and non teaching staff remuneration. The School Principals and Directors of Studies were interviewed on provision of these services and the following was the response.

Administrative costs are those meant to run the administration offices in the school. This to ensure that administrative activities are done well for instance paying telephone bill and other activities carried out in these offices. According to ministry of education interim guideline (2008) FSC policy pays Kshs. 500/= for administrative costs. The Directors of Studies in one of the schools said, "The services in these offices are well provided and the administration is able to run without much problem". The principals were also asked concerning these and they gave the information that things are done well now in these offices. In fact one of the school Principals said,

We use to struggle before to run the activities of the school in these offices but after FSE policy we are more organized now and most of the things are done as per the required timeline. In fact all the coordination with the TSC, Ministry of education, KNEC and other sectors that deal with education are done on time now unlike before when we could delay.

This is an indication that FSE policy has brought efficiency in the education sector make the learners and the other education stakeholders benefit.

The FSE fund gives Kshs. 3,965/= to cater for the non teaching staff remuneration (MOE, 2008) this is the salary meant for the non teaching staff in the school. These non teaching staff is very important in the education sector and their services are highly required just like the teachers. These staff includes the cooks, watchmen, librarians, offices clerks, Bursars, secretaries, grounds men, messengers among others. This is a very important manpower in the education system and without them learning will not be effective. When the Directors of

Studies were interviewed on this service most of them indicated that it is not provided well. The y further explained that many of them are paid very little or at times they are not paid for several months. In fact one of the Director of Studies from one of the boarding schools said,

The non teaching staff in our school was not paid their salary for 4 months and it was very unfair for these workers because some of them had children in schools but were not in a position to provide for them. This made them very demoralized and they were not able to do their work effectively. In fact the ones who reproduce examinations refused to produce exams at the end of the term, making us really plead with them for the students' sake.

The school Principals were also interviewed on the non teaching staff remuneration and they were explain that at least they are able to pay them on time except times when the government have delayed to deposit the money in their school accounts. One of the schools Principal from one of the boarding school said,

We do pay the non teaching staff remuneration on time but the money allocated to them is very little to cater for all of them make it very difficult for us to handle the situation. In fact at times we are forced to get from other vote heads to pay them but it becomes very challenging to run the school at times. It is our plea that the government can increase the amount allocated to them.

The above findings indicate that FSE policy has ensured that provision of administration services have been provided well by most of the schools except the non teaching staff remuneration. This shows that there is still a problem when it comes to the payment of non teaching staff in most schools. This attributed to the issue that the funds allocated to them is not sufficient to pay them well and also the government deals with the funds.

4.8.9 Influence of FSE Policy on Student Teacher Ratio

The number of TSC teachers in Kericho County secondary schools before the introduction of FSE policy was 673, the Board of Management teachers (BOM) was 170 while the students were 17,785. After the introduction of FSE policy the numbers of TSC teachers increased to

754, while that of BOM to 243, increased to 20,765. The Student Teacher Ratio (STR) in Kericho County was computed using the TSC teachers only and the BOM was not used.

The TSC teachers/students ratio in Kericho County was arrived by sing the formula by UNESCO Guideline (2009 b).

Formula:

$$PTR_h^t = \frac{E_h^t}{T_h^t}$$

Where

 PTR_h^t Pupil/Student teacher ratio at level of education h and year t

 E_h^t Total number of pupils or (students) at level of education h in the school year t

 T_h^t Total number of teachers at level of education h in school year t

STR before FSE
$$=\frac{17,785}{673} = 26:1$$

STR after FSE
$$=\frac{20,765}{754} = 28:1$$

Table 4.41 $\begin{tabular}{ll} \textbf{Student Teacher Ratio in before and after Introduction of FSE policy in Kericho} \\ \textbf{County (n=40)} \end{tabular}$

	Before FSE	After FSE
Students	17,785	20,765
Teachers	673	754
Ratios	26:1	28:1

Table 4.41 indicates the STR was 26:1 before and after FSE it is 28:1. This was because of students' influx. Those who had opted out due to financial constraints re-entered the schools again, while TSC did not increase the numbers of teachers accordingly. This shows that the STR has increased after FSE policy. However, schools still employ Board of Management

teachers to substitute what the government employs for them. This was because according to the DOS there was inadequate teachers, in fact one of them said, "these teachers are needed because there are some subjects with no teachers or inadequate teachers to handle the classes affecting the quality of education". This study is not in agreement with that done by Koross, Ngware and Sang, (2009) in their study in Kericho District which revealed that the STR was 20:1 in 2006, probably due to the fact that they focused on Kericho District which is now a sub county, and this study was done at county level. This also does not concur with the findings by ILO (2010) which revealed that in Kwale District student teacher ratio was 41:1.

4.8.10 Influence of FSE Policy on Student and Non -teaching Staff Ratio

Table 4.42
Students and Non teaching staff before and after Introduction of FSE policy in Kericho
County (n=40)

	Before FSE Policy		After FS	E Policy
Schools	S	NTS	S	NTS
D&B	3,674	157	4,274	175
D	1,710	45	2,043	58
В	12,401	561	14,448	626

Key: D & B: Day and Boarding D: Day school B: Boarding school NTS: Non Teaching Staff S: Students

Table 4.42 indicates the number of students and non teaching staff in 40 secondary schools in Kericho County. The schools were categorized as follows: There were 13 mixed and day, 7 day and 20 boarding schools. Student non teaching staff ratio was computed separately in day, boarding and mixed day & boarding secondary schools separately in Kericho County. The non teaching staffs before FSE policy were 157 in mixed day and boarding, 45 in day

schools and 561 in boarding schools. The students were 3,674 in mixed day and boarding, 1,710 in day schools, while in boarding school they were 12,401.

After FSE policy the non teaching staffs increased to 175 in mixed day and boarding, 58 in day schools and 626 in boarding schools. The Students also increased to 4,274 in mixed day and boarding, 2,043 in day schools, and 14,448 in boarding school. The non teaching staff ratio was determined using the same STR formula given by UNESCO (2009).

Formula:

$$PTR_h^t = \frac{E_h^t}{T_h^t}$$

Where

 PTR_h^t Pupil/Student teacher ratio at level of education h and year t

 E_h^t Total number of pupils or (students) at level of education h in the school year t

 T_h^t Total number of teachers at level of education h in school year t

This formula was used to compute the non teaching staff and students ratio in secondary schools in Kericho County secondary schools.

Ratio before FSE Policy

Mixed day and boarding
$$=\frac{3,674}{157}=23:1$$

Day Schools
$$=\frac{1,710}{45} = 38:1$$

Boarding School
$$=\frac{12,401}{561} = 22:1$$

Ratio after FSE Policy

Mixed day and boarding
$$=\frac{4,274}{175}=24:1$$

Day Schools
$$=\frac{2,043}{58} = 35:1$$

Boarding School
$$=\frac{14,448}{626} = 23:1$$

Table 4.43
Students Non Teaching Staff Ratio before and after Introduction of FSE policy in Kericho County

Schools	Before FSE policy	After FSE policy
D & B	23:1	24:1
D	38:1	35:1
В	22:1	23:1

Key: D & B; Day and Boarding D; Day School B; Boarding School

Table 4.43 indicates the non teaching Staff Student Ratio (NTSR) before FSE policy in Kericho County on average was 23:1 in mixed Day and Boarding secondary schools, 38:1 in day schools, 22:1 in boarding Schools. After FSE policy the non teaching Staff student ratio was 24:1 in Day and Boarding secondary schools, 35:1 in day schools, 23:1 in boarding Schools. According to the guidelines for the implementation of FSE policy (2008) the ratio of NTSR is as shown in Table 4.44.

Table 4.44

FSE Policy of Staffing Norm for Non teaching staff in Public Secondary Schools

Streams	Enrolment	Day Schools No. of workers		Boarding No. of workers	
	_	F	Ratio	F	Ratio
1	180	6	30:1	10	18:1
2	360	8	45:1	15	24:
3	540	9	60:1	20	27:1
4	720	13	55:1	28	26:1
5	900	15	60:1	30	30:1
6	1080	18	60:1	36	30:1

Source: Ministry of Education, 2008

The SNTR after implementation of FSE policy was within the recommended staffing norms. However it was noted that a number of these workers were casuals this was because the schools could not afford to hire staff on contract or permanent terms due to lack of adequate funds. This was because the FSE caters for only a percentage of the workers pay and parents are supposed to compliment. According to 2008 FSE policy guideline in boarding schools the parents are required 2,743/= and the government pays 3,965/=. This in itself means that the quality of services rendered may not be to the expected standards. For those workers on permanent and contract terms it was observed that schools had adopted multitasking policy, whereby they were supposed to provide services outside their areas of specialization for instance a store keeper would be expected to serve as a messenger and accounts clerk.

4.8.11 Influence of FSE Policy on Class size

The study established that the class sizes before and after FSE policy were as shown in Table 4.45.

Table 4.45

The average Class Sizes before and After Introduction of FSE Policy (n=40)

	Before FSE policy		After FSE policy	
Range	Frequency (f)	Percentages	Frequency (f)	Percentages
		(%)		(%)
21-30	15	37.5	5	12.50
31-40	21	52.5	12	30.00
41-50	4	10	18	45.00
51-60	00	00	5	12.50
Totals	40	100	40	100.00

Table 4.45 indicates the number of students per class as indicated by the school Principals. Before FSE policy 15 (37.5%) of the schools had students in their class room ranging from 21-30 on average per class, while 21 (52.50%) and 4 (10%) an average of 31-40 and 41-50 respectively per class. After FSE policy Five (12.50%) of the schools had their students in class ranging from 21- 30 students, 12 (30%) of the schools had their students in class ranging from 31-40, while 18 (45%) of the schools had students in class ranging from 41-50. Seven point five percent and 5 (12.50%) of the schools had their students in class ranging from 51-60.

This shows that in Kericho County most schools have their class size below 50 and a few other schools have a class of over 51. This shows that the class sizes after FSE policy increased. This indicates that some schools in the county are still over enrolled while others are under enrolled. This shows that teachers are under utilized in these schools where the class size is below 40 students and the schools with class sizes of above 51 shows that there is understaffing and teachers are really straining. These findings concurs the findings by Koross, Ngware and Sang, (2009) in their study in Kericho district when they revealed class size of 36 in 2006, which was at par with the national average. These findings indicate that 42.5% of the schools had their class size below 40 and another 12.50% had their class size of 51 and above and 45.00% have a class size of ranging from 41-50. It does not agree with the studies by Wamukuru and Muthaa (2011) when it showed that currently the average class size in public secondary schools in Kenya is less than 30 students per class.

4.8.12 Influence of FSE Policy on Students Performance in KCSE

To establish the influence of FSE policy on students performance in KCSE, first the 2004 and 2008 cohorts of students performance in KCSE was established for comparison and second the FSE funds spent on the 2008 cohort of students was established before undertaking the correlation between FSE funds and students performance in KCSE. The results were as shown in Tables 4.46 and 4.47.

Table 4.46

KCSE Mean Scores before and after Introduction of FSE Policy for the cohorts 2004 and 2008 (n=40)

Mean scores	Before FSE Policy		After FSE Policy	
	Frequency	Percentage	Frequency	Percentage
	(f)	(%)	(f)	(%)
2.00-3.99	10	25	2	5
4.00-5.99	16	40	20	50
6.00-7.99	10	25	8	20
8.00-9.99	4	10	10	25

Table 4.46 indicates the schools mean scores as given by the school Principals before and after FSE Policy. The mean scores of the cohort taken before the introduction of FSE Policy revealed that 10 (25%) of the schools in Kericho County had their mean scores ranging from 2.00 to 3.99, sixteen (40%) had their mean scores ranging between 4.00 to 5.99, ten (25%) had their mean scores ranging from 6.00 to 7.99 and four (10%) had mean scores ranging from 8.00 to 9.99. After the introduction of FSE Policy for 2008 cohort of students there was a slight improvement in performance even though majority of the schools had their mean scores below average. From the 40 schools 2(5%) had their mean score ranging from 2.00 to

3.99, twenty (50%) had their mean scores at 4.00 to 5.99, while 8(20%) and 10 (25%) had their mean scores ranging from 6.00 to 7.99 and 8.00 to 9.99 respectively. Table 4.60 shows that 8(20%) of the schools that had their mean scores ranging from 2.00 to 3.99 had improved as only 2(5%) had a mean score range of 2.00 to 3.99. There was also a noticeable improvement when 6(15%) of the school improved their mean scores to above 8.00. This indicates that FSE policy had led to improvement in performance in Kericho County. Since in this study all factors influencing quality of education were held constant except FSE fund, FSE policy was conceived to have had an influence on students' performance in KCSE. This is because the subsidy catered for educational inputs over and above the parental inputs and therefore was bound to enhance students' performance. This is in agreement with the study done in Muranga County by Macharia, (2013) where it revealed that in the period between 2008 and 2011. Performance of day schools in KCSE improved after FSE policy. It was concluded that the FSE policy had contributed both positively to internal efficiency of day schools; through improved performance in national examinations.

In order to establish the influence of FSE policy on students' academic achievement for 2008 cohort, data on students' academic achievements per school, FSE fund (Table 4.13), school levies (Table 4.14) and combination of school levies and FSE fund (Table 4.15) was used to correlate. Interpretation was done using Table 3.2.

Table 4.47

Pearson Product Moment Correlation (r) Matrix for FSE fund and Students' Academic

Achievement in Kericho County

		KCSE mean scores
FSE fund	Pearson Correlation	0.69
	Sig. (2-tailed)	0.00
	N	40
School levies	Pearson Correlation	0.64
	Sig. (2-tailed)	0.00
	N	40
FSE Fund and school levies	Pearson Correlation	0.66
	Sig. (2-tailed)	0.00
	N	40

Table 4.47 indicates that the relationship between FSE policy and students academic achievement was moderate and positive; and statistically significant with a coefficient of .69 at a set p-value of 0.05. According to Elfison, Runyon and Haber (1990); Leedy and Ormrod (2005) guideline Correlation coefficients (r) interpretation indicated that this is a positive moderate influence. This means that FSE funding accounted for an increase in KCSE mean scores. Coefficient of determination R^2 is the square of the Pearson's r which tells how much of the variance is accounted for by the correlation which is expressed in percentages (Leedy & Ormrod, 2005). To account for the influence of FSE funding on students' academic achievement Pearson's r was squared. The coefficient of determination $R^2 = 0.48$ which meant that FSE policy accounted for 48% of the variation in students academic achievement. School levies which was an intervening variable had a positive influence of 0.64. Coefficient of determination $R^2 = 0.41$ which meant that school levies accounted for 41% of the variation in students academic achievement. When school levies were combined together with FSE fund it had a moderate positive influence of 0.66. Coefficient of determination $R^2 = 0.44$

which meant that school levies and FSE fund accounted for 44% of the variation in students academic achievement. This means that the mediating effect of school levies on the influence of FSE policy on students academic achievement was 0.04%. This indicates that school levies had very little influence on the influence of FSE policy on students' academic achievement. This also meant that FSE policy can be relied upon in predicting the students' performance in KCSE. This means it is playing a moderate role in enhancing students' performance in KCSE. Thus, FSE funds are used to enhance student performance by providing the basic requirements for improvement in academic performance. These requirements include tuition equipment and materials, personal emolument funds, medical care, activity fee, Repair Maintenance Improvement and Electricity, Water & Conservancy. The other factors could be type of school, teacher qualification, and students' attitudes among others as revealed by interview findings which accounted for 52%.

From these findings study it shows that the higher the amount of money the school receives the better the performance. Saleemi (2012) describe Economies of Scale as the advantages that accrue to large firms, it applies in this study because the bigger the school in terms of population the higher the mean scores. Since 10,265/= is given to each student per year a school and the higher population the more the funds in such a school compared to a school with less students. Therefore in this study FSE Policy has influenced students' academic achievements positively in Kericho County.

The Director of Studies, DQASOs and students during interview and focus group discussion indicated that FSE policy had influenced performance in the county positively. This was

attributed to the availability of learning and teaching materials in the schools which they agreed that it had made learning very effective for both the teachers and the student. This was explained further when one of the DQASO said,

During our routine quality assessment we have discovered that schools have reasonable number of text books, teaching learning materials and good facilities which have made learning for the students effective. The teachers also find it easy to do their work because the required teaching and learning materials in most schools are available. With this support from the government through the FSE Fund, performance in the County has been improving over the years though it has not been steady and it could be due to the influence of other factors a part from the learning materials.

This is an indication that FSE funds in the county have brought significant change in the quality of education through the inputs as evidenced in improved performance in KCSE mean scores. The individual subjects have also improved a lot since the introduction of FSE policy which has lead to improved students academic achievements. The other physical facilities have also improved from what it used to be before FSE policy. Another Director of Studies from one of the schools revealed that, "our school really improved in the national examination after FSE policy was put in place, students completed their assignment on time and they did further reading on their own". This is an indication that with FSE policy in place the materials that are meant to improve teaching and learning were availed in school leading to improvement in the national performance.

The students also felt that FSE contributed a lot to their academic achievement while they were in school. In fact one of the students said, "We had enough exercise books and textbooks every year since form one, this made us really improve because we would revise very well for the exams and complete assignments". This reveals that FSE policy was able to improve the students reading culture and completion of assignments leading to improve students' academic achievements in terms of mean score. Another student in a day school

said, "Since FSE policy was implemented we were able to get books and other materials necessary for learning. This is mainly the reason our school improved during our year as candidates". These findings reveal that day schools benefitted a lot from FSE policy. Since the students in day schools are those that the parents cannot afford boarding school and they lack facilities and books. This makes these students very disadvantaged in terms of learning materials and facilities. FSE policy lead to improvement in these schools facilities and the necessary learning materials, finally leading to improvement in student academic achievements. This is in agreement with the study by Macharia, (2013) in Gatanga District, Muranga County which revealed that in the period between 2008 and 2011. Performance of day schools in KCSE improved. It was concluded that the FSE policy had contributed both positively to internal efficiency of day schools; through improved performance in national exams. This is in agreement because the cohort used for the study is similar to the cohort used in Kericho County.

The interview findings revealed a number of factors that could have accounted for the 52%. Thus 52% DQASOs, Directors of Studies and the students further during interviews and focus group discussion indicated that the improvement was not to their expectation and pointed out that there were other factors that were acting negatively. These factors included boy/girl relationships motorbike business, family obligations cultural practices, entry behavior, drug abuse among others.

Boy/girl relationship was mentioned as one of the factors affecting performance in Kericho County. All the DQASOs emphasized that it influence performance in the county, majority of the Directors of Studies also believe that if the students can stop engaging in this kind of

relationship they will concentrate in class. During the students' focus group discussion it came out clearly that students were affected by these relationships. In fact one of the students said, "Some students engaged themselves in relationships especially the girls, during class time instead of reading they would read and write letters distracting their attention since they always think of their boyfriends". This shows that boy/girl relationship has an influence on the student concentration and eventually on their performance.

Motor Bike business was indicated strongly as one of the factors influencing students' performance in Kericho County. The DQASOs felt that it had a big influence on the students' academic achievement. The Director of Studies also emphasized that, "it has a big influence in the students' academic achievement because when these students were required to be doing school work they were busy doing business, which is common in day schools. This lead to these students performing poorly despite FSE policy being in place". During the students focus group discussion the students agreed that the motor bike business is more of the new trend when it comes to performance. In fact one Directors of Studies in a day school said.

This motor bike business has really disrupted learning in our school every other time we have disciplinary cases, students do not attend school regularly even to do their studies they have no interest. The girls have been influenced by these business men and they have ended up pregnant, getting married and eventually not coming to school for some time. It has really affected their performance in class something should be done about it.

This assertion shows that this business really influenced the students' academic achievement in terms of KCSE performance especially in day schools. Since the students concentration was affected by these relationships.

Family responsibilities was another factor that was mentioned clearly by the all the Directors of Studies and the DQASOs during the interview. The Director of Studies further explained that this factor always affects the girl child making it hard for them to come to school regularly and perform well. One of the Director of Studies in day schools said,

There was a girl in this school ever since her parents retired she was left with a neighbor who has turned her to a house help and even at times after serious counseling she revealed that the man of the house in the wife's absents molests her sexually. This affected the girl's performance in KCSE since most the time she was absent. There was also a boy who had almost a similar experience with this girl and other students.

During the focus group discussion with the students some of them felt that their female colleagues especially in day school were treated like house helps at home because they have to do all the house chores. In fact one of the girls in a day school said,

My mother sells in the market and she would come home very later. This made me do all the house work and take care of my sibling until she is back. Leaving me very little time to read and do my home work. These lead to my poor performance in KCSE.

This finding concurs with Ngeno *et al* (2013) in Kericho District on determinates of girls' academic achievements in mixed day and boarding secondary schools which revealed that family problem and responsibilities had influenced the girl performance. It also concurs with that of Ngesu *et al* (2012) in their study which revealed that preference of boys to girls especially in matters concerning education in ASAL areas.

Entry behavior was also indicated by the Directors of Studies when they were interviewed as one of the factors that had influence the students' academic achievements in terms of performance. In this regard one of the Director of Studies in a day school explained,

Some of the students admitted in form one had very low KCPE marks making them struggle very hard to get the concepts in secondary school. These especially affects students in day schools since some were admitted with marks as low as 100 marks this made them go through a difficult time trying to learn making them not do well when they did their final exam.

This finding is in agreement with that of Ngeno, Simatwa and Soi (2013) which revealed that entry behavior affects the girls' performance in school. This is also in agreement with the report by the Daily Nation (2014, March 6th) which indicated that poor performance in Lamu East in KCSE was due to admission of students in form one with less than 250 marks in local secondary schools.

Cultural Practices for instance Female Genital Mutilation (FGM) was another factor emphasized by all the respondents. The DQASO said, "Girls who are taken for FGM are always affected in terms of performance because they lack concentration in class". This is because of the teachings the girls under go during these practices, this always make the girls imagine that they are now women and not equally to the other girls. This finding concurs with that of Ngesu *et al* (2012) in their study on when they revealed that FGM influence girls performance in ASAL areas. It also concur with the studies done in Baringo County by Kariuki *et al* (2012) when it indicated that retrogressive practices influence girls performance in the county.

Drug abuse was also another factor that influenced students' performance this was stated by all the DQASOs and Directors of Studies as affecting the boys mainly. The Director of Studies said, "Drugs affects the concentration of these students in class. This is because drugs influence the state of the mind and it lead to lack of concentration on the students due to many side effects. This has really influenced the performance despite the government's efforts on free tuition". During the focus group discussion with the students it emerged that some boys engaged in the following drugs, bhang, spirits, alcohol, glue and cigarettes among

others. A student said, "There were boys who take drugs and alcohol, whenever they are in class they are restless and rarely concentrate in their work".

This study with regard to girls is not in agreement with the study done by Ngeno, Simatwa and Soi (2013) which revealed that drug abuse was not one of the determinates in girls academic achievements in Kericho District. The current study revealed that boys are affected mainly by drug abuse and only a few girls.

Students' attitude towards their studies and school in general had played a big role in compromising their performance as was mentioned by the Director of Studies when they were interviewed. In fact one Director of Studies said,

The parents are to blame for these attitudes because whenever they are bringing these children in form one the promise that they will to get a better school. These students will always have them in mind that the school is not good enough and because of this attitude towards the school that it is not good they find it hard to settle down and learn.

During the focus group discussion with the students some students mentioned attitude as one of the factors that had influenced performance in their schools. In fact a student's said, "Some of their friends felt that another school was better than their school. This made them not work hard in class making them fail their KCSE". The other attitude the students mentioned was towards certain subjects for instance mathematics, physics, chemistry among others. This students do not like them because they associate it with some teachers they feel they are very strict. The negative attitude always has an influence in students' academic achievement since the students do not do their best hence leading to poor performance in class and eventually in the national examination. This findings concurs that of Kariuki *et al* (2012) which revealed that attitude among the students and teachers influence performance in

the Baringo County. It also concurs with the findings by Ngeno (2011) when it revealed that attitude was one of the factors that influence the girls' performance in Kericho District. It is also concurs with the studies done in Ainamoi Division by Soi, Barmasoi and Ngeno, (2013) on the attitude of girls towards mathematic in which this study revealed that both the girl child in day and boarding have a negative attitude towards the subject.

Indiscipline was another factor mentioned during interview with the DQASOs and Directors of Studies. They explained that this mainly affects the boy child and a few girls. The students tend to sneak out of school, come to school drunk, untidy, bullying and fighting among others are always sent home on disciplinary ground. This influences their performance in class because they are not in school the whole term. In this respect one of the Director of Studies said, "These students especially the boys who always sneak out to buy alcohol, cigarettes and drugs are always sent home making them miss out in class work and eventually did not do well in the national exam". This finding concurs with that done by Ngeno, Simatwa and Soi, (2013) which revealed that girls' performance was affected mainly by indiscipline in Kericho District. The current study shows that the boys were affected more.

Pregnancy was mentioned by all the DQASOs and the Directors of Studies especially in day schools that has really influenced the girls' performance. This is because when a girl is pregnant psychological these child is affected by the changes, making them loose concentration in class. Some of these students also deliver during exam time. In fact one of the Director of Studies in a mixed day and boarding school said, "One of our candidates went on labour during the KCSE time and she had to do the exams in the labour ward,

unfortunately this girl could not concentrate because of the disruption of labour pains, leading to poor performance in KCSE". The students were also in agreement especially those in day school that there were girls who were pregnant in schools and were not in a position to concentrate in class. This factor had an influence on the girl child performance. These findings concur with that Ngesu *et al* (2012) in their study on Critical Determinants of poor performance in KCSE among Girls in Arid and Semi Arid (ASAL) which revealed that pregnancy has lead to poor performance in KCSE in Arid and Semi Arid (ASAL) areas in Kenya. It is also in agreement with the study done by Ngeno (2011) which revealed that girls' performance was affected mainly by pregnancies in Kericho District.

School levies was mentioned by both the Directors of Studies and students as influencing the students' studies. They explained that FSE policy is not free the way it is perceived since the students still have to pay levies and also buy other tuition materials. One of the Director of Studies said.

School levies have influenced performance in the county because students are sent home constantly making them not to cover the syllabus like the rest who are in school. This makes these students not to do well during the exams since they have not been attending classes constantly.

Basing on the findings of this study despite FSE Policy there are other factors that led to the students not performing well the way they would wish to. FSE fund caters for 40.43% of the required fee by the day scholars while the parents cater for 59.57%. Parents with children who are boarders in mixed school cater for 72.60% while government pays 27.40%. For the single sex schools for the girls and the boys' schools the government caters for 25.62% and 24.88% respectively. While the parents cater for 74.38% and 75.12% for girls' and boys' schools respectively (Table 4.6). This shows that the amount the government pays is less and

it cannot sustain learning in schools. This indicates that the parents incur more on their children in terms of school fees and also personal effects. This is in agreement with what the Directors of Studies, students and DQASOs mentioned as the factors affecting performance. This finding is in agreement with the study done by Ngeno, Simatwa and Soi, (2013) which revealed that girls' performance was affected mainly by school levies in Kericho District.

Inadequate teachers were mentioned by most Directors of Studies and students in most schools. They said that some subjects are left to the students to read on their own at the times the teachers who have not specialized in those subjects teach affecting delivery of content. In fact one of the Director of Studies said, "we have had our mathematics teachers teach humanities, sciences and subjects not related to their area of specialization these has been strenuous for both the teachers and the learners". This is in agreement with the study carried out in Baringo County by Kariuki *et al* (2012) when it revealed that inadequate teachers have led to poor performance. It is also in agreement with the study done by Ngeno, Simatwa and Soi (2013) when it revealed that girls' performance was affected mainly by lack of teachers in Kericho District. The current study shows that the boys are affected more.

During the interview with the DQASOs and Directors of Studies another factor that came up clearly that is affecting performance is the issue of remedial. Remedial was introduced by schools to enable them complete their syllabus on time, unfortunately it has contributed positive and also negatively. This is done very early in the morning, lunch time and evening in most schools. The all the DQSASOs and the Directors of Studies indicated that these programme at times interfere with the students programme because teachers have become money oriented. In this respect one of the DQASO said,

Remedial classes have been commercialized by the teachers to get money from the parents, this makes them not to teach at the allocated time but teach during the students' preps time and singing it as remedial so that they are paid. This has made the students not have enough time for personal reading and assignments.

In fact one of the Director of Studies also said, "The teachers do not teach during their normal class time but during remedial they are always there to sign that they have thought in order to earn money". There was also another Director of Studies who said, "Remedial have contributed positively in terms of performance and completion of syllabus in time". This shows that the remedial have influenced performance in schools either negatively or positively. In this case the influence is negative because students do not get time for personal reading and revision. It is also positive since performance in the county has improved.

Few students mentioned that lack of proper uniforms influenced their performance one of the students in a day school said,

Some of our classmates may not have been having the right uniform or it is torn because they borrow from their friends since their parents cannot afford to buy for them. Hence, they were always sent home most of the time making them loose in class and they find it hard to recover later on.

This finding concurs with the findings by Ngeno *et al* (2012) when it revealed that lack of proper uniform contributed to poor performance among the girls in Kericho district.

Lack of required books was also mentioned by some students. They indicated that there are books they are required to buy for instance literature and *Fasihi* set books. These are the set books required in Kiswahili and English so as to make the subject complete. In fact one of the students said,

Some of the students could not afford to get the books because their parents had no money. Therefore, they kept borrowing from their classmates and at times they could not access hence affecting their performance in these

subjects. This eventually affects their overall performance in all the subjects due to lack of confidence.

There was another student who said, "we were sent home most of the time to get literature and *fasihi* books, we did not know whether the school was to buy for us or not". This indicates that this also has an influence on classroom attendance leading to poor performance. This study is in agreement with the study done by Ngeno *et al* (2013) when it revealed that girls' performance was determined by lack of required books in Kericho District. Basing on this finding it reveals that in Kericho County students' academic achievement improved but there are a few factors still making the county schools not to reach the required mean scores to allow students go to for certificates, diplomas and degrees. Things like literature books in some schools are bought by the students themselves indicating that FSE policy do not cater for all the reading materials in these schools.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary, conclusions and recommendations of the study. The presentation is based on themes derived from the objectives of the study.

5.2 Summary

The findings of the study were summarized as follows:

5.2.1 Influence of FSE Policy on Gender Parity in Secondary Education in Kericho County

The study established that:

Before FSE policy gender parity indices were 0.63, 0.65, 0.61 and 0.62 from 2004 to 2007 respectively. After FSE policy the gender parity indices were 0.58, 0.57, 0.57 and 0.65 from 2008 to 2011 respectively. After FSE gender parity had decreased meaning that for every 100 boys there were a less number of girls. This shows that the girls were more disadvantaged than the boys after the introduction of FSE policy in Kericho County. The parity index for the girls in form four improved in 2011 indicated that the boys repeated a class more than the girls before their final year. This is because the number of girls was also reduced as they approached Form four. This study revealed that girls were more disadvantaged in the county in terms of enrolment as most of them are not in school. Pearson correlation (r) coefficient revealed that that there was a moderate negative (-.44) relationship between FSE policy and GPI. The relationship was significant at a set p-value of 0.05. The coefficient of determination $R^2 = 0.19$ meaning it accounted for 19% of the variation. The other factors

could be due to motorbike business, early marriages, FGM, poverty and discrimination by parents as revealed by interview findings.

5.2.2 Influence of FSE Policy on Secondary School Repeater Rate in Kericho County

This study established that the student repeater rates before introduction of FSE policy from 2004 to 2007 for the students were 0.39%, 0.91%, 3.25% and 4.97%, cumulative cohort repeater rate was 6.80%. After introduction of FSE policy 2008 to 2011 the repetition rates for the students were 0.26%, 3.00%, 3.25% and 4.97% cumulative cohort repeater rate was 8.28%. The Pearson correlation output further revealed that there was a weak positive (.04) relationship between FSE policy and repeater rate. The relationship was not significant at a p-value of 0.05. The coefficient of determination $R^2 = 0.0016$ meaning FSE policy accounted for 0.16% of the variation. The other factors that influenced repeater rates as revealed by interview findings were motorbike business, pregnancies/early marriages, personal effects, FGM, poverty and discrimination by the parents.

5.2.3 Influence of FSE Policy on Dropout Rates in Secondary Schools in Kericho County

This study established that the student dropout rates before introduction of FSE policy from 2004 to 2007 in students in Kericho County were 7.00%, 12.07% and 12.67% cumulative cohort dropout rate was 29.14%. After introduction of FSE policy it was 7.96%, 13.27% and 14.94% cumulative cohort dropout rate was 32.37%. The Pearson (r) correlation revealed that there was a moderate negative (-.31) relationship between FSE policy and dropout rates. The relationship was significant at a p-value of 0.05. This means that FSE funding accounted for a decrease in dropout rate. The coefficient of determination $R^2 = 0.10$ which meant that

FSE accounted for 10% of the variation in dropout rates. The other contributing factors could have been motorbike business, early marriages, personal effects, FGM, poverty and discrimination by the parents as revealed by interview findings.

5.2.4 Influence of FSE Policy on Wastage Rates in Secondary Schools in Kericho County

This study established the influence of FSE policy on education wastage rates before FSE policy was 1.23 and 1.27 after introduction of FSE policy. Pearson (r) correlation revealed that there was a weak negative (-.22) relationship between FSE policy and wastage rates. This relationship was not statistically significant at a p-value of 0.05. The coefficient of determination $R^2 = 0.05$ meant that FSE accounted for 5% of the variation in wastage rates. The other 95% was influenced by other factors such as motorbike business and pregnancies/early marriages as revealed by interview findings.

5.2.5 Influence of FSE Policy on Students Academic Achievement in Kericho County

The study established that the influence of FSE policy on students academic achievement was moderate and positive with a coefficient of .69. This influence was statistically significant at the set p- value of .05. This means that an increase in FSE funding accounted for an increase in students academic achievement. The coefficient of determination R² was .48 which indicated that it accounted for 48% of the variation in students' academic achievement. The other 52% could be explained by other factors such as teacher student ratio, book student ratio, students discipline among others.

5.3 Conclusions

Based on the findings of the study the following conclusions were made:

5.3.1 Influence of FSE Policy on Gender Parity in Secondary Education in Kericho County

There was a moderate negative relationship between FSE fund and GPI, that is FSE policy reduced GPI moderately. The other factors that also influenced the GPI were motorbike business, early marriages, FGM, poverty and discrimination by parents as revealed by interview findings.

5.3.2 Influence of FSE Policy on Secondary School Repeater Rate in Kericho County

There was a weak positive relationship between FSE policy and repeater rates. That is FSE policy had very little positive influence on repeater rates. The other factors that influenced repeater rates as revealed by interview findings were motorbike business, pregnancies/early marriages, personal effects, FGM, poverty and discrimination by the parents.

5.3.3 Influence of FSE Policy on Dropout Rates in Secondary Schools in Kericho County

There was a moderate negative relationship between FSE policy and dropout rates. That is FSE policy reduced dropout rates moderately. The other contributing factors were motorbike business, early marriages, personal effects, FGM, poverty and discrimination by the parents as revealed by interview findings.

5.3.4 Influence of FSE Policy on Wastage Rates in Secondary Schools in Kericho County

There was a weak negative relationship between FSE and wastage rates. The relationship was not statistically significant. This means that FSE policy had very little influence on wastage rate.

5.3.5 Influence of FSE Policy on Students Academic Achievement in Kericho County

Correlation revealed a positive moderate influence between FSE policy and students' academic achievements. FSE influenced increased in books, stationary, Repair Maintenance and Improvement, Electricity, Water and Conservancy, Personal emolument, Local Travel and Transport, school activities and medical care and performance in KCSE. Thus, the book student ratio improved as well as quality of tuition materials and facilities as Repairs, Maintenance and Improvement, Water supply, electricity supply, transport and medical services. Part of the person emoluments funds was used to employ BOM teachers to ease teaching staff shortage. These education inputs had in turn a positive influence on the students' academic achievement as was signified by improved performance in KCSE. There was a moderate positive relationship between FSE policy and students academic achievement. The relationship was statistically significant meaning that FSE policy is a significant predictor of students' academic achievement as it had a moderate positive influence.

5.3 Recommendations

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

5.4.1 Influence of FSE Policy on Gender Parity in Secondary School in Kericho County

With regard to the finding that FSE policy had little negative influence on gender parity as it contributes negatively by 19% the study therefore recommended that:

- i) The government should try to double FSE fund to enable the parents take the children to school both boys and girls so as to improve on GPI.
- ii) The government should come up with ways of providing the girls with the very basic personal effects like sanitary towels, since FSE policy on its own does not seem to improve GPI.

5.4.2 Influence of FSE Policy on Repeater Rates in Secondary Schools in Kericho County

In view of the finding that FSE policy had a weak positive influence on repeater rates. Since it accounted for 0.16% of the variation and other factors such as poor academic achievement, student absenteeism, school fees/levies, forced repetition, indiscipline accounted for 99.84%, the study recommended that:

i) The government policy that; no child should be forced to repeat a class should be enforced. This would reduce cases of repetition in schools as it does not add value but only increases wastage rate and reduces internal efficiency of schools.

- ii) Academic guidance and counseling be strengthened in schools so that students can easily transit from one class to another. This would curb repetition rates in schools in the county.
- iii) Principals and parents should work hand in hand to ensure that students report to schools on time and stay in the school throughout the term. This would help the students to concentrate on their studies and develop qualities of successful students thereby performing well and being disciplined with the consequences that repetition due to poor performance is void.

5.4.3 Influence of FSE Policy on Dropout Rates in Secondary Schools in Kericho County

With regard to the finding that FSE fund had a moderate influence on dropout rate indicating that other contributing factors that included motorbike transport business, indiscipline, school fees/levies poor performance, Basic needs, teenage pregnancies and early marriages also influenced dropout rates, the study recommended that:

- i) FSE fund should be doubled since the parents are paying a higher percentage as this will help the parents retain their children in school.
- ii) Guidance and counseling services should be offered to students' with view to improving performance in academic work and retaining them in school. This would help to curb dropout rates due to poor performance and dislike for schooling which would in turn militate against dropping out of school.
- iii) Principals and parents should have concerted efforts in provision of basic needs to girls so that they are not lured into sexual relations and early marriages that

eventually lead to dropout. This would reduce dropout rates as most girls would have a conducive learning environment devoid of falling prey to sex pests.

5.4.4 Influence of FSE Policy on Wastage rates in Secondary Schools in Kericho County

In view of the findings that FSE policy had very little negative influence on wastage rate. FSE fund contributed 5% of the variations and the influence was not statistically significant. The other factors such as cattle rustling, school fees/levies, Motorbike business, drop out related factors and repeater related factors, the study therefore recommended; that, the government should increase FSE funding to cover 70% students' requirements in both day and boarding schools as this would reduce cases of child labour, motorbike businesses, early marriages, repetition and drop out thereby minimizing wastage rates.

5.4.5 Influence of FSE Policy on Students Academic Achievement in Kericho County

With regard to the finding that FSE policy accounted for 48% of variation in students' academic achievement, the study recommended that:

The FSE funds should be increased to enhance further improvement in students' performance in KCSE. This would enable students to earn more quality grades thereby raising level of quality secondary education.

With regard to the finding that most schools had not attained the recommended book student ratio of 1:1, the study recommended that FSE funds on tuition should be increased to enable purchase of more books in all subjects. This would enhance further students' academic achievements because books are vital educational inputs improving performance just as teaching personnel.

5.5 Suggestions for Further Research

The study exposed the following areas that require further research.

- i) Contribution of tea industry to the internal efficiency in secondary education in Kericho County.
- ii) Transition, survival and completion rates of students in public secondary schools in Kericho County.
- iii) Influence of Constituency Development Fund on internal efficiency of secondary schools in Kericho County.

REFERENCES

- Achoka, J.S.K. (2007). In Search of Remedy to Secondary School Dropout Pandemics in Kenya. Role of the Principal. *Educational Research and Review*. Vol. 2 (7): 236-244.
- Adeyemi. T. M. (2012). School Variables and Internally Efficiency of secondary schools in Ondo State, Nigeria. *Journal of Educational and Social Research*. Vol.2(3): ISSN 2240-0524.
- Ambayo, A.A. (1997). Parental, Social-economic Status and its Influence in Standard One Enrolment in Primary Schools. A Case study of Migori District. M.ED Thesis, Kenyatta University.
- Arnot, M. (2010). RECOUP Working Paper No. 26. Youth Citizenship, National Unity and Poverty alleviation: East and West African approaches to the education of a new generation. Cambridge. University of Cambridge Press.
- Asia Society. (2014). *National Assessment of Equity in American Schools*. www.quickanded.com/.../promoting-equity-state-by-state-school-by-school.
- Basic Education Report. (2010). Educational Measurement, Assessment and Public Examination. Report on the National Certificate of Examination Results. Republic of South Africa; Government printer.
- Best, J.W. & Kahn, J.V. (1998). Research in Education. Allyn and Bacon. Boston.
- Best, J.W. (1977). Research in Education. New Jersey. Prentice Hall.
- BBC. (2008). Free Secondary Schools for Kenya. London: *BBC News Africa*. News.bbc.co.uk/2/hi/Africa/7239577.stm. Retrieved on 17th 2012, at 1:45pm.
- Bii, N. & Nzevu, J. (2013). Internal Efficiency and Performance: An Assessment of Secondary Schools in Bureti District, Kenya. *Journal of Africa Studies in Educational Management and Leadership* Vol. 3:5-18. www.kaeam.or.ke/.../international-efficiency-and-performance-an-assess.
- Bosire, J., Sang, A. K., Kiumi, J. K. & Mungai, V.C. (2009). The Relationship between Principals' Managerial Approaches and Student Discipline in Secondary Schools in Kenya. *An International Multi-Disciplinary Journal, Ethiop*ia.
- Castle, L. B. (1966). *Growing up in East Africa*. London: Oxford University Press.

- Chabari, E. (2010). Challenges Facing Effective Implementation of FSE Education in Public Secondary Schools in Kangundo District, Kenya. Unpublished M.ED Thesis. Chuka University College.
- Coady, D. & Parker, S. (2002). Cost Effectiveness Analysis of Demand and Supply of Education Intervention: The Case of PROGRESSA in Mexico. Washington D.C: World Bank.
- Coclough, C. & Keith, M.I. (1993). *Educating all the Children: Strategies for primary Schooling in the South.* New York: Longman Publishers.
- Cohen, L. & Manion, L. (1992). *Research Methods in Education*. London: Routledge: Oxford University Press.
- Comboni Missionaries Kenya. (2012). *Turkana Zone Charter Diocese of Lodwar (dol)*. Webmaster: Francisco Carrera.
- Creswell, J.W. (2009). Research Design, Qualitative, Quantitative and Mixed Methods Approaches. California SAGE Publications.
- Draves, W.A. (nd). *Why boys under-perform in school. Information that works*. .http://www.williamdraves.com/works/boys.htm.
- Education Portal. (2014). School Principal Educational Requirements to Become a Principal Glossary of Career Education Programs, Htp://education.

 portal.com/articles/School Principal Educational Requirements to Become a Principal.html. 009: www.afrrevjo.com399.
- Elifson, K.W., Runyon, R.P. & Haber, A. (1990). Fundamental of Social Statistics. MC Graw Hill. Newyork.
- Gachugi, J.M.C. (2011). Factors Contributing to Educational wastage in Public and Private secondary Schools in Municipality Division, Nyeri District, Central province, Kenya. Unpublished M.ED Thesis, Kenyatta University.
- Gall, D.M., Gall, J.P. & Borg, R.W. (2007). *Educational research, an introduction*. New York: Longman.
- Gathigah, M. (2014). Student Dropout Rate on the Increase Despite Free Education. *Journalism and communication for Global Change*. Nairobi. IPS. http://www.ipsnews.net/2010/12/student-drop-out-rate-on-the-increase-despite-free-education/highest-population-of-illiterate-adults-Unesc.html.

- Gay, L.R. (1987). *Educational Research: Competences for Analysis and Application*. Florida International University: Merrill Publishing Company.
- Gogo, J. (2002). The Impact of Cost Sharing Strategy on Access, Equity and Quality of Secondary Education in Rachuoyo District. M. ED Thesis. Maseno University.
- Gogo, J. (2012). Cost Effective Measures to Reduce Operational Costs of Secondary Education. Daystar University Centre for Research, Publications and Consultancy working paper series.
- Grey, B. (2008). *High school drop-out rate in major US cities at nearly 50 percent*. ICFI. New York City: Oxford University Press
- Hallack, P. & Poisson, M. (2007). *Corrupt Schools, Corrupt University: What can be done?* Paris: IIEP UNESCO.
- Harbison, R.W. & Hanushek, E. (1992). *Educational Performance of the Poor: Lessons from Rural Northeast Brazil.* New York: Oxford University Press.
- Haugen, C. H. (2009). Contextualizations and Recontextualizations of Discourses on Equity in Education. Norwegian University of Science and Technology Faculty of Social Sciences and Technology Management Programme for Teacher Education. http://www.diva-portal.org/smash/get/diva2:3.
- Holsinger, D.B., Jacob, J.W. & Migumu, B.C. (2002). Cost Effectiveness Analysis of secondary schools in Uganda: comparison of Government and Private Schools. Brigham: Kennedy Centre for International Studies of Brigham Young University.
- Huebler, F. (2005). Creative Commons License in Education. London: Oxford University.
- Huebler, F. (2010). *International Education Statistics*. *Adult and youth literacy in 2010* Paris: UNESCO Institute for Statistics (UIS). Retrieved on Sunday 24/06/2014 at 7:45 pm.
- ILO. (2010). Micro factors inhibiting Education access, Retention and completion by children from vulnerable communities in Kenya. Kenya Out of School Report.
- Israel, G.D.(1992). Sampling the Evidence of Extension Program Impact. Program Evaluation and Organizational Development, IFAS. Florida. University of Florida.
- Jagero, N. O. (1999). An Evaluation of the Factors Affecting the Quality of Education in Day Secondary Schools in Kenya. Unpublished M.ED Thesis. Moi University.
- Jagero, N. O. (2010). Cost Effectiveness Analysis of Educating Day and Boarding Secondary School Students in Kisumu District, Kenya. PhD Thesis. Maseno University, Kenya.

- Juma, S. (2004). Gender Factor in Performance at KCPE Examination in Kisumu District.
 Unpublished M.ED Thesis. Maseno University.
- Kamau, N., Ngigi, K., Mulugeta, E., Mlama, P., Madanda, A., Chiuye, G., Mogotsi,S. I. Namibia., N.E, Nomcebo, S. O., Mwansa., & Mutanga., S.D. (nd). Gender Equality in Education Score Card A Pilot for Nine Countries in Eastern and Southern African Region. http://www.fawena.org/resources/GenderScoreCard.pdf. 31/1/2014: 3:34 pm.
- Kariuki, Z. M., Kibet, K., Muthaa, G., & Nkonke, G.K. (2012). Factors Contributing To Students' Poor Performance in Mathematics at Kenya Certificate of Secondary Education in Kenya: A Case of Baringo County, Kenya. *American International Journal of Contemporary Research*. Vol. 2 (6): (231 240). http://aijcrnet.com/journals/Vol_2_No_6_June_2012/11.pdf
- Katharina, V. (2013). Education Position Paper improving learning, expanding opportunities

 International development. https://www.gov.uk/EducationPositionPaperJuly2013.
- Kathuri, N.J. & Pals, D.A. (2005). Introduction to Educational Research. *Education sector Development*. Vol. 14 (3). Nakuru. Education Media.
- KENPRO. (2013). *Challenges Facing the Implementation of Free Primary School in Kenya*. Kenya Project Organization. http://www.kenpro.org/papers/htm.
- Kenya Education Partnerships. (2010). Factors Affecting Quality Education in Kenya schools in ASAL areas. Friends of Kenya.
- KNEC. (2010). *KCSE Results* 2011. Nairobi: Kenya National Examination Council. http://blog.theonlinekenyan.com/kcse-results-2009.
- KNEC. (2011). *KCSE Results* 2011.Nairobi: Kenya National Examination Council http://blog.theonlinekenyan.com/kcse-results-2010.
- KNEC. (2012). *KCSE Results* 2011. Nairobi: Kenya National Examination Council http://blog.theonlinekenyan.com/kcse-results-2011.
- Kombo, D. K. & Tromp, D.L.A. (2006). *An Introduction of Proposal and Thesis Writing*. Nairobi: Pauline publications Africa.
- Koross, P.K., Ngware, W.M., & Sang, A.K. (2009). "Principals' and Students' Perceptions on Parental Contribution to Financial Management In Secondary Schools in Kenya", Quality Assurance in Education. *Emerald Insight Journal*. Vol. 17 (1): 61-78.

- Leedy, P.D. & Ormrod, J.E. (2005). *Practical Research: Planning and design*. New Jersey: Pearson Merrill Prentice Hall.
- Liston, V. (2006). *NGO'S and Spatial Dimensions of Poverty in Kenya*. Dublin: Department of Political Science, Trinity College.
- Luvega, C.I. (2007). An Evaluation of the Implementation of the FPE Policy in Selected Public Primary Schools in Kakamega District. Unpublished M.ED Thesis. Maseno University.
- Macgregor, K. (2007). *South Africa: Student drop-out rate*.alarminghttp://www.universityworldnews.com/article.php?story=200710 251 02245380.
- Macgregor, K. (2012). South Africa: Student drop-out rates. http://learningenglish.voanews.com/content/high-dropout-rate-a-problem-for-south-africa-144393775/606824.html.
- Macharia. R. W. (2013). Impact of Free Secondary Education Policy on Internal Efficiency of Day Schools in Gatanga District, Murang'a County, Kenya. Nairobi. Kenyatta University.
- Mallum, G. (1981). Educational Wastage and Need for Guidance in Nigeria schools. Lagos.
- Mayo, J. & Murambi, N.K. (2009). The impact of Cost Sharing on Internal Efficiency of Public Secondary Schools in Ndivisi Division, Bungoma District. *Mediterranean Journal of Social Science. Vol.4 No.13 441*. Retrieved on 11:50 am on 6TH April 2013.
- Mc Burney, D.H. & White, T.L. (2010). *Research Methods*. Wadsworth Cengage learning. United States of America.
- Mikiko, N., Yamano, T. & Sasaoka, Y. (2005). *Impacts on the universal primary education attainment and private costs in rural Uganda*. Tokyo: National Graduate Institute for policy studies. http://www3.grips.ac.jp/~yamanota/UgandaUPE%20Oct%202005.pdf
- MOE. (2007). Report of Task force on Affordable Secondary Education. Nairobi. Ministry of Education.
- MOE. (2008 a). Endangering *Education Sector Budget*. *Reforming Future Education Sector Budgets*. Nairobi: Government Printer.

- MOE. (2008 b). *The Development of Education National Report of Kenya*. Inclusive education: The Way of the Future. The International Conference on Education, Geneva, 25-28 November 2008.
- MOE. (2009). Guideline for the Implementation of Free Secondary Education. Republic of Kenya. Nairobi.
- MOE. (2011). Quality education for National Development. Nairobi. Government Printer.
- MOE. (2012). Education for Development. Kericho District Education Day. Prepared by DEO's Office Kericho.
- MOE. (2013). Kipkelion District Education Day. Prepared by DEO's Office Kipkelion.
- Muchiri, K. (2012). Challenges Facing Implementation of FSE in Kangemi District. Muranga County. Unpublished M.ED Thesis. Kenyatta University.
- Mugenda, O.M. & Mugenda, A.G. (2003). Research Methods: Quantitative and Qualitative Approaches. Nairobi: ACTS Press.
- Muindi, M. (2012). Impact of FSE Policy on Quality of Secondary Education in Ketanyi Division. Yatta district, Machakos County. Unpublished M.Ed. Thesis. Kenyatta University.
- Mulama, J. (2004). Education-Kenya: Too Much, Too Soon? Nairobi: Press Service.
- Mundia, L. (nd). Secondary School wastage, Continuing Education and Youth
 Unemployment in Zambia.
 - http://www.directions.usp.ac.fj/collect/direct/index/assoc/D770108.dir/doc.pdf
- Murunga, F., Kilaha, K., & Wanyonyi, F. (2013). Emerging Issues in Secondary School Education in Kenya. *International Journal of Advanced research*. Vol. 1. Issue 3.
- Musyimi, C.M. (2011). Wastage Rates in Kenyan Secondary Schools. A case study of Kathonzeni District, Makueni County. Kenyatta University Institutional Repository. http://ir-library.ku.ac.ke/handle/123456789/7290.
- Mwebi, B. & Simatwa, E.M.W. (2013). Expansion of Private Universities in Kenya and its Implication on Quality and Completion Rate: An analytical Study. *International Research Journals*.Vol. 4 (4): 352-366 http://www.interesjournals.org/ER.
- Mwiria, K. (1985). *The harambee School Movement in Kenya*. A historical Perspective PhD Dissertation, Stanford University.

- Nanda, P.K. (2014). India has the highest population of illiterate adults. *Live Mint & Wall Street Journal*:

 http://www.livemint.com/Politics/3yYYIDoiLTWDiJAOg5J9SL/India-has-the-highest-population-of-illiterate-adults-Unesc.html.
- NCES. (2007). Achievement Gaps: How Hispanic and White Students in Public Schools Perform in Mathematics and Reading on the National Assessment of Educational Progress. http://nces.ed.gov/nationsreportcard/pubs/studies/2011459.asp.
- NCES. (2011). Trends in High School Dropout and Completion Rates in the United States:

 National Assessment of Educational Progress U.S: Department of Education.

 https://nces.ed.gov/pubs2012/2012006.pdf.
- NCPA. (2008). The High School Dropout's Economic Ripple Effect. National *Centre for Policy Analysis*. *Ideas changing the world*. http://www.ncpa.org/sub/dpd/index.php?
- Ngeno, V.C., Simatwa, E.M.W. & Soi, D.C. (2013). Determinants of Girl Students' Academic Achievement in Mixed Day and Boarding Secondary Schools in Kericho District: An Analytical Study. *Educational Research Journal*.Vol. 4 (7):543-554. http://www.interesjournals.org/er/.
- Ngeno, V.C., Simatwa, E.M.W. & Ayodo, T.M.O. (2012). Cost Effectiveness Analysis of Educating Girls in Mixed Day and Boarding Secondary Schools in Kenya: A Case Study of Kericho District. *Educational Research Journal*. Vol. 3(5): 480-494. http://www.interesjournals.org/ER.
- Ngesu, L., Wachira, L., Mwelu, B. & Nyabisi, E. (2012). Critical Determinants of poor performance in KCSE among Girls in Arid and Semi Arid. *Journal of African Studies in Management and leadership*. Volume 1 (2): 63-70 http://www.kaeam.or.ke/articles/Vol2N/Paper6.pdf.
- Ngware, M., Onsumu, E., Muthaka, F. & Muthika, D. (2006). Improving Access to secondary Education in Kenya. What can be done? *Emerald Journal*. Vol. 25 (7): 448 www.emeraldinsight.com. Last visited 12th May, 2013.
- Nsubuga, E.H.K. (2000). Fundamentals of Educational Research. Kampala. MK Publishers (U) Ltd.

- Nyamesa, A.M. & Chemwai, B. (2013). Drop out among pupils in Rural Primary Schools in Kenya. The Case of Nandi North District, Kenya. *Journal of Education and Practice* Vol.4,(19).
- OECD. (1975). Education Equality and life. Volume 1. Paris. OECD
- OECD. (2000). Teacher Utilization in Developing Countries. Paris .OECD
- OECD. (2006). Program on international Assessment of Schools. Paris. OECD
- OECD. Development Centre (2010). Gender Inequality and the MDGs: What are the Missing Dimensions? (231 240) Issues Brief. Paris. OECD.
- Oketch, M. & Rolleston, C. (2007). *Research Review on Institute of Education*. University of London: UK.
- Oketch, M. & Somerset, A. (2012). A Free Primary Education and After in Kenya:

 Enrolment impact, quality effects, and the transition to secondary school. Consortium for Research on Educational Access, Transitions and Equity. Create Pathways to Access Research Monograph No.37: http://www.create-rpc.org/pdf_documents/PTA37.pdf.
- Okuom, H.A., Simatwa, E.M.W., Olel, M.A. & Wichenje, K.M. (2012). Assessment of Factors that Contribute to Repetition and Dropout of Pupils In Primary Schools in Flood Prone Areas of Nyando District, Kenya: An analytical study. *Educational Research* Vol. 3(2): 190-201http://www.interesjournals.org/ER.
- Olubuor, R. O. (2009). Private cost analysis of pre-school education in Nigerian private schools. University of Benin, Nigeria.
- Onsomu, E.N. & Muthaka, D. (2008). Financing of Secondary Education in Kenya. Costs and Options. Nairobi: Kippra.
- Onyango, J. (2003). Factors that influence girls' performance in Mathematics in Nyanza Province Kenya. Unpublished M.ED Thesis. Kenyatta University.
- Orodho, A. J. (2004). Techniques of Writing Research Proposal and Reports in Education and Social Science. Nairobi: Reata Printers.
- Orr, L. & Larry, L. (1999). A study on Education Social Science Experiments. Thousand Oaks, CA: Sage.
- Owolabi, J. (2006). *Quantitative Methods of Educational Planning*. Moborode: Lucky Odoni (Nig.) Enterprises.

- Oxford Dictionary. (2006). Oxford Dictionary for Advanced learners. International Learners edition. London. Oxford University Press.
- Paul, K. (2008). An Assessment on the impact and Sustainability of FPE in Migwani Division. Kitui County. London. Oxford University.
- Pierrakeas. C. & Xenos, M. (2009). A Comparative Study of Dropout Rates and Causes for Two Different Distance Education Courses Hellenic Open University .Greece
- Psacharapoulos, G. & Woodhall, M. (1985). *Education for development. An analysis of investment choices*. Washington D.C: Oxford University Press.
- Punch, K.F. (2005). *Introduction to Social Research: Quantitative and qualitative approaches*. London. SAGE Publications Ltd.
- Republic of Kenya. (1988). Sessional Paper No.6 of 1988 of Education and Manpower Training for the next decade and Beyond. Nairobi: Government Printer.
- Republic of Kenya. (2004). Sessional paper No. 1. of 2004 A policy framework for Education, Training and Research. Nairobi: Government Printer.
- Republic of Kenya. (2005). Kericho District Strategic Plan. Implementation of the National Population for Sustainable Development. Nairobi: National Coordination Agency for Population Development.
- Republic of Kenya. (2005). Sessional paper No.1. of 2005 Kenya Education Sector Support Programme. Nairobi: Government Printer.
- Republic of Kenya. (2006). *Ministry of Education Strategic plan 2006-2011*. Nairobi: Government Printer.
- Republic of Kenya. (2006). Sessional Paper No.55 of 2006 Financing of secondary Education in Kenya Costs and Options. Nairobi: Government Printer.
- Republic of Kenya. (2008). Kenya's Economic Survey Highlight. Nairobi: Government Printer.
- Republic of Kenya. (2010). Kenya's Economic Survey Highlight Report. Nairobi: Government Printer.
- Republic of Kenya. (2010). National census and Population Statistics. Nairobi: Government Printer.
- Republic of Kenya. (2011). *Ministry of Education Quality Education for Development*. Nairobi: Government Printer.

- Republic of Kenya. (2011). Kenya's Economic Survey Highlight. Nairobi: Government Printer.
- Republic of Kenya. (2012). Sessional Paper No...of 2012. *A policy Framework for Education and Training. Reforming Education and Training in Kenya*. Government of Kenya. Nairobi. Government Printer. http://www.vision2030.go.ke/cms/vds/Sessional_Paper_July_5,_2012.pdf
- Republic of Kenya. (2012). Vision and Mission of the Ministry Of Education. Nairobi: Government printer.
- Republic of Kenya. (2013). Sessional Paper No. 14 of 2013. *Kenya Basic Education Act*. Nairobi. Government Printer.
- Rosario, M. (2011). Enrolment rates in Philippine town and city schools before and after the social programme was implemented. Philippines Institute of Development studies.
- Rousseau, J.J. (1712-1778). Emile for Today. The Emile Jean Jacques Rousseau, selected and interpreted by William Boyd. London: Heinemann.
- SACMEQ. (2012). Education in Zanzibar. Southern and Eastern African Consortium for Monitoring and Evaluation Quality. http://www.sacmeq.org/education-zanzibar.htm.
- Soi, D., Barmao, A. & Ngeno, J. K. (2013). Influence of School Type on Girls' Attitudes towards Mathematics in Ainamoi Division, Kericho District, Kenya. *Asian Journal of Social Sciences & Humanities*. Vol. 2: 2186-8492.
- South African Basic Education. (2011). Report on Dropout and Learner Retention Strategy

 Department of Basic Education. Portfolio Committee on Education. Republic of
 South Africa.
 - http://www.education.gov.za/LinkClick.aspx?fileticket=jcSsY0rHcME%3D&tabid=3 58&mid=1261. Retrieved on 1st march 2014 at 8:59.
- State University. (2002 a). Criticism of Public Education Inequality of Opportunity, Highly Bureaucratic Systems, Achievement-Based Outcomes, School Choice, Reform after Reform. StateUniversity.com http://education.stateuniversity.com/pages/2341/Public-Education-Criticism.html#ixzz21kP3lpsL.

- State University. (2002 b). School Dropouts Extent of the Problem, Factors Associated with Early School Leaving, Dropout Prevention Programs and Their Effects StateUniversity.com http://education.stateuniversity.com/pages/1921/Dropouts-School.html#ixzz1y3P8rOq3.
- Suryahadi, A. & Sambodho, P. (2013). Assessment of Policies to Improve Teacher Quality and Reduce Teacher Absenteeism. Jakarta. The SMERU Research Institute. http://www.smeru.or.id/report/workpaper/improveteacherquality/.
- Takashi, Y. & Asankha, P. (2011). Impact of Universal Secondary Education Policy on Secondary School Enrolment in Uganda. *Journal for Accounting Finance and Economics* Vol. 1(1):16-30.
- Takashi, Y. & Asankha, P. (2008). Impact of Universal Secondary Education in Uganda. Development Economics, Economics of Education. Kampala. Makerere University.
- The Daily (2010). Trends in dropout rates and the labour market outcomes of young dropouts. Statistics Canada www.statcan.gc.ca.
- The Elementary and Secondary Education Act (Pub.L. 89-10, 79 Stat. 27, 20 U.S.C. ch.70), is a United States federal statute enacted April 11, 1965
- The Standard Newspaper (2012, March 1st). KCSE performance Analysis and Gender Parity Index. The Standard Newspaper. Nairobi: Standard Media Group.p.10
- UN. (2005). The Millennium Development Goals Report 2005. New York. UN http://unstats.un.org/unsd/mi/pdf/mdg%20book.pdf.
- UNESCO, (2004 a). A comparison of primary school gross and net enrolment rates in sub-Saharan Africa. Paris: UNESCO.
- UNESCO. (1971). Wastage in Education a world Problem. A study prepared for the International Bureau of Education. Paris: UNESCO.
- UNESCO. (1992). Performance in sub-Saharan Africa between the boys and the girls. Paris: IIEP.
- UNESCO. (2003). Global Education Digest shows Rapid Growth in Secondary Education Worldwide. Paris: UNESCO.
- UNESCO. (2004 b). *Indicators of wastage rates in Education. Institute of Statistics*. IIEP Paris: http://www.unesco.org/iiep/.

- UNESCO. (2004 c). *The State of the Right to Education Worldwide Free to Free*. Paris UNESCO. www.katrinatomaserki.com. Retrieved on 17th June 2012 at 10:30 A.M.
- UNESCO. (2006 a). *Grade Repetition, International Policy Series;* International Academy of Education. Paris. IIEP http://www.unesco.org/iiep/.
- UNESCO. (2006 b). *Principles and General Objectives of Education. International Bureau of Education*: http://www.ibe.unesco.org/sub/saharan_africa/nigeria/nigeria.htm.
- UNESCO. (2009 a). *Education for All by 2015*. Education International's Response to the Global Monitoring Report 2008. ie.org/docs/Retrieved on 26th July 2012 at 7:30 pm
- UNESCO. (2009 b). *Education Indicators Technical Guidelines*. UNESCO institute for Statistics. Paris: UNESCO.
- UNESCO. (2009 c). The role of the higher Education Loans Board in Pro-poor management approaches to enhancing access to university education in Kenya. Paris:IIEP. unesco.org/cgi-bin/www.
- UNESCO. (2009 d). Gender Equity in Education: Policy Guidelines for Implementation Aus AID Australian Government. ISBN 978-9980-86-189-4 Department of Education, Papua New Guinea.
- UNESCO. (2010 a). A study carried out in Africa on Enrolment rates after introduction of subsidized education. Paris: UNESCO.
- UNESCO. (2010 b). Global Education Digest, Comparing Education Statistics across the World, Montreal. Paris: UNESCO.
- UNESCO. (2011 b). Report on the Gender Initiative; gender Equality in Education, Employment & entrepreneurship. Meeting of the OECD Council at Ministerial Level Paris 25-26 May, 2011. Paris: OECD.
- UNESCO. (2011a). Gender Equality in Education. Looking Beyond Parity. An IIEP Evidence based Policy Forum. UNESCO Paris: IIEP.
- UNESCO. (2012). *Measuring Education Quality in Africa*. UNESCO world Education Blog. Paris. UNESCO.
- UNGEI. (2011). Gender Equality Assessment in Education. East Asia and Pacific Region. Bangkok: UNICEF.
- UNHRC. (2012). Assessing the 2012 UN Human Rights Council Elections: One-Third of Candidates Unqualified for Membership. Bangkok: UNHRC.

- UNICEF. (2009). Gender Equality in Education Snapshot 'Education for All mid Decade Assessment "East Asia and Pacific Regional Office. Bangkok: UNICEF. http://www.unicef.org/eapro/Gender_Snapshot_web.pdf.
- United States Federal Statistics. (1965). *The Elementary and Secondary Education Act*, New York: Oxford University Press.
- Usher, A. & Medow, J. (2010). Global Higher Education Rankings Affordability and Accessibility in Comparative Perspective. *Higher Education Strategy Associates*. http://www.ireg-observatory.org/pdf. Vol. 3 (3): 399-413.
- Wamukuru, D. K. & Muthaa, G. (2011). Causes of Secondary School Teacher Shortages in Kenya. *Kenya Journal of Education, Planning, Economics and Management*. Volume 3:43.
- Wikimedia, (2013). *Education in Africa from Wikipedia, the free encyclopedia*. http://meta.wikimedia.org/wiki/Terms_of_use/Paid_contributions_amendment.
- Wikipedia, (2010). *Kericho District Consultation Report*. PRSP Website: http://en.wikipedia.org/wiki/Kericho Retrieved on 20th June 2012 at 2:00 PM.
- Wikipedia. (2009). Cambridge University award on Quality Education to Mallya Aditti International School. Bangalore; India. http://aditi.edu.in/World_Awards.htm
- Wikipedia. (2014). Educational Equity. http://en.wikipedia.org/wiki/Educational_equity Retrieved on 27th May, 2014 at 10.26 am.
- Woodhall, M. (2004). *Analysis in Educational Planning Cost Benefit Analysis in Education*. Paris: IIEP .UNESCO.
- World Bank. (1980). Education Sector Policy Paper. Washington D.C: World Bank.
- World Bank, (2008). *Gender Equity in Junior and Senior Secondary Education in Sub-Saharan Africa*. African Human Development Series working paper No.140. Washington D.C. www.directions.usp.ac.fj/collect/direct/index/assoc/D770108.
- World Bank. (2000 a). Education for All from Jomtiem to Dakar and Beyond. Word bank. Senegal http://siteresources.worldbank.org/Education/Resources/278200-1099079877269/547664-1099079993288/efa_jomtien_dakar.pdf.
- World Bank. (2000 b). World Declaration on Education for all and Framework for Action to meet the basic needs. Jomtiem: Thailand, World Bank.

- World Bank. (2001b). *Public Examination Systems: The Nature of Public Examination*. Washington D.C: World Bank.
- World Bank. (2005). Educational Sector Strategy Update: Achieving Education For All Broadening our perspective, Maximizing our effectiveness. Washington D.C: World Bank.
- World Bank. (2007). *Primary school Education Programme in Cambodia. World Food Programme*.http://www.foodsecurityatlas.org/khm/country/education/primary-education. Retrieved on Sunday 24th June 2012 at 7:53 pm.
- World Bank. (2011). *Education in Sub Saharan Africa. Secondary School Education in Africa* http://go.worldbank.org/VKSZD0AZJ0.Retrieved on Sunday 17th June 2012 at 12:15 pm.

APPENDIX I

PRINCIPALS' QUESTIONNAIRE

SPECIFIC INFORMATION

The purpose of this questionnaire is to collect information on the influence of the Free Secondary Education (FSE) Policy on Gender Parity, repeater rate, dropout rate, wastage rate and students' academic achievement in Kericho County. The information collected will be treated with utmost confidentiality and used only for this study. Please don't indicate your name anywhere in this questionnaire. Please give the information required in the spaces provided and with a tick $(\sqrt{})$ where applicable.

_	GROUND INF ow long have you	been the school Prin	icipal?
•	1-5 years	()	
•	6-10 years	()	
•	11-15 years	()	
C	MEDDoctorate	n PGDE, BCOM +PGI ol started	()

1. Amount paid by the parents and the government before and after the FSE for the 2004 cohort and 2008 cohort

Year	Day scholar		Boarders		
	Government	Parents	Government	Parents	
Before FSE (2004-2007)					
After FSE(2008-2011)					
Total					

5. Population of students, teachers and non teaching staff before and after FSE policy for the 2008 cohort.

	Before FSE (2004-2007)	After FSE ((2008-2011)
Number of teachers		
Number of non teaching staff		
Population of students		
Number of BOM teachers		
Number of students per Class		
on average		

6. Enrolment rates before FSE policy (2 Cohorts)

Year	Form 1 2004		Form 2 2005		Form 3 2006		Form 4 2007	
	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys
Enrolled								
New								
Repeaters								
Totals								
Year	_	m 1 05	_	rm 2)06	Forr 200	_	Forr 200	
Enrolled								
New								
Repeaters								
Totals								
Years	20	06	20	007	200)8	200)9
Repeaters (2004 cohort)								

7. Enrolment rates after FSE policy (2 Cohorts)

Year	Form 1 2008		Form 2 2009		Form 3 2010		Form 4 2011	
	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys
Enrolled								
New								
Repeaters								
Totals								
Year		m 1	Forn		For		For	
F 11 1	20	09	201	.U	20	11	20	1 <i>4</i>
Enrolled								
New								
Repeaters								
Totals								
Years	20	10	201	1	20	12	20	13
Repeaters (2008 cohorts)								

8. Number of relevant reference books available in the school.

Number of books in the	Indicate using a tick				
library	Before FSE(2008)	After FSE (2008)			
Below 999					
1000-1999					
2000-2999					
3000-3999					
4000-4999					
Above 5000					

9. Indicate the text book student ratio before and after FSE policy					
Before FSE	After FSE Policy				

10. The book student ratio per subject before and after introduction of FSE policy in Kericho County.

Ratio	Subjects	Before	After
Mathematics			
English			
Kiswahili			
Biology			
Chemistry			
Physics			
History			
Geography			
CRE			
Home Science			
B/studies			
Agriculture			
Computer studies			
French			
Art and design			
Drawing and Design			

(10) Indicate the performance of students in your school in terms of KCSE mean for these two cohorts of students.

Year	KCSE mean scores
2004 - 2007	
2008 – 2011	

Thank you very much for your cooperation in filling this questionnaire.

APPENDIX II

DOCUMENT ANALYSIS GUIDE

Year	Class	No of	No. of	Boys	Girls
	Enrolled	Boys	Girls		
2004	Form 1			Continuing students ()	Continuing students ()
				Repeaters ()	Repeaters ()
				Drop outs ()	Drop outs ()
				New students ()	New students ()
2005	Form 2			Continuing students ()	Continuing students ()
				Repeaters ()	Repeaters ()
				Drop outs ()	Drop outs ()
				New students ()	New students ()
2006	Form 3			Continuing students ()	Continuing students ()
				Repeaters ()	Repeaters ()
				Drop outs ()	Drop outs ()
				New students ()	New students ()
2007	Form 4	•		Continuing students ()	Continuing students ()
				Repeaters ()	Repeaters ()
				Drop outs ()	Drop outs ()

Year	Class	No of	No. of	Boys	Girls
	Enrolled	Boys	Girls		
2005	Form 1			Continuing students ()	Continuing students ()
				Repeaters ()	Repeaters ()
				Drop outs ()	Drop outs ()
2006	Form 2			Continuing students ()	Continuing students ()
				Repeaters ()	Repeaters ()
				Drop outs ()	Drop outs ()
2007	Form 3			Continuing students ()	Continuing students ()
				Repeaters ()	Repeaters ()
				Drop outs ()	Drop outs ()
2008	Form 4			Continuing students ()	Continuing students ()
				Repeaters ()	Repeaters ()
				Drop outs ()	Drop outs ()

Year	Form 1 (2006)	Form 2(2007)	Form 3(2008)	Form 4(2009)
Repeaters for 2004				
cohort				

Year	Class	No of	No. of	Boys	Girls
	Enrolled	Boys	Girls		
2008	Form 1			Continuing students ()	Continuing students ()
				Repeaters ()	Repeaters ()
				Drop outs ()	Drop outs ()
2009	Form 2			Continuing students ()	Continuing students ()
				Repeaters ()	Repeaters ()
				Drop outs ()	Drop outs ()
2010	Form 3			Continuing students ()	Continuing students ()
				Repeaters ()	Repeaters ()
				Drop outs ()	Drop outs ()
2011	Form 4			Continuing students ()	Continuing students ()
				Repeaters ()	Repeaters ()
				Drop outs ()	Drop outs ()

Year	Class	No of	No. of	Boys	Girls
	Enrolled	Boys	Girls		
2009	Form 1			Continuing students ()	Continuing students ()
				Repeaters ()	Repeaters ()
				Drop outs ()	Drop outs ()
2010	Form 2			Continuing students ()	Continuing students ()
				Repeaters ()	Repeaters ()
				Drop outs ()	Drop outs ()
2011	Form 3			Continuing students ()	Continuing students ()
				Repeaters ()	Repeaters ()
				Drop outs ()	Drop outs ()
2012	Form 4			Continuing students ()	Continuing students ()
				Repeaters ()	Repeaters ()
				Drop outs ()	Drop outs ()

Year	Form 1 (2010)	Form 2(2011)	Form 3(2012)	Form 4(2013)	
Repeaters for 2008					
cohort					

8. Number of relevant reference books available in the school.

Number of books in the	Indicate using a tick				
library	Before FSE (2007)	After FSE (2011)			
Below 999					
1000-1999					
2000-2999					
3000-3999					
4000-4999					
Above5000					

Indicate the text book student ratio before and after FSE policy efore FSE						
Mathematics						
English						
Kiswahili						
Biology						
Chemistry						
History						
Physics						
Geography						
CRE						
Home Science						
B/studies						
Agriculture						
Computer studies						
French						
Art and design						
Drawing and Design						

APPENDIX III OBSERVATION GUIDE

1. Repair, Maintenance and Improvement in terms of availability, adequacy and quality.

Facilities	Condition	Comments
Class rooms		
Desks		
Chairs		
Library		
Dining hall		
Laboratories		
Computer lab		
Offices		

2. Water and electricity in terms of availability adequacy and quality

Facilities	Availability	Comments
Piped water		
Bore holes/rain water		
Electricity		
Generators		

APPENDIX IV

INTERVIEW SCHEDULE FOR SCHOOL PRINCIPALS

- 1. How has FSE Policy Influence management of the schools with regard to gender parity, repeater rate, dropout, and wastage rate and students academic achievements in Kericho County?
- 2. The non teaching staff is catered by FSE policy. How has it influenced their services in the school?

APPENDIX V

DQASO INTERVIEW SCHEDULE

- 1. How did FSE policy influence Gender parity index in your county for the first cohort of students (2008-2011)?
- 2. How did FSE policy influence repetition in your county for the first cohort of students (2008-2011)?
- 3. How did FSE policy influence dropout in your county for the first cohort of students (2008-2011)?
- 4. How did FSE policy influence wastage rates for your county in the first cohort of students (2008-2011)?
- 5. In what ways did FSE policy influence students' academic achievements for the first cohort of students in you county (2008-2011)?

APPENDIX VI

DIRECTOR OF STUDIES INTERVIEW SCHEDULE

- 1. How did FSE policy influence Gender parity index in your students for the first cohort of students (2008-2011)?
- 2. How did FSE policy influence repetition in your school for the first cohort of students (2008-2011)?
- 3. How did FSE policy influence dropout in your school for the first cohort of students (2008-2011)?
- 4. How did FSE policy influence wastage rates for your school in the first cohort of students (2008-2011)?
- 5. In what ways did FSE policy influence students' academic achievements for the first cohort of students in your school (2008-2011)?

APPENDIX VII

FOCUSED GROUP DISCUSSION GUIDE

- 1. How did FSE policy influence the number of girls and boys in your class (2008-2011)?
- 2. How did FSE policy influence student repetition in your class (2008-2011)?
- 3. How did FSE policy influence students dropping out in your class (2008-2011)?
- 4. How did FSE policy influence wastage rate in your class (2008-2011)? Where wastage means students taking longer than four years to complete their secondary education.
- 5. In what ways has FSE policy influenced Students academic achievements in your class (2008-2011)?

APPENDIX VIII

INTRODUCTION LETTERS

Maseno University, Box private bag, Maseno. 21st April 2013 Tel: 0722 294 888
To Kericho County Director of Education
Dear Sir/Madam,
RE: DATA COLLECTION IN THE COUNTY.
I am a PhD student at Maseno University and having presented my proposal titled "Impact of FSE policy on Equity, Quality and Education Wastage in Kericho County" in the faculty and it has passed through the school of Graduate studies. It is a requirement that I go to the field and collect data so as to finalize with my studies. This research will be done in Kericho County Secondary schools and your permission is required so as to go on with data collection from the Month of May 2013.
I intend to visit the schools three weeks from now. I would kindly request for the provision of the following documents as part of my study Admission books, Class registers, Fees Registers and KCSE results analysis from the year 2004 to 2011. The Director of studies (DOS) and 10 form four students will interviewed and the later will participate in focused group discussions.
Thank you.
Yours Faithfully,
Viviline Ngeno

APPENDIX IX

INTRODUCTION LETTER

APPENDIX X LETTER FROM THE COUNTY DIRECTOR OF EDUCATION



MINISTRY OF EDUCATION SCIENCE AND TECHNOLOGY STATE DEPARTMENT OF EDUCATION

FAX NO.05221361 When Replying Please Quote: K/1/Vol. I/25 County Education Office P.O BOX 149 KERICHO Date.02/05/2013

TO WHOEVER IT MAY CONCERN

RE: VIVILINE NG'ENO ADM: PG/PHD/0151/011

The above mentioned is one of our teachers in Kericho High School. She is a student at Maseno University pursuing a Doctorate Degree in Planning and Economics of Education.

She is carrying out her research titled:

"The Impact of Free Secondary Education Policy on Equity, Quality and Education Wastage in Kericho County"

She is out to collect data from secondary schools within the county, which will assist her to complete her studies.

Kindly accord her the necessary assistance and support.

MAOGA, O. F.

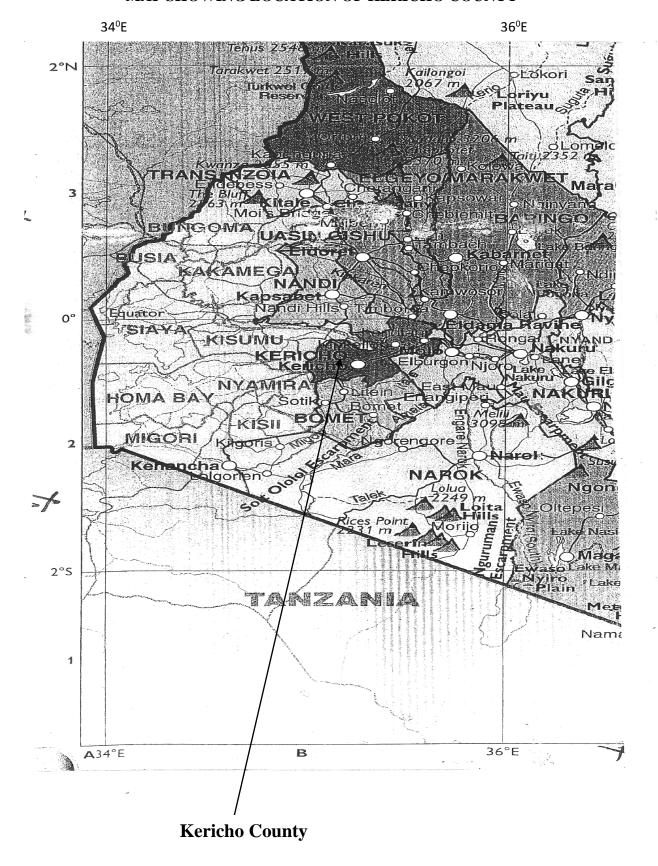
FOR: COUNTY DIRECTOR OF EDUCATION

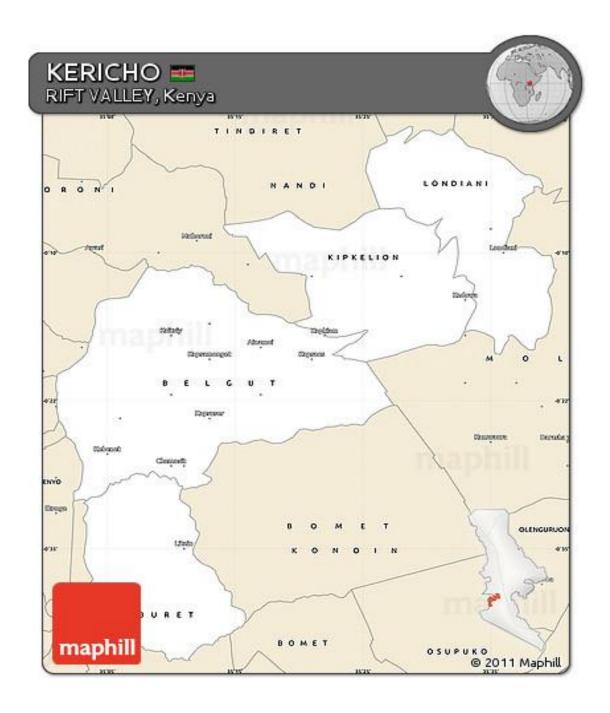
KERICHO COUNTY

Copy to:

THE TSC COUNTY DIRECTOR KERICHO COUNTY

APPENDIX XI MAP SHOWING LOCATION OF KERICHO COUNTY





APPENDIX XII (After Introduction of FSE Policy)

APPENDIX XII (After Introduction of FSE Policy)								
SCHOOLS	FSE FUND	SCHOOL LEVIES	TOTAL LEVIES	GPI	RR	DR	WR	KCSE
1	523515	663000	1186515	0.4	25.49	1.96	1.14	4.04
2	882790	1585743	2468533	0.71	2.33	36.05	1.29	4.08
3	728815	1498100	2226915	0.36	14.09	22.54	1.23	4.67
4	1991410	6543038	8534448	0	7.73	31.96	1.33	6.15
5	2771550	7290000		0	8.89	34.07	1.34	7.84
6	3058970	13101272	10061550	0	32.55	0.67	1.19	8.93
7	851995	6781764	7633759	0	7.23	40.96	1.25	6.9
8	1252330	2747684	4000014	0.54	7.38	15.81	1.3	5.41
9	1652665	5166973	6819638	0	9.94	40.37	1.53	4.16
10	2402010	11700000	14102010	0	2.99	15.81	1.11	8.99
11	410600	961080	1371680	0.4	37.50	27.50	1.75	4.00
12	1026500	1556000	2582500	0.63	8.00	22.00	1.23	5.85
13	492720	268151	760871	0.67	29.17	39.58	1.47	4.30
14	1242065	3603017	4845082	0.17	39.67	9.09	1.22	5.33
15	1088090	2186462	3274552	0	6.60	45.28	1.47	4.33
16	923850	1980000	2903850	0.53	4.44	70.00	2.41	5.33
17	893055	1914000	2807055	0.47	22.99	19.54	1.3	4.8
18	1354980	3785364	5140344	0.31	9.85	58.33	2.07	6.69
19	533780	442000	975780	0.71	19.23	11.54	1.17	4.38
20	1098355	3210000	4308355	0.19	14.02	16.82	1.18	6.89
21	564575	1705000	2269575	0	23.64	25.46	1.38	5.73
22	1426835	2622374	4049209	0.55	7.19	56.12	1.73	5.8
23	461925	337500	799425	0.13	28.89	33.33	1.46	6.4
24	800670	2063100	2863770	0.63	00	46.15	1.42	4.29
25	903320	1636000	2539320	1.1	6.82	43.18	1.53	5.73
26	790405	1439900	2230305	0.91	5.20	12.99	1.05	4.5
27	1940085	5108103	7048188	0.85	11.64	43.39	1.55	5.71
28	461925	1429650	1210320	1.67	0.00	82.22	3.22	3.41
29	461925	748395	1210320	1.1	13.33	40.00	1.14	3.9
30	1047030	2644554	3691584	0	4.90	7.84	1.06	9.69
31	431130	924000	1355130	0	00	52.38	1.38	3.84
32	1488425	4264958	5753382	0	6.90	2.76	1.03	9.27
33	1406305	3781200	5187505	0	17.52	2.92	1.06	7.38
34	431130	1170456	1601586	0.2	00	57.14	1.67	4.16
35	1283125	2578375	3861500	0	11.20	12.00	1.06	8.57
36	954645	1732311	2686956	0	10.75	41.94	1.28	5.88
37	2042735	4378000	6420735	0	15.58	21.61	1.23	9.47
38	2186445 2740755	5197200 8691918	7383645 11432673	0	8.92 32.58	28.17 3.37	1.29 1.14	8.78 8.35
40	390070	657400	1047470	0.43	21.05	26.32	1.14	6.2
	270070	357 100	101/1/0	0.15	21.03	20.52	1.17	0.2

Before Introduction of FSE policy

SCHOOLS	SCHOOL SCHOOL								
belloobs	LEVIES	GPI	RR	DR	WR	KCSE			
1	624,000	1.80	00	70.83	2.11	4.45			
2	1,566,000	1.08	34.48	5.75	1.26	3.88			
3	816,500	0.25	11.29	32.39	1.18	4.38			
4	3,648,329.31	00.00	21.26	14.96	1.37	4.9			
5	3,456,000	00	3.91	21.88	1.19	5.87			
6	4,777,500	00	18.74	1.03	1.15	8.10			
7	3,805,200	0.16	15.00	43.57	1.29	6.23			
8	2,520,625	0.53	7.20	44.00	1.19	5.53			
9	1,106,400	00.00	33.33	22.92	1.49	4.79			
10	4,096,000	00.00	18.75	10.94	1.20	8.06			
11	1,814,700	0.43	00.00	56.56	1.68	4.23			
12	482,887	1.10	00.00	43.20	1.40	4.40			
13	726,453.11	0.53	00.00	33.33	1.11	3.15			
14	3338,750	1.06	16	29.60	1.22	4.18			
15	1,218,000	1.13	42.24	15.25	1.21	4.63			
16	1,221,300	1.64	22.03	30.00	1.31	4.32			
17	2,536,00	0.97	3.00	11.54	1.27	4.17			
18	684,320	0.33	11.54	33.33	1.03	4.49			
19	756,000	1.56	11.90	24.30	1.09	4.94			
20	2,996,000	0.21	4.67	20.00	1.22	6.56			
21	1347,500	0.36	10.91	33.33	1.06	4.66			
22	1,911,051	0.38	11.38	35.71	1.31	5.53			
23	655,200	0.33	00.00	18.37	1.27	5.60			
24	833,000	0.75	24.49	65.22	1.06	4.03			
25	1,283,400	1.09	1.45	39.29	2.03	3.52			
26	1,288,000	2.63	8.93	8.82	1.27	3.39			
27	3,819,050	0.47	4.71	72.73	1.06	4.28			
28	495,000	0.50	00	50.00	2.31	3.21			
29	404,300	0.33	3.85	8.60	1.75	3.06			
30	2,906,250	0.00	5.38	8.60	1.06	9.12			
31	855,000	00.00	3.33	30.00	1.23	3.68			
32	2,539,000	00.00	13.46	4.81	1.04	7.39			
33	2,184,750	0.00	13.33	28.89	1.19	6.84			
34	2,369,800	1.60	00	68.29	1.20	3.78			
35	2,198,400	0.00	10.42	1.04	1.11	9.06			
36	975,618	0.00	5.56	40.74	1.29	5.00			
37	4,290,000	0.00	17.49	19.49	1.19	9.47			
38	3,975,000	0.00	12.58	5.66	1.05	6.82			
39	6,411,493	0.00	24.88	2.87	1.20	9.20			
40	893,000	0.50	4.26	51.06	1.47	4.19			