INFLUENCE OF FREE PRIMARY EDUCATION POLICY ON INTERNAL EFFICIENCY OF PUBLIC PRIMARY SCHOOLS IN EMUHAYA SUB COUNTY, KENYA

BY

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DECLARATION

DECLARATION BY THE CANDIDATE

This thesis is my original work and has not been published or presented for the award of a degree in any other university.

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DEDICATION

I dedicate this work to my loving wife Abigael, my children Ryan and Favour, my father Joram Lilahu, my mum Esther Lilahu, my brothers Wilson, Albert, and the late Jimmy. My Sisters Truphosa, Joan and Cindy without forgetting my dear grand mum Dorice Olenja for their encouragements and aspirations.

ABSTRACT

Globally, countries have made major strides in education in increasing enrolment to achieve Universal Primary Education. In Kenya, the Government reintroduced FPE in 2003 to enhance access, retention, participation, progression and completion. In 2002 dropout rates in Vihiga, Sabatia, Emuhaya and Hamisi Sub Counties were 1.8%, 1.6%, 2.5% and 1.4% respectively. Repetition rates were 9.8%, 8.0%, 10.8% and 8.4% respectively. In 2007, out of 7,967 pupils admitted in class 1 only 4,097 completed class 8 in 2014, 48.83% are still in school or have dropped out. In Emuhaya dropout rates and repetition rates are high before introduction of FPE policy and even after introduction of FPE policy dropout and repetition are still there. The purpose of this study was to establish the influence of FPE policy on internal efficiency. Objectives of the study were to: determine influence of FPE policy on; dropout rates, repetition rates and to determine the coefficient of efficiency. Conceptual framework was used to show the relationship between FPE policy as Independent variable and dropout rates, repetition rates and coefficient of efficiency as dependent variables. The study adopted Ex-post facto, descriptive survey and correlation research designs. Study population included 89 Head teachers, 1 Sub County Quality Assurance Standards Officer (SQASO) and 3490 class 8 pupils. Sample size of 73 head teachers, 73 class teachers and 359 pupils was used. Saturated sampling was used to select SQASO. Questionnaire, interview schedule, document analysis and focus group discussion were used to collect data. Content validity of the instruments was determined through the help of Supervisors. Reliability was established through test-retest method using 16 schools. Data obtained from pilot study was correlated using Pearson r at alpha level 0.05.Reliability index for head teachers' and class teachers' questionnaires were 0.72 and 0.76 respectively. Since they were higher than 0.70, the instruments were considered reliable. Quantitative data was analyzed using frequency counts, means, cohort analysis, correlation and regression. Qualitative data was transcribed and reported. The study revealed that there was a strong negative relationship between FPE policy and dropout rates with coefficient of -0.743 significant at .05. It accounted for 54.40% of the variation in dropout rates. There was a strong negative relationship between FPE policy and repetition rates with coefficient of -0.832 which was significant at.05. It accounted for 68.70% variation in repetition rates. Coefficient of efficiency was 55.86% and 71.50% in 2002 and 2014.This mean coefficient of efficiency had improved. The study concluded that FPE policy had reduced dropout, repetition rates and improved internal efficiency of public primary schools in Emuhaya Sub County. The study recommended that FPE fund be disbursed on time to schools. The findings of this study are useful to stakeholders in education as it informs them on the need to assess implementation of FPE so as to achieve its objectives fully.

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LIST OF ABBREVIATIONS AND ACRONYMS

AYPG   Average Year per Graduate

BEFA   Basic Education For All

EFA   Education For All

FPE   Free Primary Education

GDP   Gross Domestic Product

GDR   Grade Dropout Rate.

GER   Gross Enrolment Rate

GSR   Grade Survival Rate

GWR   Grade Wastage Rate

IPAR   Institute of Policy Analysis and Research

KANU   Kenya African National Union

KCPE   Kenya Certificate of Primary Education

KCSE   Kenya Certificate of Secondary Education

MOE   Ministry Of Education

MOEST   Ministry   Of Education Science and Technology

NARC   National Rainbow Coalition

SQASO   Sub County Quality Assurance Standards Officer

UNESCO   United Nations Educational Scientific and Cultural Organization

UNICEF   United Nations   International Children Education Fund

UPE   Universal Primary Education

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CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Universal Primary education is one of the principal concerns of governments around the world (Steer & Geraldine, 2010). In 1948 the United Nations Declaration of Human rights proclaimed that education, especially elementary education was a fundamental human right (World Bank, 1980). Every person has a claim to basic level of knowledge regardless of his /her social, economic or political status. This document set a stage for the rise of Free Universal Education Policies around the world in subsequent years. After decolonization, education moved to the top of nation's post-independence development agendas. Many governments in developing countries allocated much of their resources to education after independence as a means of eradicating poverty, for future development and catalyst for social economic and industrial development (Psacharopoulos & Woodhall, 1985).

According to UNICEF (2001) investment in education is widely recognized as an important element in a given country's development strategy. A study by Bisika (2005) in Malawi notes that a number of countries in Africa introduced Free Primary Education with recognition of human right under Universal Declaration of Human Rights. The importance of primary education cannot be assumed. It is considered to be more important than higher education in terms of impact on poverty alleviation, social progress and economic development (Mukudi, 2004). According to Psacharopoulos and Woodhall (1985) primary education has been given priority as a form of investment in human resources since the average rates of return are higher compared to other levels of education. However, this does not imply that other levels are less profitable.

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One of the significant developments since the World Education Forum in Dakar, Senegal in the Year 2000 was the steady rise in primary school enrolment (UNESCO, 2005). Most countries in the world have put in place measures to enhance access to children in Primary schools. However many nations have not achieved Universal Primary Education (UPE) and about 101 million children are out of school. Some reasons hampering achievement are poverty, illness, absenteeism, high cost of schooling, cultural factors, in appropriate curriculum, examinations, lack of facilities and inefficiency in school system (UNESCO, 2007).

Dropout and repetition are considered key factors in wastage of human resources in terms of both students and teachers. Studies conducted in both developed and developing countries have confirmed that there are high dropout rates and repetition at primary level (World Bank, 2002). Primary school enrolment should be completed by improving on the indicators of school failures which include dropping out, repeating grades and poor quality of education. For instance in 2002 Burkina Faso had a paltry 36% of pupils enrolled in grade one reaching grade five (ADB, 2006).

While some regions, notably Latin America, the Caribbean and East Asia are on course to achieving Universal access to Primary Education, other parts like sub-Saharan Africa have yet to realize the objectives of universal education for all. The progress has notably been sluggish on early childhood care and development. Governments are still for most part spending too little on primary education and ratio of pupils to teachers is over 50 in a large number of countries. Furthermore, there continues to be lack of data on such issues as efficiency suggesting an urgent need for more concerted efforts in this area (UNESCO, 2004b).

Internal efficiency is concerned with the relationship between inputs and output in education such as number of graduates. The internal efficiency of a school is a key determinant of the overall output in education. Lerotholi (2001) point out that internal efficiency of education system is revealed by grade promotion, the higher the grade promotion the better the system efficiency. Galabawa (2003) also describes internal efficiency as follows: the internal efficiency of the system concerns maximizing the relationship between inputs and outputs. Lerotholi (2001) concurs with the above citation and remarks that since internal efficiency is calculated on basis of repetition, dropout and promotion rates, when dropout and repetition rates are high that portion of education system is said to have serious internal inefficiency. Internal efficiency is affected by various factors especially dropout, repetition, promotion, and cycle completion (Subedi, 2007). There are various factors which affect internal efficiency. This includes; availability of physical facilities, availability of instructional materials, family background, dropout and repetition, performance in national exterminations and utilization of teachers (Macharia, 2013).

Attempts to introduce FPE in Kenya were first made in 1974 and later in 1979 with the aim of achieving free and universal primary education. In January 2003 FPE policy was ushered in by the National Rainbow Coalition (NARC) as one of Campaign promises in its 2002 election Manifesto. All Public primary schools in Kenya received Ksh 1,020 per child per annum with the amount disbursed based on the number of pupils enrolled in a school (MOEST, 2003). Its key concern was to improve internal efficiency by enhancing access, retention, quality and relevance, reversing declining enrolment rates at primary school, improving participation, progression and completion rates, reduction of burden of

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cost of education and implementing sector policy goals within education system (Republic of Kenya, 2005).

Dropout rate and repetition rates are key indicators of internal efficiency of education system. Free Primary Education is a government commitment to achieving universal primary education. This is in line with international commitments such as Education for All (EFA) and also part of National Economic Strategy set out by Kenyan Government in the recent reforms (Republic of Kenya, 2005).The aim of providing FPE program was to provide more opportunities to disadvantaged school age children (Otach, 2008).The program created positive outcome because it resulted in significant increase in enrolment in majority of schools (Otach, 2008). The policy abolished school fees and other levies arguing that fees and levies posed a serious hindrance to children wanting to access education in schools (Otach, 2008).FPE fund comprised of an allocation equivalent to Ksh.1, 020 per child per annum with the amount disbursed based on the number of pupils enrolled in schools within that area (MOEST, 2003).

The MOEST gives guide lines on how the funds have to be used. The government sent money to schools per pupil which fall under two accounts: the school instructional material account grant (SIMBA) and general purpose account grant (GPA). SIMBA account covers: textbooks, textbook maintenance, exercise books, supplementary readers, reference materials, pencil, duster, chalk, register' chart and wall map. GPA account covers: support staff wages, renovations, building of toilets, repair, maintenance and improvement of physical facilities, activity, local transport and travelling, electricity, water and conservancy and telephone box postage. Analysis of census report of 2009 show that the number of children out of school in formal education system was

6.7millions specifically they are about 2.1 million in pre-primary (3-5 years), 1.9millions (6-13years and 2.7millions (14-17years) (Republic of Kenya, 2010).

Study by Shahinsha (2010) found out that Pakistan was facing the challenge of universalization of primary Education. Government of Pakistan is trying to increase the net enrolment in Primary education but there are a lot of issues and problems. Poverty is the main problem of Pakistan and teachers confirm that children drop out of school because parents believe that a child is more productive for them if she/he becomes an earning hand even when the government is providing free education. In Ghana the average rate of promotion, dropout and repetition were 90.85%, 6.0% and 3.2% respectively (UNICEF, 2006). Psacharopoulos and Woodhall (1985) conclude that dropout and repetition appear to be most common among students from families with low socioeconomic background and are more prevalent in rural than urban areas. This was mainly due to inadequate learning brought about by low quality of the factor inputs into the system (Hanushelk & WossMann, 2007).

World Bank (2003) report that although FPE has enabled nearly all children to attend primary school in Lesotho there are high repetition rates especially in lower primary classes. In Zimbabwe, completion rates at primary school level have averaged 72% of a grade cohort since 1992, thus 28% of children initially enrolled in grade 1 did not complete all seven grades of primary school. Repetition rates are high at grade 5 and 6 (M.O.E, 2006).Nishimura *et al* (2007) carried out a study to establish the status of dropout and repetition under UPE policy in Uganda. They found that the probability of repetition was higher in public schools than in private schools. To them there was a

possibility that capitation grant might make schools want to have as many pupils as possible to extent of increasing repeaters.

Yang (2014) found that trend of primary education in relation to dropout rate of upper primary schools have indicated decreasing trend from 2009 to 2013.Long distance from home to school, family low standards of living, shortage of school facilities and involvement in family work were found to be major factors to student dropout that affects school internal efficiency.

Shahinsha (2010), the study investigated the causes of student's dropout at primary level in Pakistan. He used descriptive research design while questionnaire and interviews were used to collect data. Study population was 100 primary school teachers .Data was analyzed using Chi-square. This study used Ex-post facto and descriptive research designs. Four instruments of data collection were used which include questionnaire, interview schedule, Focus Group Discussion and document analysis. Mwiria and Wamahiu (1995) assert that document analysis is the best method of accessing the valid information since it cannot create, waiver or withhold information required by researcher on data collections that ensure validation and triangulation of findings. The Study looked at drop out but did not look at how it has been influenced by Free Primary Education policy. Mcgregor (2007) found that 40% of South African students drop out of university in their first year. Financial difficulties among the country's large poor black students are to blame. Students from low income, less educated families are the most likely to drop out.

Ogada (2014) did his study on factors influencing dropout and repetition in primary schools in Kakamega Municipality. He found that grade dropout rates are on decline from

17.3% in 2004 to15.1% in 2010. Ojwang (2012) in his study on analysis of internal efficiency using non schooling gap and school based inputs in public schools in East Karachuonyo division note that grade wastage rates are generally high in upper classes. Nyae (2012) reveal that average dropout rates gradually increased from class one to class seven that is from 12.76% to 22.16%.The dropout rates for class seven and eight decreased to 10.33% in 2010.Kiplagat (2012) established that as a result of implementation of FSE policy students were learning continuously and that cases of dropout had declined significantly from 11.34% in 2004 to 4.26% in 2011.Studies by Ojwang (2012), Nyae (2012) ,and Kiplagat (2012) did not focus on influence of FPE policy on dropout rate. This is the gap in knowledge that this study intended to fill.

Factors that influence repetition tend to differ. Apart from family and student factors internal variables of education system and quality of teaching have considerable effect on repetition. Such variables include teacher attitude, degree of preparation, and management of school and level of infrastructural facilities in the school (UNESCO, 2012). In Latin American 60 percent of every 100 pupil who enter primary school drop out before completion (Todaro, 1985). In developing countries a third of every a half of all pupils repeat first grade and a quarter or more repeat subsequent grades. In U.S.A it was found that in overall 29 percent of all primary students are repeating their grades each year. This was mainly due to inadequate learning brought about by low quality of factor inputs into the system (Hanushelk &Wossmann, 2007). A survey conducted by open society 2007 in six developing countries found that low economic status of a family was the prominent reason for educational withdrawal.

Abadzi (2007) points out that most Brazilian children attend both primary and secondary school but suffer from some of highest rates of grade repetition and dropout in the world as well as high disparities in the quality of education across rural and non rural populations. Psacharopoulos and Woodhall (1985) established that inadequate income among low class families hindered the provision of tuition fee, school books and other learning materials necessary to ensure good academic performance and continuation. Yang (2014) in his study found that poor school infrastructure ,lack of experienced teacher, teachers absenteeism, student teacher ratio, lack of parent and community involvement are minor factors for student repetition even with UPE. Odhiambo (2014) found that there was increase in enrolment characterized by decline in enrolment as boys move to upper primary school level. Abala (2006) did his study on factors influencing internal efficiency of public primary schools under free primary education policy in Suba East. The study found that despite introduction of FPE to improve internal efficiency in public primary schools; public primary schools in Suba East Division still revealed high rates of repetition and dropout. However this study was done before full cycle of FPE.

Ogada (2014) found that in public schools in Kakamega municipality repetition rates were on upward trend from 8.5%in 2004 to 11.6% in 2010 showing an increase of 36.47%. Kiplagat (2012) in his study on influence of free secondary education on access and completion in Kuresoi found that FSE has influenced completion rate positively and repeater rate had reduced by 0.51% in 2011.Nyae (2012) in his study found that the average highest repeater rate was in class eight at 0.2458 and lowest was at 0.1078 in class one. From the studies reviewed Abala (2006), Ogada (2014), Kiplagat (2012) and Nyae (2012) no study focused on influence of FPE policy on repetition. This is the knowledge gap that motivated the study.

Internal efficiency is concerned with the relationship between inputs and immediate output in education such as the number of graduates. It is the extent resources made available to educational system are being used to achieve the objectives for which the system has been set up. To measure internal efficiency in education flow rates such as promotion rate, dropout rate and repetition rate have to be considered. If the system is able to see students through the system in shortest possible time then the system is efficient. Internal efficiency of an education system can be determined using coefficient of efficiency.

Study by National Environmental and Health Center (2011) on internal efficiency of Primary Education in China found that Coefficient of efficiency was lowest at 69.8% in Rasuwa district and highest on in Rupandehi district at 75.8% under Universal Primary Education. The target population was 5 districts representing 5 development regions and 3 ecological belts. One district was from each region was selected and one sample school selected. In this study sample size was not representative hence could have used a formula to get sample size. Study by UNESCO (1998) in Arab states found that Coefficient of efficiency in 12 Arab States varied from 63% to 96%for half of these countries from which data was available range from 78% to 93% with a median 87%.In Nigeria a study by Adeyemi (2012) found that secondary schools had coefficient of efficiency 87.7% which showed that secondary schools in the state are internally efficient.

 A study by Hanushek and Wossmann (2007) on internal efficiency of public primary education established that one third of the expenditure on primary education are wasted or used inefficiently. Abagi and Odipo (1997) found that primary education system in Kenya face the problem of inefficiency. However the study was carried out before introduction

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of FPE policy in Kenya. Yaola (2012) in his study found that efficiency of private schools was high. Ojwang (2012) established that the Actual Grade Survival rates were higher in lower classes and reduced in upper classes and further declined as pupils moved to class 7 and 8. The study used non- schooling gap and school based inputs to analyze internal efficiency. This study intended to determine coefficient of efficiency of public primary schools in Emuhaya Sub County to get the level of internal efficiency in public primary schools since the introduction of Free Primary Education. This will enable us know whether with introduction of FPE policy level of internal efficiency has improved. This is the knowledge gap the study wanted to fill.

Free Primary Education policy has led to increase in net enrolment from 79.8% in 2002 to 88.2% in 2014. Gross Enrolment rate has also increased from 93% in 2002 to 103.5% in 2014 (Economic Survey, 2014).However completion rate has not been 100%. The table below shows gross enrolment in public primary schools in Kenya from 2003 to 2014.

Table1.1: Gross Enrolment in Primary Schools in Kenya 2003-2014 in 000"

YEAR	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Standard1	1,311.7	1,252.4	1,206.2	1,161.3	1,312.1	1,316.1	1,381.1	1,370.7	1,370.7	1,370.3	1,369.6	1,372.3
Standard 2	1,018.4	1,139.4	1,127.4	1,086.4	1,216.3	1,228.5	1,289.1	1330.8	1,331.2	1,332.7	1,316.0	1,215.5
Standard 3	945.2	953.7	1,066.7	1,062.2	1,188.3	1,180.6	1,238.8	1,320.0	1,324.1	1,324.6	1,328.1	1,206.8
Standard 4	922.6	923.4	963.6	1,040.5	1,093.8	1,171.4	1,229.2	1,220.7	1,313.4	1,317.5	1,317.9	1,326.7
Standard 5	854.8	846.5	859.9	898.8	999.2	1,082.0	1,135.4	1,161.9	1,182.3	1,272.2	1,276.3	1,276.8
Standard 6	793.3	818.7	842.9	848.7	908.4	979.5	1,027.9	1,056.2	1,136.4	1,156.5	1,244.4	1,248.3
Standard 7	762.1	817.7	873.0	895.0	831.0	903.9	948.3	1,017.2	1,023.1	1,101.1	1,120.3	1,205.6
Standard 8	551.5	643.1	651.7	637.8	704.8	701.9	736.5	875.3	887.9	891.1	884.9	898.7

Source: Economic survey 2004, 2006, 2008, 2010, 2012, 2014.

Table 1.1 shows the Gross enrollment in primary schools in Kenya in the year 2003 to 2014 in 000''. From Table 1.1 it can be noted that gross enrolment rate has been increasing from the year 2003.This may be attributed to the reintroduction of Free Primary Education by NARC Government in 2003.Although there is increase in enrolment it can also be noted that some learners may be taking more than one year to complete a given grade or drop out since not all those who start do complete. According to economic survey 2015 completion rates in 2014 were 78.5%.This imply that 21.5% of pupils do not complete primary education because of either dropout or repetition. Table 1.1 has been used to calculate percentage of pupils who did not reach final grade for the cohorts 2003-2010, 2004-2011, 2005-2012, 2006-2013 and 2007-2014.

Table 1.2: Percentage of pupils who did not reach final grade in primary schools in Kenya based on 2003, 2004, 2005, 2006 and 2007 cohorts

Year	2003-2010	2004-2011	2005-2012	2006-2013	2007-2014
Rate	33.27%	29.10%	26.12%	23.80%	31.50%

Source: Economic survey, 2004-2014

Table 1.2 shows percentage of pupils who did not reach final grade in primary schools in Kenya based on 2003, 2004, 2005, 2006 and 2007 cohorts. From Table 1.2 it can be noted that dropout rates and repetition rates are still there. In 2014 percentage of pupils who did not reach final grade was 31.50%. The level of influence of FPE policy on dropout rates and repetition is not known. Dropout and repetition vary from region to region and from year to year.

Table 1.3: Comparative Dropout rates from Primary Grade 1 after six years in Selected African Countries in 2000

Country	Percentage (%)	Country	Percentage
Benin	39.9	Madagascar	75.4
Botswana	16.5	Mali	50.6
Burundi	55.1	Niger	40.3
Chad	71.5	Rwanda	66.8
Congo	29.2	Senegal	34.0
Cameroon	42.5	Sudan	25.0
Gabon	49.6	Swaziland	31.0
Gambia	4.9	Tanzania	14.6
Ghana	28.2	Zaire	59.4
Ivory Coast	19.8	Zambia	21.8
Kenya	22.3	Lesotho	53.0

Source: Bray, Clarke and Stephens (2002)

Table 1.3 shows comparative dropout rates from Primary Grade 1 after six years in Selected African Countries in 2000. From Table 1.3 it can be noted that dropout still exist in Africa with highest percentage recorded in Madagascar (75.4%) while lowest in Gambia (4.9%).

In Latin America and Caribbean implementation of policies yield results but high rates persists. Repetition fell from 12% to 8% in 2000 and 2010.In Brazil the rate dropped from24% to 18% in 2006 while in Nicaragua and Guatemala registered highest dropout rates at 52% and 35% respectively. In southwest Asia there was modest progress despite demographic dividend. About 9.1 million children in primary schools repeated in 2009

(UNESCO, 2009). Four countries registered reduction in repetition rates. These include Nepal (26%-12%), Bhutan (4%-6%), Iran (2-5%), and India (4%-3.5%). Dropout rates remained high at 33% in 2009. In Sub-Saharan Africa the progress has been steady but challenges in providing educational opportunities for growing school-age population remain. Repetition rates remain high in Burundi (36%) and Togo (23%) while dropout rates are high in Chad and Uganda at 72% and 68% (UNESCO, 2012).In Kenya the values concur. In western region dropout rates were 2.4% in 2002 and repetition rates were 11.9% (Ministry of Education, 2007). During the same period Emuhaya Sub County had a dropout rate of 2.5% and repetition rates of 10.8%.These rates are seen to be high. Table 1.4 below shows dropout rates in Vihiga, Sabatia, Emuhaya, Hamisi and Butere Sub County between 1999 -2002

Table 1.4: Dropout rates in primary schools in Vihiga, Sabatia, Emuhaya, Hamisi and Butere Sub Counties between 1999 -2002

YEAR	DROP OUT RATE				
	Vihiga Sub-County	**Sabatia Sub-County**	**Emuhaya Sub-County**	**Hamisi Sub-County**	**Butere Sub-County**
1999	1.9	2.2	**2.1**	1.3	1.8
2000	1.7	1.2	**2.3**	1.6	1.5
2001	1.5	1.4	**2.2**	1.2	1.6
2002	1.8	1.6	**2.5**	1.4	1.3
Average	1.7	1.6	**2.3**	1.3	1.6

Source: Ministry of Education statistic section, 2007

From Table 1.4 it can be noted that in Vihiga County dropout rates have been fluctuating from 1999, 2000, 2001 and 2002, average for which Emuhaya Sub County has

experienced highest dropout rates of 2.3 as per Ministry of education 2007. This rate was higher than the National dropout rate in 2002 that was at 2.0% (Ministry of Education statistics section, 2007).Table 1.5 below shows repetition rates in Vihiga, Sabatia, Emuhaya, Hamisi and Butere Sub County between 1999 -2002.

Table 1.5: Repetition rates and repeater rates in primary schools in Vihiga, Sabatia, Emuhaya, Hamisi and Butere Sub Counties between 1999 -2002

Year	Repetition Rate				
	Vihiga Sub-County	**Sabatia Sub-County**	**Emuhaya Sub-County**	**Hamisi Sub-County**	**Butere Sub-County**
1999	9.4	7.8	**10.1**	8.2	7.1
2000	9.7	7.6	**10.5**	8.7	7.5
2001	9.6	8.4	**10.4**	8.1	7.9
2002	9.8	8.0	**10.8**	8.4	7.6
Average	9.6	8.0	**10.5**	8.4	7.5

Source: Ministry of Education statistics section, 2007

Table 1.5 shows that in Vihiga County repetition rates have been fluctuating from 1999, 2000, 2001 and 2002 average for which Emuhaya Sub County has experienced highest repetition rate of 10.5 as per ministry of Education 2007. This rate was higher than the National repeater rate in 2002 that was at 7.3% (Ministry of Education statistics section, 2007).Emuhaya, Vihiga, Sabatia, Hamisi and Butere Sub Counties are neighboring Sub Counties and share may things in common which include same economic activities and densely populated with same conditions that have direct influence on internal efficiency (Moulindi, 2008). Emuhaya Sub County lags behind in terms of efficient education. Dropout rate and repetition rates in Emuhaya are higher than in Vihiga, Sabatia, Hamisi,

and Butere. This means that pupils are more likely to drop out and repeat in Emuhaya than in Vihiga, Sabatia, Hamisi and Butere Sub Counties.

With the implementation of Free Primary Education in the year 2003, there was an increase in enrolment in public primary schools. However, all those who are admitted in grade 1 do not complete grade eight or if they do they take more time in the system. In Emuhaya Sub County based on 2007 cohort out of 7,967 pupils admitted in class 1 in public primary schools only 4,097 completed grades 8 in 2014.This imply 3870 pupils are still in the system or have left the system before completion. Despite the government having introduced FPE policy, dropout and repetition rates are still there. Dropout and repetition are indicators of internal efficiency. The study wanted to determine whether FPE policy has had any influence on internal efficiency in public primary schools in Emuhaya Sub County. Table 1.6 below gives a description of gross enrollment in public primary schools in Hamisi, Vihiga, Emuhaya and Sabatia as per 2007 cohort.

Table 1.6: Gross enrolment in Public Primary Schools in Sub Counties as per 2007 Cohort

Sub County	Admitted grade1 2007	Completed grade 8	Rates(%) of those who did not complete
Hamisi	6,554	3,547	45.88
Vihiga	8,141	4,632	43.10
Emuhaya	**7,967**	**4,097**	**48.83**
Sabatia	6,841	3,858	46.60
Butere	6,587	3,770	42.77

Source: Sub county Education Office Emuhaya, Vihiga, Sabatia Hamisi and Butere (2015)

From Table 1.6 in Vihiga County, Emuhaya sub county had the highest percentage of pupils based on 2007 cohort who did not complete class 8 in 2014 at 48.83 5% despite introduction of FPE policy

1.2 Statement of the Problem

Issues of efficiency in education have remained a critical area of concern in developing countries. A number of pupils who enroll in primary schools in developing countries either drop out or do not complete primary education within eight years. In Kenya FPE policy was reintroduced in 2003 to enhance access, retention, improve participation, progression and completion rates at primary school level. Indeed introduction of Free Primary Education has facilitated access to primary education to majority of Kenyan children which has led to increased enrolment. With the importance of education to a country and the commitment of the government to FPE program, children who drop out of school are a setback to country's move towards achieving universal education.

FPE policy was intended to ensure all pupils who join primary cycle are able to finish within the eight years of the cycle. This was to be achieved through the amount of money of Kenyan Shillings one thousand and twenty (Ksh 1020) per child the government sent to public primary schools. Despite funds being given out to schools by the government it appears substantial amount of this expenditure may be to those who take more than one year in a particular grade or drop out of school. The absence of information in Emuhaya Sub County on how FPE policy has influenced grade dropout rates, grade repeater rates and the level of internal efficiency in public primary schools prompted the study. It was noted that based on the 2007 cohort out of 7,967 pupils admitted in grade one in public primary Schools, only 4,097 completed grades 8 in 2014 as reported by Sub county Education Office in Emuhaya. These implied that 3870 pupils (48.53%) were still in the

system or had left the system before completion. This study sought to determine the influence of FPE policy on dropout rates, repeater rates and determination of coefficient of efficiency.

1.3 Purpose of Study

The purpose of the study was to establish the influence of Free Primary Education Policy on internal efficiency of public primary schools in Emuhaya Sub County, Kenya.

1.4   Objectives of the Study

The objectives of the study relating to Emuhaya Sub County were:

(i)   To determine   the influence of Free Primary Education Policy on dropout rate in public primary schools.

(ii)   To determine the influence of Free Primary Education Policy on repetition rate in public primary schools.

(iii) To determine coefficient of efficiency of public primary schools.

1.5 Research Questions

The following research questions guided the study:

(i)   What is the influence of Free Primary Education Policy on dropout rate in public primary schools in Emuhaya Sub County?

(ii)   What is the influence of Free Primary Education Policy on repetition rate in public primary schools in Emuhaya Sub County?

(iii) What is coefficient of efficiency of public primary schools in Emuhaya Sub County?

1.6 Significance of the Study

The findings of the study provide information on the level of internal efficiency of public primary schools in Emuhaya Sub County. The information is useful to quality assurance officers and educational planners in designing strategies for improving internal efficiency of education. It also contributes   knowledge in area of educational planning by shedding more light on internal efficiency   in public primary schools in developing countries like Kenya.

1.7 Scope of the study

The study was confined to public primary schools in Emuhaya Sub County. The focus of the study was on influence of Free Primary Education policy on internal efficiency of public primary schools in Emuhaya Sub County. The study covered the period 1995 - 2002 and 2007-2014. 1995 -2002 is a cohort before FPE policy was introduced while 2007-2014 is a cohort that benefited fully FPE policy. 2007 cohort was chosen because FPE had been in place for four years therefore stabilised. Children, parents and even teachers had by then had confidence in FPE policy. The cohorts enabled the researcher to make comparison on the influence before and after FPE polcy.1995 Cohort was used as control group since they were not beneficiaries of FPE policy.

1.8 Limitations of the Study

(i) There are some other indicators of internal efficiency a part from dropout rates and repetition rates which were not covered by the study, which are completion and survival rates.

(ii) Eight principal (10.96%) and eight teachers (10.96%) did not return the questionnaires. Mugenda and Mugenda (2003) say that return rate of 70% and above is good enough for a study to proceed.

1.9 Assumptions of the Study

The study was carried out on the basis of the assumptions that learning environment in public primary schools in Emuhaya Sub County was leaner friendly.

1.10 Conceptual Framework

This study was based on conceptual framework which is an input-output model propagated by Psacharopoulos (1985).According to the model there is a relationship between inputs and output into education system. Conceptual framework postulates that FPE policy influences dropout rates, repetition rates and coefficient of efficiency. The independent variable in this study is FPE policy. FPE policy was looked at in terms of the money the government sends to schools from the year 2007 to the year 2014 which fall under two accounts: the school instructional material account grant (SIMBA) and general purpose account grant (GPA). The Framework shows the various vote heads under which FPE funds are spent. SIMBA account covers: textbooks, textbook maintenance, exercise books, supplementary readers, reference materials, pencil, duster, chalk, register' chart and wallmap.GPA account covers: support staff wages, renovations, building of toilets, repair, maintenance and improvement of physical facilities, activity, local transport and travelling, electricity, water and conservancy and telephone box postage. Conceptual framework helped to focus on the variables of the study. The framework supposes that with introduction of Free Primary Education all pupils who enroll at primary level of

education remain in school to learn and complete primary level of education within the required time.

INDEPENDENT VARIABLE   **DEPENDENT VARIABLES**

FREE PRIMARY

EDUCATION POLICY

FPE   POLICY-FPE   funds
received by schools from the
year 2007 to year 2014.

INTERNAL EFFICIENCY

- Dropout rate

- Repetition rate

- Coefficient of efficiency

INTERVENING VARIABLES

- School management system and practices

- Attitude of teachers

- Attitude of Pupils
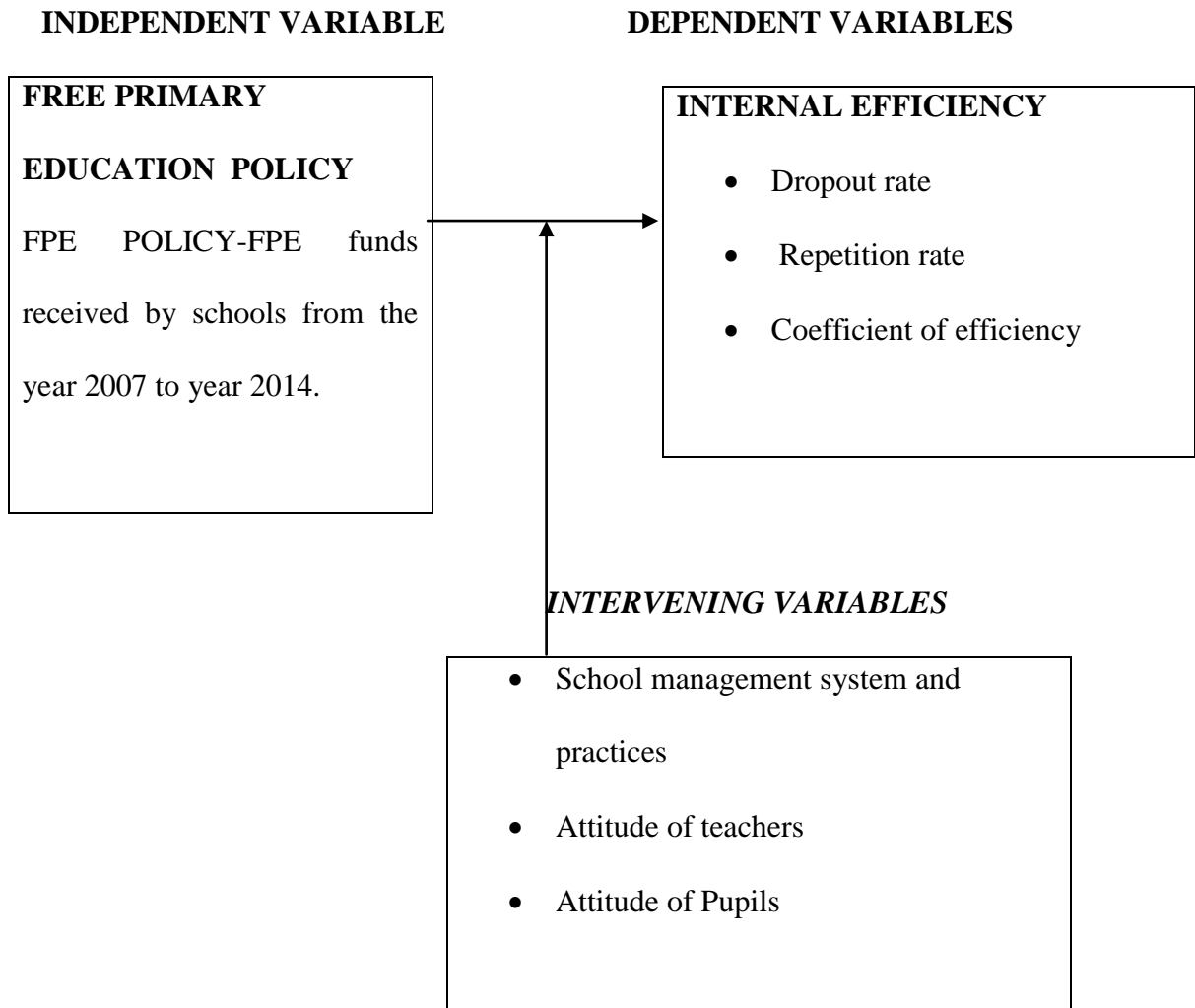
Figure 1.0: Conceptual Framework showing influence of FPE policy on internal efficiency of Public Primary Schools in Emuhaya Sub County

Source: *Researcher*

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1.11: Definitions of Operational Terms

Coefficient of efficiency Ideal number of pupil years required to produce a number of graduates from a given school cohort for a cycle or level of education expressed as percentage of actual number of pupil years spent to produce same number of graduates.

Cohort Group of students as they are traced from year of enrolment through subsequent years to final year of cycle.

Dropout rate Proportion of pupils from a cohort enrolled in a given grade at school year who are no longer enrolled in the following school year

FPE FPE funds received by schools from the year 2007 to the year 2014.

Influence Change brought by free primary education policy in relation to dropout rate and repetition rate.

Internal efficiency The ability of education system to achieve its set objectives based on National objectives of education. This involves increasing access, reducing dropout and repetition rates enhancing retention and improvement of quality education thus minimizing wastage. The key indicators of internal efficiency are dropout rate and repetition rate.

Policy Is the intervention measure put by government to increase internal efficiency by lowering dropout and repetition rates.

Repetition rate Proportion of pupils from a cohort enrolled in a given grade at given school year who study in the same grade in the following School year

Wastage rate Include dropout rate and repeater rate.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

Literature review has been presented under three subheadings based on the objectives of the study which are: Influence of Free Primary Education policy on dropout rate, Influence of free primary education policy on repetition rate and Determination coefficient of efficiency in public primary schools.

2.2 Influence of Free Primary Education Policy on dropout rate in public primary schools

Considerable amount of research has been done on issue of school wastage in developed countries. Studies carried out by the State University (2002) indicate that dropout rates differ by various demographic factors including gender, race and ethnicity, Immigration status and geographical location. According to report by OECD (2011), in Britain more teenage dropout than other developed nations as poor children were edged out of school by those from sharp able families. It established further that one out of five (20%) currently leave school at 16 before taking A-level style qualification examination. Shahinsha (2010) note that in Pakistan cultural values, shortage of teachers and lack of community involvement is the reason for dropout at primary school level.

South Africa Basic Education (2011) carried out a household Survey and found that dropout rate before grade 9 was 1% in grade 1 and 3 and less than 1% in grade 2 and 4.From grade 5 to 8 the dropout rate was between 2% and 4%.Low dropout rates in lower grades was uniform with high enrolment rates in grade 3.Dropout rates however increased from grade 10 to 11 reaching 2%.In total 10% of learners who had been

enrolled in grade 9 to 11 dropped out of school between 2007 and 2008.This was after introduction of Universal Primary Education. However this study did not focus on how FPE policy has influenced dropout rates.

In Uganda study done by Nishimura (2005) found that universal primary education has decreased delayed enrollments and increased grade completion up to the fifth grade and its effects especially large among girls in poor households. Yang (2010) also reveals that in Uganda educational status of parent and lack of educational awareness of parent have impacts on internal efficiency. Children whose parents have low educational status normally drop out of school. Therefore low academic levels of parent contribute negatively to internal efficiency of primary school. Free Primary Education program in Kenya has lead to increase in net enrolment from 79.8% in 2002 to 88.2% in 2014.Gross enrolment rate has also increased tremendously from 93% in 2002 to 103.5% in 2014 (Economic survey, 2014). According to economic survey (2004, 2006, 2008, 2010, 2013, 2014), percentage of pupils who are still in the system or have dropped out is 33.26%, 29.10%, 26.12%, 23.80% and 31.50% in 2010 ,2011, 2012, 2013 and 2014.

 Wastage rates are associated with drop out and repetition. This rates vary from region to region (Abagi et al,2001).UNESCO (2010) felt that dropout phenomena largely drains the government and society as a whole a lot of resources in terms of funds, teaching and equipment. It also implies inefficiency in use of resources in terms of funds, teaching and equipment. Dropouts are considered waste because each school cycle is taken as an entity which should be attended in its totality if the pupil is to reach a certain level of competency (Barasa, 2003).

Musyimi (2011) did a case study on wastage rates in Kenya secondary schools in Kachonzweni District, Makueni County. The study was conducted using descriptive survey design. The sample size was 18 secondary schools. Data was collected using proforma. The study established that dropout rates after introduction of Free Secondary Education was 24.1% in form 3 and 4 for boys and 22% for girls. These rates were high compared to other classes. The study further revealed that causes of dropout were; lack of family support, lack of interest, indiscipline, peer pressure, poor performance, sickness, teenage pregnancy and early marriages. The study was done in secondary schools. Study by Comboni Missionaries Kenya (2012) established that Turkana District register one of the lowest gross enrollment, retention and completion in the County. Out of 33% of children of age 5-10 that start schooling 69.2% drop before finishing primary school. Data was analyzed using percentages. The study did not look at influence of FPE policy on dropout rate.

Ogada (2014) while focusing on factors influencing drop out and repetition in public primary schools in Kakamega municipality used descriptive survey design, study population 25 head teachers, 457 teachers, 1548 standard eight pupils, 25 dropouts and 1 sub county quality standard assurance officer .Sample size was 23 head teachers, 115 teachers, 480 pupils, 25 dropouts and one sub county quality assurance standard officer. Instruments used were only questionnaire and in depth interview. Data was analyzed using descriptive statistics. The findings showed that grade dropout was generally found to be on downward trend from 17.3% in 2004 to 15.1% in 2010.Their was high enrolment in year 2005 and 2007 followed by low enrolment in 2006 and2008 resulted in negative dropout rates in the year2006 and 2008. Dropout rates are high in grade 2 and 3 at

18.0%.Pupils who had dropped out of school alluded that poor parental (22.95%), child labor (19.67%), peer influence (18.03%) and death of parents (14.75%) made them drop. Ojwang (2012) in his study on Analysis of internal efficiency using non schooling gap and school based inputs in public primary schools in East Karachuonyo division used descriptive survey design. Target population consisted of 90 head teachers, 553 Assistant teachers and 5 Assistant education officers. A sample of 36 head teachers, 216 assistant teachers and 5 assistant education officers were used. Questionnaires, interview schedule and observation checklist were used to collect data. Data was analyzed using descriptive statistics and cohort analysis. The study found that actual survival rates were higher in lower classes and reduced in upper classes and further declined as pupils move to class 7 and 8 .Nyae (2012) while using weighted average in Kubo Division of Kwale reveal that average dropout rates gradually increased from class one to class seven that is from 12.76% to 22.16% respectively. The dropout rates for class seven and eight decreased to 10.33% from highest 22.16% between class six and seven. The study also found that the main factors that influenced dropout were poor performance, pregnancy and early marriages. Other factors include poverty, drug abuse, child labor and repetition.

 Study by Owino (2014) on Influence of FPE on pupil participation by gender in public schools in Rongo Sub County revealed that FPE had a positive influence on access, Survival and graduation rates though girls still lagged behind boys. There was increase in enrolment in the sub county for both boys and girls after introduction of FPE policy which was characterized by decline in enrolment as boys and girls move to upper primary level, FPE enhanced survival in public primary schools in that through re-entry policy many girls who drop out of school had got a second chance to pursue their education thus increase in survival rate. Data was analyzed using descriptive statistics and cohort

analysis. To measure influence descriptive statistics was not suitable therefore he could have used inferential. In addition the study did not look at how FPE policy had influenced dropout rates.

Kiplagat (2012) established that as a result of implementation of FSE policy students were learning continuously and that cases of dropout had declined significantly from 11.34% in 2004 to 4.26% in 2011.Cases of girls who had dropped out of school due to early pregnancy and marriage were able to come back to school and continue with learning. Cases of child labor had also significantly reduced. This study agrees with findings by Ogada (2014) that child labor as a factor contributed to dropout. Nyamesa and Chemwai (2013) carried out a study on dropout among pupils in rural primary schools in Nandi North District. They found that grade dropout rate was highest for boys in grade six at 4% and lowest in grade 8 at 1.8%. For girls it is highest at second grade at 6% and lowest at grade three. The findings indicated 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. It further pointed out that factors leading to dropout differ among girls and boys.

Sang (2009) conducted a research on factors influencing dropout in secondary schools in Nandi district using descriptive survey. Study population was 15658 students. The study established that poor performance, school fees, indiscipline and pregnancy were the main factors that influenced dropout.

Ngeno (2015) in her study on influence of free secondary education policy on gender parity, repetition, dropout, wastage and student's academic achievement in Kericho

County, found that there was a weak negative relationship between FSE Policy and dropout and it a accounted for 0.16% variation in dropout rates. Interview findings revealed that FSE did not have much influence on dropout rates. This study concurs with study by Kiplagat that FSE had reduced dropout rates but both studies focused on Free Secondary Education.

Makokha (2016) in his study on Effects of Free Tuition Secondary Education On access, completion rate and quality of education in public secondary schools in Emuhaya Sub county found that FTSE policy had a positive effect on access since the number of students accessing Secondary improved, FTSE policy had a positive effect on completion rate. He also found that indiscipline among students, death of parents and early pregnancy among girls were the main factors causing dropout in secondary schools in Emuhaya. This study did not look at how FPE had an effect on repetition rate and a gain the study was done in public secondary schools. This study is different since it focused on FPE policy. Study by Musyimi (2011), Comboni Missionaries (2012), Ojwang (2012), Nyae (2012), Ogada (2014), Kiplagat (2012), Nyamesa and Chemwai (2013) and Ngeno (2015) and Makokha (2016) did not focus on influence of FPE policy on dropout rate. This is the gap in Knowledge that this study sought to fill.

2.3 Influence of Free Primary Education Policy on Repetition rate in Public Primary Schools

Repetition rate can be higher or lower depending on individual country's policies and GDP (World Bank, 2004). UNESCO (2004 a) established that globally, 6.0% of primary pupils repeat a grade. Repetition rates are highest in West and Central Africa (average repetition rate 12.9%), Eastern and South Africa 12.4% and Latin America and Caribbean

(10.0%). In East Asia and the Pacific, Eastern Europe and Central Asia, the industrialized countries and South Asia, not more than 5% of pupils repeat a grade at primary level. Generally countries with low incomes have the highest repetition rates.

Study by Abadzi (2007) found that in Brazil primary schools suffer from several systematic issues: too much time spent on organization which wastes valuable class time, teachers are always absent or off task diminishing student ability to concentrate on difficult material. Together problems of absenteeism and time mismanagement result in Brazilian children repeating a class.

Grira (2001) found that in Bangladesh nutrition deficiencies are associated with slow school progress due to its impact on children's cognitive development. Repetition reduces completion rates for any given cohort which further compromises internal efficiency of mixed day schools (DFID, 2001). It increases education cost because repeaters reduce the intake capacity of school and prevent other children from entering school or causes overcrowding of classroom. Repetition is one of the constraints of developing countries not to achieve universal primary education (Psacharopoulos & Wood hall, 1985).

In developing countries grade repetition is often considered to be a remedy for low achievers based on the assumption that automatic promotion would disadvantage them. However neither repetition nor promotion addresses the problem of low achievers. Potential solutions lie in providing these children with better learning opportunities at school and home (Hungi, 2010).

South Africa Basic Education (2011) carried out a house hold survey and found that in 2009, on average 9% of learners enrolled in schools were repeating the grade they were in previous year. International comparative information for 2007 show that South Africa's 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 high among males than female learners and much greater in higher grades than in lower grades. This study was done after introduction of Universal Primary Education. However it did not look at how FPE policy has influenced repetition rates.

Yang (2014), in his study found that in Uganda high student teacher ratio and lack of student textbooks were major factors contributing to repetition. UNESCO (2007) found that repetition in Kenya schools was a common feature as a total of 7.7% of pupil enrolled had repeated their class hence providing finance for additional places for repeaters is costly. Abala (2006) in his study on factors influencing internal efficiency of public primary schools under free primary education policy in Suba East used a cluster sample of 25 schools whose heads participated in the study. It involved 70 repeaters and 36 children who dropped out of school after inception of FPE. Questionnaires and focus group discussion was used to collect data. Data was analyzed descriptively by Pearson product moment correlation. The study found that despite introduction of FPE to improve internal efficiency in public primary schools; public primary schools in Suba East Division still revealed high rates of repetition and dropout. It was further found that there exists a positive and significant correlation co-efficient between textbook availability and repetition. However this study was done before full cycle of FPE policy.

Ogada (2014) found that in public schools in Kakamega municipality repetition rates were on upward trend from 8.5%in 2004 to 11.6% in 2010 showing an increase of 36.47%.In the year 2008 repetition was found to be high at class seven at 11.6 % compared to repeater rates in other classes. This was because a number of pupils who had given up on school found their way back due to FPE. Unlike dropout rates repetition rates were found to be high in grade 7 at 11.6% compared to repeater rates in other classes. Further pupils (56.47%) alluded that repetition was carried out due to poor academic performance, they indicated that 47 (8.56%) made their own choice 77 (14.03%) said they had to repeat due to indiscipline.

Kiplagat (2012) in his study on influence of free secondary education on access and completion in Kuresoi found that FSE has influenced completion rate positively and repeater rate had reduced by 0.51% in 2011. Nyae (2012) in his study on determination of repeater rates, dropout rate and survival rate in public primary schools in Kubo division, Kwale District found that the average highest repeater rate tended to gradually increase from class one to class8 that is from 10.74% to 24.58%. Average repeater rates were lower in lower classes than in upper classes. It was established that grade repetition was highest in 2008 between class four to eight than any other year. He found that poor performance was the main factor that contributed to repetition. Others include underage, illness, school transfer, absenteeism, poverty and truancy.

Yaola (2012) in his study on indicators of internal efficiency in private primary schools in Lugari District established that poor performance in exam was the major reason for pupils repetition in class (indicated by 56% of pupils and 42% of teachers).This agrees with findings by Ogada (2014).However this study was done in private primary schools. This

study was done in public primary schools. Owino (2014) established that FPE policy had relieved parents of the burden of paying large amount of fees and this has helped them to stay in school which finally led to their graduation. Despite the other challenges facing girls in primary education, most of the head teachers agreed that FPE policy has positively influenced completion rates of the girl child as the number graduating has increased as compared to previous period before introduction of the policy. Those who finally enrolled in class eight in relation to both gender ended up graduating.

A study by Macharia (2013) in Gatanga District, Murang'a County established that repetition rates greatly increased. Survey design was used in the study. The target population was 23 day schools, 23 principals and 245 teachers. The sample population consisted of 8 day schools, 8 principals and 48 teachers. Questionnaires and interviews were used to collect data. Percentages and standard deviation were used. In this study population used was small to sample hence saturated sampling could have been adopted. The study did not focus on how FPE policy has influenced repetition rates. From the studies reviewed Abala (2006), Ogada (2014), Kiplagat (2012), Nyae (2012), Yaola (2012) and Macharia (2013) no study focused on influence of FPE policy on repetition rates. This is the knowledge gap that prompted the study.

2.4 Determination of Coefficient of Efficiency of Public Primary Schools

Internal efficiency is the relationship between the input and output of an education system. Internally efficient system is one which turns out graduates without wasting any student year or without dropout and repeaters (Akinwumiji, 1995). Internal efficiency is the extent to which resources made available to educational system are being used to achieve the objectives for which the education system has been set up (Yang, 2014). An

education system is said to be efficient if maximum output is obtained from given input or if a given output is obtained with minimum possible input. Educational efficiency has two internal dimensions: flow of students through the system with minimum of waste and quality of learning achieved in the system.

Wastage in the flow is manifested quantitatively in form of dropout and repetition while quality of learning is determined by the input and output of the education system (UNESCO, 2005). Pupil who enter a given cycle of education are supposed to complete it within prescribed period hence those who dropout or repeat given grades form wastage in education. Wastage in education reduces the output of education system leading to internal inefficiency. Ineffectiveness and inefficiency can be seen in terms of school repeaters and dropouts (Hanushek & Wossmann, 2007). This imply lowering dropout and repetition would contribute to improving cost effectiveness of any education system by reducing expenditure per graduate.

Coefficient of efficiency is a synthetic indicator of internal efficiency of an educational system. It summarizes the consequences of repetition and dropout on the efficiency of the educational process in producing graduates. It is the ideal number of pupil years required (absence of repetition and drop out) to produce a number of graduates from a given school cohort for a cycle or level of education expressed as a percentage of actual number of pupils-years spent to produce the same number of graduate. It is calculated by dividing the ideal number of pupil-years required to produce a number of graduates from a given school cohort for the specific level of education, by the actual number of pupil-years spent to produce the same number of graduates, and multiply the result by 100.Results a approaching 100% indicate a high overall level of internal efficiency. Coefficient below

100% reflects the impact of repetition and dropout on efficiency of the education process. As the reciprocal, the optimum input-output ratio is one, and inefficiency rises from any point which is greater than one (UNESCO, 2005).

Study by National Environmental and Health Center (2011) on internal efficiency of Primary Education in China found that Coefficient of efficiency was lowest at 69.8% in Rasuwa district and highest on in Rupandehi district at 75.8% under Universal Primary Education. Similarly under an average number of pupil years invested per graduate was higher in Rasuwa and Baitad whereas in other districts it was less than 7 years. 5 districts representing 5 development regions and 3 ecological belts with consultation with District Education Officer were selected. Sample schools in each district were grouped into to two types; accessible and remote. The total number of schools selected was 20. In this study sample size was not representative hence could have used a formula to get sample size.

Coefficient of efficiency in 12 Arab States varied from 63% to 96% for half of these countries from which data was available range from 78% to 93% with a median 87%.In all the 11 East Asian countries, the coefficient of efficiency ranged from 44%to 98%.Coefficient of efficiency for half of these countries ranged between 67% and 95% with a median at 83%.From these study the education system in Arab countries wasted between 4% and 37% of resources on repeaters and dropouts and half of these countries wasted between7% and 22% of its resources on drop outs and repeaters (UNESCO,1998).

In Nigeria study by Adeyemi (2012) on School variables and internal efficiency of secondary schools in Ondo State found that secondary schools had coefficient of efficiency 85.5% which showed that secondary schools in the state are internally efficient.

A study by Hanushek and Wossmann (2007) on internal efficiency of public primary education established that one third of the expenditure on primary education are wasted or used inefficiently. Abagi and Odipo (1997) conducted a study on efficiency of primary schools in Kenya: Situation analysis and implementation for educational reforms. Primary data was collected from 120 purposively selected primary schools based in12 districts. Secondary data was collected from official documents within the ministry of education and Central Bureau of Statistics. The study established that primary education system in Kenya face the problem of inefficiency. Completion rates have remained low(less than 80 percent) for the last five years. In addition national pupil-teacher ratio was also high at 70:1. However this study was carried out before introduction of FPE policy in Kenya.

Yaola (2012), in his study on indicators of internal efficiency in private primary schools in Lugari Sub County found that efficiency was high (survival was 95%, retention rate was 97% and completion rate was 86%). However it was found that poor performance in exam was the major reason for pupil repetition in class(indicated by 56% pupils and 42%teachers). He found that flow of pupils was inconsistent indicating high turnover of pupils in private primary schools perhaps due to high interschool transfers. Yaola in his study did not determine coefficient of efficiency which is used to indicate the level of efficiency. In addition the study was done in private primary schools. The proposed study will be done in public primary schools.

 Macharia (2013) in his study on impact of FSE policy on internal efficiency of day schooling in Gatanga District, Muranga established that school internal efficiency was affected by repetition rates. The study found that repeater rates had increased from 1.74% in period 2004-2007 to 5.07 in period 2008-2011.Repeater rates varied among schools.

The range of repeater rates among schools was 1.39 in period 2004-2007 and 5.49 in period 2008-2011.This study focused on FSE and did not determine coefficient of efficiency to indicate the efficiency level under the influence of FSE.

Ojwang (2012) established that the Actual Grade Survival rates were higher in lower classes and reduced in upper classes and further declined as pupils moved to class 7 and 8.The low Actual Grade Survival rates in upper classes could be attributed to high poverty level in the division. The highest decline in grade survival rate was between class 7 and 8. This may have been as a result of pupils with low academic performance at class 7 so that only pupils who are more likely to pass K.C.P.E are promoted to class 8. According to the study, Actual Grade Survival Rate was highest in the year 2003.From the findings of the study pupil took an average of 10.1 years to complete primary education. This yielded coefficient of efficiency 0.79 and input ratio of 1.3, implying that the schools in the division were internally inefficient. The study used non- schooling gap and school based inputs to analyze internal efficiency.

Bii and Nzevu (2013) in their study on internal efficiency and performance: An Assessment of secondary schools in Bureti District, Kenya found that secondary schools that had low wastage rates were single schools that were church sponsored. The study revealed further that schools with high wastage rates were public mixed day secondary schools and they were faced with high pregnancy rates, and absenteeism. Two sets of questionnaires were used to collect data. This implies data was collected using one type of instrument which has its own weakness.

Boru (2013) in his study on factors influencing internal efficiency in public primary schools in Moyale District, Marsabit County found that adequacy of teaching and learning materials affected internal efficiency in Public Primary Schools. Data showed that head teachers agreed teacher qualification and in servicing of teachers can help improve internal efficiency. It further revealed that schools internal efficiency was affected by pupil's dropout. The research adopted descriptive research design. Target population was 26 head teachers and 11,238 Pupils. Sample population comprised of 7 head teachers and 370 Pupils. Data was collected by use of questionnaires. However the target population for head teachers was small to sample which is a weakness of this study. In addition data was collected using only one instrument. From the studies reviewed no study has been carried out to determine coefficient of efficiency to get the level of internal efficiency after introduction of FPE policy.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents research design, study area, study population, sample and sampling techniques, instruments of data collection, validity, reliability, data collection procedure , ethical considerations and data analysis.

3.2 Research Design

The research designs used were Ex-post facto descriptive survey design and Correlation research designs. Ex-post facto is a systematic inquiry where the researcher does not have any control of the independent variables because their manifestation has already occurred and cannot be changed (Borg Gall, 1996). In this study Ex-post facto research design allowed the researcher to get data for 1995-2002 cohort and 2007-2014 cohort which cannot be manipulated since enrolment repetition and dropout have already occurred. 1995 -2002 is a cohort before FPE policy was introduced while 2007-2014 is cohort after FPE policy was introduced.

Koul (1992) define " ex-post facto" as a research type where the researcher is concerned with conditions or relationships that exist, beliefs point of view or attributes that are held, process that are going on, effect that are being felt and may select the problem accordingly from the area in which it is interested. According to Mugenda and Mugenda (2003) the main aim of Ex-post facto research design is to determine the reasons or causes for current status of phenomena under study. Ex-post facto research design helped the researcher to get data on dropout and repetition that enabled him perform correlation.

Descriptive Survey is a method of collecting information by interviewing or administering a questionnaire to a sample of individuals (Orodho, 2003). Descriptive survey design is suitable because in this study the researcher collected data in order to answer questions concerning the status of wastage in primary school. It is designed to investigate current status and nature of phenomena (Kasomo, 2007). Descriptive survey design helped researcher describe FPE. Correlation research designs helped researcher establish relationship between FPE funding, dropout rate and repetition.

3.3 Area of Study

This study was conducted in Emuhaya Sub County which is one of the sub counties in Vihiga County. It borders Vihiga Sub County to the East, Butere Sub County to the North, Siaya Sub County to the west and Kisumu west Sub County to the South. The area is located between latitude $0°5'S$ and $0°15'N$ and longitude $34° 30'E$ and $35° 0'E$ covering a total area of 175.2 Kilometers square. It is divided into four Divisions: Elukongo Division, Ekwanda Division, Esiembero Division and Luanda Division. According to the 2009 National population Census, the area had a population of 185,069 people (Republic of Kenya, 2011) with population density of 1,067 persons per Km^2 hence it is one of the most densely populated sub county in the region.

According to 2009 population census, 65% of Emuhaya District is poor, living below poverty line (Republic of Kenya, 2010). Some of the causes of poverty have been identified as overpopulation, landlessness, soil erosion, lack of resources, prevalence of HIV/AIDS, insecurity and high dependency ratio among others (Emuhaya Development Publication,2012).76.2 % of people aged 15 years and above are able to read and write while18.1% of same category is unable to read or write. Overly 72.1% of population is literate (Emuhaya Development Publication, 2012).

There are 101 public primary schools in Emuhaya Sub County; out of this 89 were established before 1995.1995 was chosen because it gave the researcher the cohort which completed class 8 in 2002 and did not benefit from FPE policy. Boda boda operation of motorcycle has been on increase and most of them are being driven by youths who leave primary school before completion of the course. The number of pupils of school age population is increasing in Luanda market even on school days and are getting involved in hawking (Sub county education office, Emuhaya 2015).Further more there are a number of ills that bed evil education in Emuhaya which include early pregnancies and poverty (Sub County education office, Emuhaya).It is expected that with introduction of Free Primary Education   children who start grade one should be able to complete grade eight. It was noted that based on the 2007 cohort out of 7,967 pupils admitted in grade one in Public Primary Schools, only 4,097 completed grades 8 in 2014 as reported by Sub county Education Office in Emuhaya. These implied that 3870 pupils (48.53%) were still in school or had dropped out. This imply dropout rate, repetition rate and coefficient of efficiency were concerns that were to be addressed by FPE policy but its influence is not known. The map for the area of study is attached as Appendix I &J.

3.4 Study Population

 The study population was 89 head teachers, 89 class teachers 1 SQASO, 3490 class eight pupils of 2016 (Emuhaya Sub county Education Office, 2014). SQASO was selected in this study because he is in charge of assessment of quality in schools and is in position to give information on influence of FPE policy on dropout and repetition rates in Emuhaya Sub County. The head teachers were selected as respondents because they are school managers therefore are in a better position of availing all information needed on enrollment, dropout and repetition. They also have access to the required documents such

as class registers and admission book. Class teachers of class eight were also used as respondents. This is because they are able give any relevant information on dropout and repetition. Pupils who were in class eight in 2016 were used as respondent because they have been through the system therefore are well placed to give any information on dropout and repetition.

3.5 Sample and Sampling Techniques

Yamane formula was used to get the sample size. Purposive sampling was used to select 89 schools from the 101 public primary schools that were established by 1995. Mugenda and Mugenda (2003) acknowledges that purposive sampling the units are selected according to the researchers knowledge and opinion about what which respondents they think will be appropriate to the topic. Yamane formula was used to select 73 schools out of 89 schools that were established by 1995. 16 schools were used for pilot study which means 16 head teachers and 16 class teachers of class eight and 349 class 8 pupils were used in piloting. The Yamane formula was also used to obtain 359 pupils from a total of 3490 pupils of class eight.

Proportionate random sampling was used to ensure boys and girls are given equal opportunities in focus group discussions. Class eight pupils were used to provide additional information for the study. According to Yamane (1967) the formula states that:

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

n- Sample size

N-population size

e- Acceptable sampling error (0.05)

* 95% confidence level

Sample size for head teachers

$$n = \frac{89}{1 + 89(0.05)^2}$$

=72.8

=73 headteachers.

According to Orodho (2009), at least 10% of the target population is sufficient for a pilot study. This was used to get number of class 8 pupils to be used in pilot study. Excluded from the study were 16 head teachers, 16 class teachers of class 8 and 349 class eight pupils who were be used in pilot study.

Table 3.1: Sample Frame

Category of respondents	Population (N)	Sample Size (n)	Percentage (%)
Head teachers	89	73	82.02
Class teachers	89	73	82.02
Class 8 pupils	3490	359	10.29
SQASO	1	1	100

3.6 Instruments for Data Collection

Questionnaires, interviews, document analysis and focus group discussion were used to collect data. Questionnaires were used because they enable the researcher gather information from many respondents within limited time of study (Kerlinger, 1992). Two questionnaires were used namely Head teacher's questionnaire (HTQ) and Class Teacher Questionnaire (CTQ).

3.6.1 Head Teacher's Questionnaire (HTQ)

This questionnaire comprised of two sections; section A and section B. Section A was used to collect information about background of the Head teacher; Section B collected specific information on enrolment, drop out, repetition, and head teacher's view on influence of FPE policy on drop out and repetition which was used for objective (i) and (ii). Rating scale ranging from "Very high" to very low" (5=Very High, 4=High, 3=Moderate 2=Low, 1=Very low). HTQ was attached as Appendix B.

3.6.2 Class Teacher's Questionnaire (CTQ)

This questionnaire comprised of two sections; section A and section B. Section A collected information on background of the teacher; Section B was used to collect information on teacher's opinion on influence of FPE policy on dropout and repetition in public primary schools in Emuhaya Sub County. Rating scale ranged from "very high to "very low" 5=Very High, 4=High, 3=Moderate, 2=Low 1=Very low).CTQ was attached as Appendix C. This was used for objective (i) and (ii).

3.6.3 Pupils' Focus Group Discussion Guide (PFGDG)

Focus group discussion guide consisted of questions concerning drop out and repetition in public primary schools.359 class 8 pupils discussed in groups. Out of 359 pupils 35 groups had 10 pupils per focus group discussion totaling to 35 groups and one focus group consisted of 9 pupils making a total of 36 focus groups. PFGDG helped to gather information on influence of FPE on drop out, repetition and reasons for dropping out and repeating. Class eight pupils were chosen because they have been in the system for long and are in a better position to respond to the issues. PFGDG are less time consuming compared to individual interviews and it gathers more data from many respondents at the same time (Beyea & Nicoll, 2000). It was used to gather information for objective (i) and

(ii) and any other relevant additional information for this study. It is attached as Appendix D.

3.6.4 Document Analysis Guide (DAG)

It was used to collect information on enrolment; dropout and repetition for 1995-2002 cohort and 2007- 2014 cohort. This helped in getting data on dropout and repetition. Class registers in schools and admission registers were used. Document analysis is the best method of accessing valid information since it cannot waiver or withhold information required by researcher (Mwiria & Wamahiu, 1995). Document Analysis Guide is attached as Appendix H.

3.6.5 SQASO's Interview Schedule (SQASOIS)

An interview schedule was used to collect information on views of SQASO on drop out, repetition and FPE policy. There was face to face encounter. Respondent's response during interview was recorded through note taking. It was used to get more information about influence of FPE policy on drop out and repetition (Appendix E).

3.6.6 Head teacher's Interview Schedule

 Interview schedule was used to collect information on views head teachers on influence of FPE policy on drop out and repetition. There was face to face encounter. Respondent's response during interview was noted through note taking. It was used to get more information about drop out and repetition (Appendix F).

3.6.7 Validity of Instruments

Validity is the degree to which a test measures what it is supposed to measure. Validity of an instrument is based on how the instrument fulfils the function it has to perform (Mugenda & Mugenda, 2003). To ensure the instruments developed measure what they

are supposed to measure experts from Department of Educational and Foundations of Maseno University were used to assess content validity of the questionnaires and interview schedule. Their input was incorporated in the final draft of questionnaires and interview schedule.

3.6.7 Reliability of Instruments

The researcher used test-retest technique to test reliability. Reliability measures the degree to which particular measuring procedure gives similar results over a number of repeated trials (Orodho, 2004). The researcher administered the research instruments twice in the 16 schools where pilot study was done. Two weeks were allowed between the first and second one. After pilot study the researcher correlated the data. The correlation coefficient(r) obtained was 0.72 which tends to 1 therefore head teachers' questionnaires were considered reliable to collect data for the study. The correlation coefficient(r) for teachers' questionnaire obtained after was 0.76 which tends to 1 therefore the teachers' questionnaire was considered reliable to collect data for this study. According to Gay (1992), a correlation coefficient of at least 0.70 for the two halves is considered reliable.

3.7 Data Collection Procedures

The researcher got permission from Maseno University to collect data through Maseno University Ethics Committee. After receiving the permit the researcher sought assistance from head teachers of public primary school in Emuhaya Sub County through Sub County Director of Education. The researcher made arrangement to visit sampled schools and in each school respondents were briefed on the essence of carrying out research before issuing them with questionnaires.

Document analysis guide assisted in collecting data on enrolment, repetition and dropout for 1995-2002 cohort and 2007-2014 cohort. Data on new pupils was also collected and recorded because the researcher was a studying a specific cohort therefore this helped him identify pupils who belong to cohort under study only. Arrangements were made and dates set on when to interview Sub County Quality Assurance Officer. 35 Pupil Focus Discussion Groups consisted of 10 standard eight pupils while one Pupil Focus Discussion Groups consisted of 9 standard eight pupils. 73 Questionnaires were distributed to Head teachers, 73 Questionnaires to class teachers of class 8 in public primary schools. The researcher distributed the questionnaires himself in schools. Interview with Sub County Quality Assurance Officer and head teacher took between 30 minutes and 45 minutes to relevant information on dropout and repetition.

3.8 Data Analysis

Quantitative data was analyzed using descriptive and inferential statistics. Descriptive statistics was in form of frequency counts, percentages, means, cohort analysis and coefficient of efficiency. Descriptive statistics easily communicates research findings to most of the readers (Kerlinger, 1992). Computation of repeater rates and dropout rates for 1995-2002 cohort and 2007- 2014 by grade was done using the formula (Appendix G). Inferential statistics was in form of Pearson Product moment of Correlation coefficients and regression. Pearson Product moment of Correlation coefficients enabled the researcher get the relationship. Regression analysis was done to get level of influence. A five point rating scale was used to measure the view of Head teachers and class teachers on various responses. Mean rates were calculated from the sum of values of variables. Mean rates were used to determine the degree of influence using a scale of 1-5.Mean rate of 1.0 implied the factor had a very low influence while 5.0 very high influence.

To get the influence of FPE on dropout and repetition rates 2007 cohort was considered. Cumulative dropout and repetition rates per school for 2007 cohort were determined using formula adopted from UNESCO (2009) guideline. Data on FPE funds received per school for 2007 cohort for eight years was collected. The amount received per school for eight years was correlated with dropout rates and repetition rates and their correlation coefficients noted.

Correlation coefficient is a measure of linear relationship between two variables (Creswell, 2009). The study adopted a p-value of .05 to test the level of Significance which is acceptable according to Mugenda (2003). Correlation Coefficients were interpreted using Elifson, Runyon and Haber (1990) Leedy and Omrod (2005) interpretation guidelines. Coefficient of efficiency was used to assess educational efficiency. Coefficient of efficiency was calculated by dividing the ideal number of pupil years by the number of pupil years actually spent by cohort of pupils.

$$\text{Coefficient of efficiency} = \frac{\text{ideal number of pupil years}}{\text{Number of pupil years actually spent by cohort of pupils}}$$

Ideal number of pupil years is 8.Number of pupil years spent was obtained from the average year per graduate which was calculated using the formula in Appendix G. In a system that is perfectly efficient this coefficient is expected to be 100% and inefficiency rises when it is less than 100%. Qualitative data from interview, open-ended items of questionnaires and focus group discussion were transcribed reported and discussed. According to Cresswell (2009) in qualitative research, data analysis involves collecting open ended data based on asking general questions and developing analysis from the information supplied by participants.

3.9 Ethical Considerations

The researcher assured respondents confidentiality and that information gathered was specifically for purpose of the study. The researcher met respondents in their schools. Participants were informed the purpose of the study and explanation given in detail on the importance of the study. Respondents were made aware that participation was voluntary. Consent form was issued to respondents in selected schools. Class eight pupils in selected schools were involved in the study was given consent form which they presented to their parents or guardians for signing and approval to participate. The pupils also signed form of assent to allow them participates in the study. Since the research was free and voluntary, if participant did not sign they were exempted from the research and could walk out freely without victimization. To protect identity of the participants questionnaires were assigned codes and did not bear the names of the participants and school.

Raw data that was collected from the field was kept under lock and key where only the researcher was could access. Processed data was stored in various storage masses and email of researcher to ensure was safer in case of virus. It was also stored in researcher's laptop and other computers and a secret password put. The information was then disseminated to the participants through the Sub County Quality Assurance Officers and Head teachers to ensure feedback of the findings reach the study participant. The benefits of the study were communicated and possible recommendations implemented to benefit the participants and the entire Sub County.

CHAPTER FOUR

RESULTS AND DISCUSSIONS

4.1 Introduction

This chapter presents demographic characteristics of respondents in the study. The findings are presented according to the objectives of the study under the following themes:

a) Influence of Free Primary Education Policy on dropout rates in public primary schools in Emuhaya Sub County.

b) Influence of Free Primary Education Policy on repetition rates in public primary schools in Emuhaya Sub County.

c) Determination of coefficient of efficiency of public primary schools in Emuhaya Sub County.

The return of questionnaires was 89.04% for head teachers and 89.04% for class teachers, 65 head teachers and 65 class teachers return of questionnaires.

4.2 Respondents' Demographic Characteristics

This section provides the characteristics of respondents in relation to gender, highest professional qualification and experience in leadership.

4.2.1 Head teachers

This has been presented in table form and provides the characteristics of head teachers in relation to gender, highest professional qualification and experience in leadership (Table 4.1).

Table 4.1: Demographic Characteristics as indicated by Head teachers (n = 65)

Demographic characteristics	Frequency (f)	Percentage (%)
Gender		
Male	**53**	**81.54**
Female	12	18.46
Total	**65**	**100.00**
Highest Professional qualifications		
PhD	0	0.00
M.ED	2	3.08
B.ED	18	27.69
Diploma	6	9.23
PI	39	60.00
Total	**65**	**100.00**
Headship experience in current school		
1-5 years	8	12.31
6-8 years	34	52.31
Above 8 years	23	35.38
Total	**65**	**100.00**

Source: Field data

Key: Phd = Doctor of Philosophy**, M.ED** Master of Education**,**
B.ED = Bachelor of Education**, PI =** Primary Teacher Certificate

Table 4.1 shows that 65 (100%) head teachers involved in the study 53(81.54%) were male while 12 (18.46%) were female. This shows that few female teachers are appointed as head teachers in Emuhaya Sub County. This is in agreement with the study carried out by Odhiambo (2014) where it was indicated that out of 20 sampled head teachers 19

(95.0%) were male while 1(5.0%) were female. Concerning highest professional qualification for head teachers 2 (3.08%) had masters degree, 18 (27.69%) holds Bachelors of Education, 6 (9.23%) holds Diploma in Education while 10 (60.00%) holds primary teacher certificate in Education. Head teacher experience in current school indicate that 8 (12.31%) had experience of between 1-5 years, 34 (52.31%) had an experience of 6-8 years while 23(35.38%) had an experience of more than 8years.

This findings are in agreement with a study carried out by Ngeno (2015)where it was indicated that out of 40 sampled school principals one (2.5%) had headship experience between 1-5 years,12 (30%) had an experience of 6-10 years,17 (42.50%) had an experience of 11-15 years while 10 (25.00%) had an experience of 16-20years.This implies that in this study Head teachers had enough experience on management and they were able to give important information on dropout rate and repetition rate in Emuhaya Sub County. Head teachers with experience can be relied on for the authenticity of data collected Ngeno (2015).

4.22 Class teacher

Table 4.2: Demographic Characteristics as indicated by class teachers (n=65)

Demographic characteristics	Frequency (f)	Percentage (%)
Gender		
Male	**50**	**76.92**
Female	15	23.08
Total	**65**	**100.00**
Highest Professional qualifications		
PhD	0	0.00
M.ED	0	0.00
B.ED	20	30.77
Diploma	7	10.77
PI	38	58.46
Total	**65**	**100.00**

Source: Field data

Table 4.2 shows that 50 (76.92%) of the class teachers involved in the study were males and only 15 (23.08%) were females. On highest professional qualification 20 (30.77%) of class teachers hold a degree in Bachelor of Education, 7 (10.77%) held Diploma in Education and 38 (58.46%) held Primary teacher certificate in Education. This means that the class teachers are well trained and have the necessary knowledge required to enhance internal efficiency in public primary schools in relation to drop out and repetition in Emuhaya Sub county. According to Robbins (2003) the technical, human and conceptual skills gained in training will enable class teachers and head teachers in understanding issues related to dropout and repetition. Experience gained by class teachers should make them understand educational policies better

4.3 Influence of FPE Policy on Dropout rates in Public Primary Schools in Emuhaya Sub County.

The research question the study sought to answer was: What is the influence of FPE policy on dropout rates in public primary schools in Emuhaya Sub county?

To determine the influence of FPE policy on dropout rate in Emuhaya Sub County data on enrollment for cohort before introduction of FPE and after was collected from school head teachers in 65 public primary schools. Dropout rate by grade and cumulative dropout rate were computed in the Sub County and presented.

Table 4.3: Flow chart showing flow of 2007 cohort

Year					Class				
	1	2	3	4	5	6	7	8	Graduates
2007E	4780								
R	127								
N	0								
2008 E	4849	4473							
R	129	150							
N	0	226							
2009E		4518	4180						
R		153	152						
N		196	231						
2010 E			4243	3903					
R			152	173					
N			246	245					
2011E				3929	3672				
R				247	175				
N				231	250				
2012 E					3626	3346			
R					179	259			
N					289	276			
2013E						3507	2927		
R						266	236		
N						301	247		
2014 E							3342	2684	2678
R							235	129	
N							317	316	
								2987	2983
2015 E								138	
R								201	
N									

Source: Field data

KEY: E – Enrolment R – Repeater N-New pupils

Table 4.3 shows the enrollment and repetition in Emuhaya Sub County for the 1995 cohort. The data was used to compute dropout rate and repetition rate for 1995 cohort and presented as in Table 4.4.

Table 4.4: Dropout rates in Emuhaya Sub County between 1995-2002 before FPE implementation (n=65)

Year	Class	Dropout rate (%)
1995-1996	1-2	0.06
1996-1997	2-3	2.53
1997-1998	3-4	1.40
1998-1999	4-5	2.87
1999-2000	5-6	4.61
2000-2001	6-7	5.97
2001-2002	7-8	4.08
Average dropout rate		**3.07**

Table 4.4 shows that Grade dropout rates before FPE policy were 0.06%,2.53%,1.40% ,2.87%,4.61%,5.97 % and 4.08%.Average dropout rates was 3.07%.This mean before FPE policy 307 pupils were dropping out of school for every10,000 pupils. Dropout rates were higher between class 6 and 7 where 597 pupils dropped out of school for every 10000 in the year 2000-2001.This is because of increased school levies as pupils approached examination class therefore pupils opted to drop out of school. Dropout rates were lower between class 1 and 2 where 6 pupils dropped out of school for every 10,000 pupils in the year 1995-1996.This is because of less levies in lower classes which parents could afford therefore pupils remain in school.

Table 4.5: Flow chart showing flow of 2007 cohort

Year		1	2	3	4	5	Class 6	7	8	Graduates
2007	E	4780								
	R	127								
	N	0								
2008	E	4849	4473							
	R	129	150							
	N	0	226							
2009	E		4518	4180						
	R		153	152						
	N		196	231						
2010	E			4243	3903					
	R			152	173					
	N			246	245					
2011	E				3929	3672				
	R				247	175				
	N				231	250				
2012	E					3626	3346			
	R					179	259			
	N					289	276			
2013	E						3507	2927		
	R						266	236		
	N						301	247		
2014	E							3342	2684	2678
	R							235	129	
	N							317	316	
									2987	2983
2015	E								138	
	R								201	
	N									

Source: Field data

KEY: E – Enrolment R – Repeater N-New pupils

Table 4.5 shows enrollment and repetition in Emuhaya Sub County for the period 2007-2014. The data was used to compute dropout rate and presented as in Table 4.6 below. From Table 4.5 Grade Dropout Rates (GDR) were calculated using the formula adapted from UNESCO guide line (2007b) as shown in Appendix G. The values of dropout rates for the various grades were calculated and recorded as in Table 4.6.

Table 4.6: Dropout rates in Emuhaya Sub County after FPE policy for 2007-2014 (n=65)

Year	Class	Dropout rate (%)
2007-2008	1-2	0.30
2008-2009	2-3	2.91
2009-2010	3-4	0.30
2010-2011	4-5	1.05
2011-2012	5-6	0.93
2012-2013	6-7	4.49
2013-2014	7-8	3.16
Average dropout rate		**1.88**

Source: Field data

Table 4.6 shows that grade dropout rates after FPE policy was introduced were 0.30%, 2.91%, 0.30%, 1.05%, 0.93%, 4.49% and 3.16% for classes 1-2, 2-3, 3-4, 4-5, 5-6, 6-7, 7-8 respectively. Average dropout rate was 1.88%.This mean after introduction of FPE policy 47 pupils were dropping out of school for every 2500 pupils. It was noted that average dropout rates were lowest between grades 1-2   and 3-4 that is 0.30%. Which mean for 3 pupils were dropping out of school for every 10,000 pupils. This because pupils in this classes are not approaching class eight hence are not under a lot of pressure of good academic performance. This agree with findings by Nyae (2012) in which dropout rate was lowest at 0.30 % between grade 1-2 and 3-4.

High dropout rates were noted between class 6 and seven and between class seven and eight where   449 pupils dropped out of school for every10, 000 pupils between class six and seven and79 pupils dropped out of school for every2500 pupils between class seven

and eight. This is because this is examination classes therefore learners are under academic pressure to perform. Those whose academic performance is poor opt to drop out. The findings agree with findings by Musyimi (2011) who established that dropout rates after introduction of Free Secondary Education was 24.1% in form 3 and 4 for boys and 22% for girls .This rates were high compared to other classes. The study further revealed that causes of dropout were; lack of family support, lack of interest, indiscipline, peer pressure, poor performance, sickness, teenage pregnancy and early marriages

.

These findings agree with Basic Education Statistical Booklet (2014) which shows that high dropout rates are observed in last two classes of primary cycle with class seven recording13.6% and class eight recording 23.1%. Head teachers interviews and Pupil Focus Discussions revealed that FPE is not the main factor in retaining children in school. They indicated that pupils still drop out because of early marriages, drug abuse, poverty, early pregnancy, parental disputes, lack of parental care, school levies and poor academic performance. These sentiments were echoed by Sub County Quality Assurance Officer who added that ''early pregnancy was one of the causes of dropout among girls and motorbike operation among boys'' These findings concur with study done by Nyae (2012) which revealed that pregnancy; early marriages, drug abuse and child labor are factors that cause dropout.

Table 4.7: Comparison of dropout rate before and after Free Primary Education policy in Emuhaya Sub County for 1995 and 2007 cohorts. (n=65)

Class	Dropout rates before FPE (%)	Dropout rates after FPE (%)
1-2	0.05	0.30
2-3	2.53	2.91
3-4	1.40	0.30
4-5	2.87	1.05
5-6	4.61	0.93
6-7	5.97	4.49
7-8	4.08	3.16
Average dropout rate	**3.07**	**1.88**

Source: Field data

Table 4.7 shows that dropout rates before FPE were ; 0.05%, 2.53%,1.40%, 2.87%, 4.61%, 5.97% and 4.08% for classes 1-2, 2-3, 3-4, 4-5, 5-6, 6-7 and 7-8 respectively. After FPE policy was introduced the number of pupils dropping out between classes 2-3 has increased that is before FPE policy 253 pupils were dropping out for every 10,000 pupils and after FPE 29I pupils were dropping out for every 10,000 pupils. This is because some of the children in this class have not been assessed in terms of special needs. They cannot continue because some have disabilities i.e mental disability. These findings agree with those of Ogada (2014) who found that dropout rates were high in grade 2 and 3 at 18.0%.Pupils who had dropped out of school alluded that poor parental (22.95%), child labor (19.67%), peer influence (18.03%) and death of parents (14.75%) made them drop.

From the Table 4.7, before FPE policy 307 pupils were dropping out of school for every 10, 000 pupils. After introduction of FPE policy 47 pupils are dropping out of school for every 2500 pupils. FPE policy has reduced dropout rates. It means with introduction of FPE policy some factors that affected pupils have been removed for example fee problem has been removed hence those who could not pay school fees can now learn continuously.

This finding agree with findings of Ngeno (2015) who found that in Kericho County dropout rates decreased after introduction of FSE policy. These findings disagree with that of UNESCO (2009) which revealed that in Nicaragua and Guatemala dropout rates remained high at 52% and 35%.They concur with findings by Yang (2014) in Uganda which revealed that the trend of primary education in relation to dropout rate have indicated decreasing trend from 2009 to 2013. The findings also agree with Ogada (2014) which showed that grade dropout was generally found to be on downward trend from 17.3% in 2004 to 15.1% in 2010.There was high enrolment in year 2005 and 2007 followed by low enrolment in 2006 and 2008 resulted in negative dropout rates in the year 2006 and 2008.

To establish the influence of FPE policy on dropout rates in Emuhaya Sub County based on the views of Head Teachers and Class Teachers the researcher rated the views of head teachers and class teachers (Table 4.8).

Table 4.8: Influence of FPE policy on Dropout rates as rated by head teachers and class teachers (n=65)

Statement	RESP	VL F	VL %	L F	L %	M F	M %	H F	H %	VH F	VH %	MR
Provision of textbooks	H	4	6.15	4	6.15	15	23.07	31	47.69	11	16.92	**3.63**
	C	4	6.15	10	15.38	10	15.38	37	56.92	4	6.15	**3.42**
Exercise books	H	2	3.08	10	15.38	20	30.77	28	43.07	5	7.69	**3.37**
	C	6	9.23	9	13.84	26	40.00	15	23.08	9	13.85	**3.18**
Employ school workers	H	3	4.62	10	15.38	23	35.38	20	30.77	9	13.85	**3.34**
	C	6	9.23	10	15.38	30	46.15	11	16.92	8	12.31	**3.08**
Physical facilities	H	6	9.23	6	9.23	35	53.85	15	23.08	3	4.62	**3.05**
	C	3	4.62	28	43.08	20	30.77	12	18.46	2	3.08	**2.72**
Stationary	H	3	4.62	8	12.31	17	26.15	28	43.08	9	13.85	**3.49**
	C	6	9.23	18	27.69	25	38.46	12	18.46	4	6.15	**2.85**
Provision of electricity	H	1	1.54	4	6.15	20	30.77	29	44.62	11	16.92	**3.69**
	C	4	6.15	8	12.31	12	18.46	35	53.85	6	9.23	**3.48**
Provision contingency	H	15	23.07	23	35.38	16	24.62	11	16.92	0	0.00	**2.35**
	C	22	33.85	21	32.31	14	21.54	8	12.31	0	0.00	**2.12**
Overall mean rating	H											**3.27**
	C											**2.98**

Key: VH= Very High, H=High, M=Moderate, L=Low, VL=Very Low.

H=Head teachers   C=Class teachers   Resp. = Respondent

MR=Mean Rating

Classification of mean rating:

1.0-1.9   VL, 2.0-2.9   L, 3.0-3.9   M, 4.0-4.9   H, 5.0VH

From Table 4.8, Head teachers' view on how FPE policy has influenced dropout rates through provision of electricity and water conservancy: 1.54% stated very low influence, 6.15% low influence, 30.77% moderate, 44.62% high while 16.92% very high influence. This gave a mean rating of 3.69 which meant moderate influence. About Class teachers 6.15% stated very low influence, 12.31% low influence, 18.46% moderate, 53.85% high while 9.23% very high influence. This gave a mean rating of 3.48 which means moderate influence. Both rating of head teachers and class teachers is almost equal which implies that both the respondents agree that FPE policy has reduced dropout in public primary schools through provision of electricity and water conservancy. This may be because through provision of electricity the teachers are able to vary teaching methods through the use of ICT and media technology which makes learning interesting. Kimberly and Gamble (2001) in their study among people of Benin found out that there are many factors that influenced learning in schools. He noted that lack of facilities in schools such as water, electricity and enough workers negatively influenced learning.

The view that FPE policy has influenced dropout rates through provision of textbooks according to Head teachers: 6.15% very low influence, 6.15% low influence, 23.07 % moderate, 47.69% high while 16.92% very high influence. This gave a mean rating of 3.63 which mean moderate influence. Class teachers 6.15%stated very low influence, 15.38% low influence, 15.38% moderate, 56.92% high while 6.15% very high influence. This gave a mean rating of 3.42.This mean moderate influence. Both rating of head teachers and class teachers again is nearly equal which imply that both respondents agree FPE policy has reduced dropout rate through provision of textbooks. Heyneman and Stuardo (1978) found that in Chile inefficiency in schools was experienced due to inadequacy of textbooks and inability of poor children to buy books even when teachers wished to use them.

The view that FPE policy has influenced dropout rates through provision of stationary, 4.62% of head teachers stated very low influence,12.31% low influence,26.15 % moderate,43.08% high while 13.85% very high influence. This gave a mean rating of 3.49 which mean moderate influence. Class teachers 9.23%stated very low influence, 27.69% low influence, 38.46% moderate, 18.46% high while 6.15% very high influence. This gave a mean rating of 2.85.This meant low influence. The difference in ratings may be attributed to the fact that head teachers responses were based on facts unlike class teachers rating which could have been individual views. Head teachers are administrators so they are in better position to know the influence provision of stationary before and after FPE policy. The difference may also be attributed to the fact that head teachers look at the strengths of FPE policy while for class teachers some may have concentrated on challenges of FPE since sometimes there is delay in disbursement of the funds to schools. Kamwitha (2015) in his study on school based factors influencing pupils' wastage in

public primary schools in Mwala Division found that provision of instructional materials influenced pupils to drop. This was reported by the repeaters, dropouts who resumed classes and also head teachers who noted that their schools did not have   adequate instructional materials.

The view that FPE policy has influenced dropout rates through provision of exercise books according to head teachers, 3.08% stated very low influence, 15.38% low influence,30.77 % moderate,43.08% high while 7.69% very high influence. This gave a mean rating of 3.37.This imply moderate influence. Class teachers 9.23% stated very low influence, 13.84% low influence, 40.00% moderate, 23.08% high while 13.85% very high influence. This gave a mean rating of 3.18 which mean moderate influence. This average rating by both head teachers and class teachers could be due to the fact that the exercise books provided may not be enough. In addition sometimes there is delay in disbursement of FPE funds and pupils have to buy exercise books. Head teachers said ''Learners get four exercise books in a term against all the subjects they undertake, learners from poor families are not able to fill the gaps in order to continue with education. At the same time few exercise books and pencils are not enough to complete the term''

This agree with the findings by Ananga (2011) that the cost of pen, pencils, copybooks, private coaching and school uniform remain a relative economic burden for poor household. Kadzamira and Rose (2003) concur that lack of money to buy essential school materials for children's schooling is likely to cause dropout. Mukundi (2004) noted that children from economically vulnerable families drop out due to lack of resources to pay for costs of education for their children that are not covered by Free Primary Education.

Dropout rate has reduced through employment of school workers. On this view 4.62% of head teachers' stated very low influence, 15.38% low influence, 35.38 % moderate, 30.77% high while 13.85% very high influence. This gave a mean rating of 3.34 meaning moderate influence. Class teachers 9.23%stated very low influence, 15.38% low influence, 46.15% moderate, 16.92% high while 12.31% very high influence. This gave a mean rating of 3.08 meaning moderate influence. The high rating by head teachers could be due to the fact that the head teachers have experience in financial management and are aware of the cost pupils had to cater for before introduction of FPE policy.

The view that Free Primary Education policy has reduced dropout rates through provision of physical facilities as indicated by headteachers;9.23% stated very low influence,9.23% low influence, 53.85% moderate,23.08% high while 4.62% very high influence. This gave a mean rating of 3.05 that mean moderate influence. Class teachers 4.62%stated very low influence, 43.08% low influence, 30.77% moderate, 18.46% high while 3.08% very high influence. This gave a mean rating of 2.72 which implied low influence. The rating of head teachers and class teachers are not high. This may be attributed to the fact that physical facilities may not be adequate since FPE policy led to increase in enrolment and led to increase in and thus overcrowding in public primary schools. This agrees with study done by Ojwang (2012) whose findings showed that in East Karachuonyo more than half (65%) of sampled schools had inadequate physical facilities. In particular only 13(36.1%) schools had adequate classrooms.

Free Primary Education policy has reduced dropout rate by provision of contingency (sanitary towels).On this view 23.07% of head teachers indicated very low influence, 35.38% low influence, 24.62% moderate, 16.92% high while 0.00% very high influence. This gave a mean rating of 2.35 that mean low influence. Class teachers 33.85% stated

very low influence, 32.31% low influence, 21.54% moderate, 12.31% high while 0.00% very high influence. This gave a mean rating of 2.12 that mean low influence. Rating by both head teachers and teachers are low. This low rating implies that probably provision of sanitary towels is done but is minimal. Head teachers said ''There is inadequate funding i.e amount allocated to sanitary towels is very low therefore many girls still have a challenge during menstruation which make be lured by boda boda boys with small money leading to pregnancy hence drop out '' This agrees with findings by Lema (2005) who found that approximately one in ten school age African girls skip school during menstruation or dropout entirely because of lack of sanitation. Fawe (2004) also report that more than half of girls in upper primary schools in Kenya drop out of school because they lack sanitary pads. This concurs with findings of Owuor (2012) in Ndhiwa Sub County that inadequate menstrual management contributed to school dropout among primary school girls.

To establish further the influence of FPE policy on dropout rates the researcher used the 2007 cohort and computed data on dropout rates FPE fund. Dropout rates per school was computed using UNESCO guideline (2009). According to UNESCO guideline (2009) cumulative dropout rate in education is calculated by subtracting the survival rate from 100%at a given level. Cumulative dropout rate was calculated using the formula adapted in UNESCO guideline (2009) as shown in Appendix G. Cumulative dropout rates per school were calculated grouped and recorded as tabulated in Table 4.9.

Table 4.9: Cumulative Dropout rates in Emuhaya Sub County per school based on 2007 cohort (n=65)

Dropout Rate (%)	Frequency	Percentage
0.00 -9.99	4	6.15
10.00-19.99	37	56.92
20.00-29.99	24	36.92
Total	**65**	**100.00**

Source: Field data

Table 4.9 shows dropout rates in Emuhaya Sub County as given by Head teachers in 65 public primary schools. Four (6.15%) had dropout rates ranging between 0.00% and 9.99%. Thirty seven (56.92 %) between 10.00% and 19.99%. Twenty four (36.92 %) between 20.00% and 29.99%). FPE funds received per school for the 2007 cohort in eight years were used to determine influence of FPE policy on dropout rates.

Table 4.10: FPE Funds received by Primary schools for 2007 cohort

Amount in Ksh	Number of schools	Percentage (%)
Below 299,999	1	1.54
300000-599,999	35	53.85
600,000-899,999	20	30.77
900,000-1,199,999	9	13.85
Total	**65**	**100.00**

Source: Field data

From Table 4.10 one school (1.54%) received less than Ksh299, 999.Thirty five schools (53.85%) received between Ksh300, 000 and Ksh 500,000.Twenty schools (30.77%) got between Ksh 600,000 and Ksh 899,999 while Nine schools (9%) got between Ksh

900,000 and Ksh1, 199,999.Dropout rates per school and FPE funds received shown in Table 4.9 and Table 4.10 whose details are in appendix K were correlated in order to obtain the strength and direction of the relationship and results tabulated as in Table 4.11.

Table 4.11: Influence of FPE funds on dropout rates in Public Primary schools in Emuhaya Sub County

		Dropout Rate
FPE Funding	Pearson's (r)	-0.743
	Sig (2-tail)	0.000
	N	65

 From Table 4.11 results showed that there was a strong negative relationship between FPE funding and dropout rates as signified by Pearson's Coefficient of -0.743.This relationship was statistically significant since 0.000 is less than 0.05 the p-value that was set. This means that increase in FPE funding led to decrease in dropout rates. The relationship between FPE funds and dropout rate is illustrated in a scatter plot (Figure 4.0).
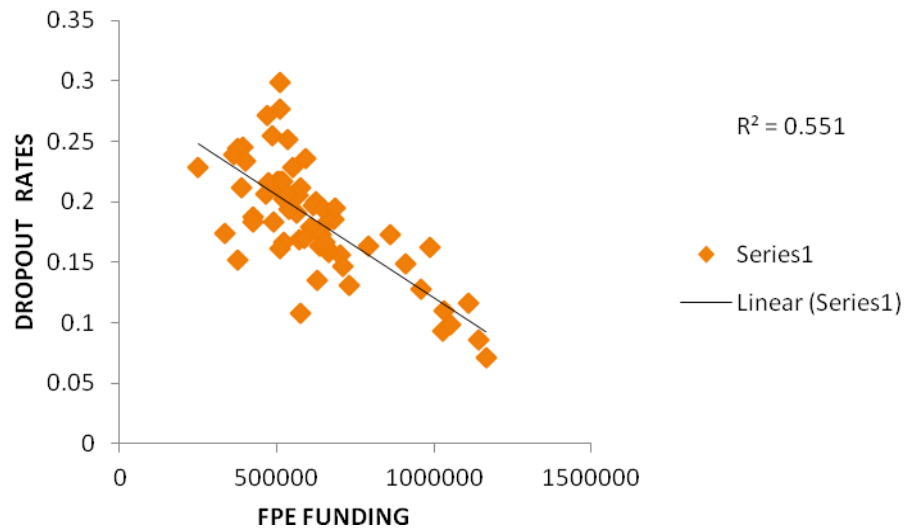
Figure 4.1: Scatter plot with regression line showing relationship between FPE funding and dropout rates

From Figure 4.1 it shows that there is a negative relationship between FPE funding and dropout rates. The diagram helped in getting the direction of the relationship. From the diagram schools which received more funds have low dropout rates while those that received fewer funds have high dropout rates. Economies of scale is realized when addition of one more pupil result to lower average cost instructional contact hour or their unit service. Schools that have higher enrolment receive more funds therefore can acquire more goods at a lower cost since they are purchasing them in bulk. This means they can be able to acquire more facilities that is, textbooks, exercise books, maintenance of more classrooms, employment of more workers which in turn reduce dropout rates.

Regression line drawn show that R^2 = 0.551 which mean FPE funding accounted for 55.1% variation in dropout rates. Linear Regression analysis was done to measure the level of influence as shown in Table 4.12 below. Adjusted R Square which is free from any error was used to measure the level of influence.

Table 4.12: Model Summary 1 Influence of FPE funds on dropout rates in Public Primary schools in Emuhaya Sub County

Model	R	R square	Adjusted R square	Standard error of the estimate
1	0.743	0.551	0.544	0.316252

From Table 4.12 it can be noted that Adjusted R square (Coefficient of determination (R^2) was 0.544. This meant that FPE funds accounted for 54.4% variation in dropout rates. Some factors leading to dropout were eliminated by FPE policy. Pupils whose parents were unable to pay school levies were sent home, those who could not afford dropped out of school. Similarly some were sent home continuously making them perform poorly in exams which made them be forced to repeat. There are other factors that affect dropout rates. Sub County Quality Assurance Officer said; ''some of the reasons of pupils dropping out are early pregnancy, lack of parental guidance, drug abuse and domestic violence''

Table 4.13: Anova

Model	Sum of squares	Df	Mean squares	F	Sig
1 Regression	0.077	1	0.077	77.416	0.000[b]
Residual	0.063	63	0.001		
Total	0.140	64			

a. Dependent variable: Dropout rate

b. Predictor: FPE funds

From Table 4.13 it shows that FPE fund is a significant predictor of dropout rates. This means that FPE policy can be relied on to explain influence of FPE policy on dropout rates. Analysis of variance confirmed that FPE is a significant predictor of dropout rates because most children were dropping out because they were unable to pay fees but now that the government pays their school fees it is possible to know if they will drop out or not because one of the reasons of dropping out has been removed.

Table 4.14: Showing simple linear regression analysis of influence of FPE on dropout rates

Model	B	Std error	Stdsed Coefficient Beta	T	Sig
1 Constant	0.290	0.012		23.208	0.000^{b}
FPE fund	-1.691E-0.007	0.000	-0.743	-11.897	

a. Dependent variable: Dropout rate

b. Independent variable: FPE funds

Table 4.14 shows the actual influence. It shows that for every one unit increase in FPE funds there will be a decrease of 1.691 in dropout rate. The objectives of Free Primary Education were to enhance retention, participation and completion. This findings show that FPE has reduced dropout rates meaning improvement in retention, participation and completion. During interviews and focus group discussions it was reported that FPE has helped reduce dropout rate. SQASO gave this comment; ''After introduction of FPE policy pupils from poor families who were unable to afford school levies are in school and can be able to finish the cycle without leaving on the way''.During interviews

SQASO also said; ''though dropout cases are still witnessed in Emuhaya many pupils who would have dropped out of school have survived due to FPE policy.''

The findings concur with that of US Department of Education (2011) which revealed that dropout rates had declined from 11% to 8%.It does not agree with house hold survey done in South Africa which revealed that dropout rates had increased to almost 12% in both grades 10 and 11.The findings agree with Yang (2014) who found that trend of primary education in relation to dropout rate of upper primary schools in Uganda had indicated decreasing trend from 2009 to 2013.Long distance from home to school, family low standards of living, shortage of school facilities and involvement in family work were found to be major factors to student dropout that affects school internal efficiency.

Again these findings agree with findings by Ngeno (2015) in her study in Kericho County where she established that there was a weak negative relationship between Free Secondary funding and dropout rates. This meant an increase in FSE funding led to decrease in dropout rate.FSE funding contributed to 0.16% variation in dropout rates. Similarly study by Kiplagat (2012) established that as a result of implementation of FSE students were learning continuously and that cases of dropout had declined significantly from 11.34% in 2004 to 4.26% in 2011.Alot of factors leading to dropout were eliminated by FPE policy. For example pupils whose parents were unable to pay school fees were sent home and those who could not manage to pay the levies could drop out of school. Similarly pupils whose parents could not pay school levies were sent home continuously and this made them to perform poor in exams as a result they were forced to repeat. With continued repeating a pupil would opt to drop out of school.

Before FPE funding pupils used to pay for tuition, personal emolument, electricity, water, local travel transport, activity and repair and maintenance. This meant that parents had a financial burden and pupils who could not afford to pay ended up dropping out of school. With introduction of FPE the government pays for tuition, personal emolument, electricity, water, local travel transport, activity and repair and maintenance. This mean parents have been relieved the burden of paying school fees therefore pupils can be in schools throughout without dropping out because of lack of fees.

4.4 Influence of FPE Policy on Repeater rates in Public Primary Schools in Emuhaya Sub County

The research question to be answered was: What is the influence of Free Primary Education Policy on repeater rates in public primary schools in Emuhaya Sub County?

From Table 4.3 on   Grade Repeater Rates in Emuhaya Sub County for the 1995 cohort were calculated using the formulae as given by UNESCO (2009) and it was expressed in percentages (Appendix G).

Table 4.15: Repetition rates in Emuhaya Sub County for 1995-2002 before FPE Policy (n=65)

Year	Class	Repetition rate (%)
1995	1	4.21
1996	2	5.40
1997	3	6.13
1998	4	6.84
1999	5	7.24
2000	6	11.22
2001	7	14.54
2002	8	9.82
Average repetition rate		**8.18**

Table 4.15 shows that Grade repetition rates before FPE policy were ; 4.21%, 5.40 %, 6.13%, 6.84%, 7.24%, 11.22%, 14.54% and 9.82% in class 1, 2,3,4,5,6,7,and 8 respectively. Average repetition rates were 8.18%. This mean 409 pupils for every 5000 pupils were repeating a class before FPE policy.

From Table 4.15 it can be observed that average grade repetition rates are lowest in lower classes and tend to increase in upper classes. For example repetition was high in higher grades than lower grades. It can be noted that lowest grade repetition is in grade one at 4.21%.Which meant 421 pupils were repeating a class for every10, 000 pupils This agree with study done by Nyae (2012) in which average grade repeater rate was lowest in grade one at 10.74 %.It is also agrees with study done by Ogada (2014) in which lowest grade repeater rate was lowest in Grade one at 8.5% in 2004. Grade repeater rate of 14.54% in

grade seven is highest. This differ with study done by Nyae (2012) in which highest repeater rate was in grade eight at 24.58%.

Findings of this study concurs with study done by Ogada (2014) in which grade repeater rate was highest in grade seven in 2010 at 11.60%.According to Ogada(2014)Repetition was encouraged in class 7 due to belief that in this grade it would make pupils improve their performance in examination. During PFGD pupils said;'' Promotion to next grade depends on better performance in class''. It can be noted that despite FPE policy repetition is still a phenomenon in educational system even after the ministry of Education has put in place Automatic promotion policy (UNESCO, 2012).Interview and Pupil Focus Group Discussion revealed that there are other factors that contribute to pupil progression in school other than FPE. They indicated that pupils still repeat because of poor performance, indiscipline and absenteeism.

Table 4.16: shows comparison of repetition rate before and after Free Primary Education policy in Emuhaya Sub County for 1995 and 2007 cohorts. (n=65)

Class	Repetition rate before FPE (%)	Repetition rate after FPE (%)
1	4.21	2.70
2	5.40	3.42
3	6.13	3.64
4	6.84	6.33
5	7.24	4.87
6	11.22	7.95
7	14.54	8.03
8	9.82	5.14
Average Repetition rate	**8.18**	**5.26**

Table 4.16 shows that repetition rates before FPE were ; 4.21%, 5.40%, 6.13%, 6.84 %, 7.24%, 11.22% , 14.54% and 9.82% in class 1,2,3,4,5,6,7 and 8 respectively. Average repetition rates was 8.18%. This mean before FPE policy 409 pupils were repeating a class out of school for every 5,000 pupils. Repetition rates were higher between class 7 where 727 pupils repeated in school for every 5,000.This is because of increased pressure for good academic performance, school levies as pupils approached examination class therefore pupils were forced to repeat if they did poorly in examinations. Repetition rates were lower in class 1 where 421 pupils dropped out of school for every 10,000.This is because of less pressure for good academic performance is put to pupils in lower classes.

Grade repetition rates after FPE policy were 2.70%, 3.42%, 3.64%, 6.33%, 4.87%, 7.95 %, 8.03% ,5.14% in class 1,2,3,4,5,6,7 and 8 respectively. After FPE policy was introduced the number of pupils repeating all the classes reduced. The policy has allowed pupils to be in school throughout therefore   absenteeism due to lack of school fees has reduced hence improved academic performance and reduced repetition. This finding agree with findings of UNESCO (2012) which revealed that in Brazil repetition rates dropped from 24% to 18% in 2006.These findings agree with South Africa Basic Education 2011 which revealed that 9% of learners who enroll in school repeat the grade they were in previous year. Repetition was high in higher grades than lower grades.

Findings of this study disagree with findings of Ngeno (2015) who found that in Kericho County repetition rates increased after introduction of FSE policy. It agrees with Ogada (2014) who found that pupils (56.47%) alluded that repetition was carried out due to poor academic performance, they indicated that 47(8.56%) made their own choice 77 (14.03%) said they had to repeat due to indiscipline. It also agrees with Nyae (2012) who found that poor performance was main factor that contributed to repetition. Others include underage, illness, school transfer, absenteeism, poverty and truancy. During PFGD pupils said; ''our friends who we were with and did not do well in examinations were told to repeat or look for another school of their choice.''

The researcher sought the views of Head teachers and class teachers to establish the influence of FPE policy on repetition rates based on their views. Their views were rated as in Table 4.17.

Table 4.17: **Influence of FPE policy on Repetition as rated by head teachers (n=65) and Class teachers (n=65)**

Statement	Resp	VL		L		M		H		VH		MR
		F	%	F	%	F	%	F	%	F	%	
Provision of textbooks	H	5	7.69	6	9.23	5	7.69	32	49.23	17	26.15	**3.77**
	C	6	9.23	3	4.62	8	12.31	41	63.08	7	10.77	**3.62**
Exercise books	H	9	13.85	10	15.38	17	26.15	16	24.62	13	20.00	**3.22**
	C	5	7.69	15	23.08	25	38.46	14	21.54	7	10.77	**3.09**
Employ workers	H	8	12.31	22	33.85	13	20.00	12	18.46	10	15.38	**2.91**
	C	4	6.15	35	53.85	17	26.15	5	7.69	4	6.155	**2.54**
Physical facilities	H	9	13.85	22	33.85	22	33.85	8	12.31	4	6.15	**2.63**
	C	6	9.23	37	56.92	13	20.00	6	9.23	3	4.62	**2.43**
Provision of stationary	H	5	7.69	4	6.15	27	41.54	23	35.38	6	9.23	**3.32**
	C	6	9.23	11	16.92	22	33.85	20	30.77	6	9.23	**3.14**
Provision of electricity	H	2	3.08	11	16.92	14	21.54	27	41.54	11	16.92	**3.52**
	C	4	6.15	11	16.92	11	16.92	31	47.69	8	12.31	**3.43**
Provision of contingency	H	13	20.00	30	46.15	17	26.15	3	4.62	2	3.08	**2.25**
	C	17	26.15	34	52.31	6	9.23	6	9.23	2	3.08	**2.11**
Overall mean rating	**H**											**3.08**
	C											**2.91**

Key: VH= Very High, H=High, M=Moderate, L=Low, VL=Very Low.
H=Head teachers   C= Class teachers
MR=Mean Rating

Classification of mean rating:

1.0-1.9 VL,   2.0-2.9 L,   3.0-3.9   M, 4.0-4.9 H, 5.0 VH

From Table 4.17, Head teachers' view on how FPE policy has influenced repetition rates through provision of textbooks: 7.69% stated very low influence, 9.23% low influence, 7.69% moderate, 49.23% high while 26.15% very high influence. This gave a mean rating of 3.77 which implied moderate influence. About Class teachers 9.23% stated very low influence, 4.62% low influence, 12.31% moderate, 63.08% high while 10.77% very high influence. This gave a mean rating of 3.62 meaning moderate influence. Both rating of head teacher and class teachers were almost equal. This shows that both respondents agree that FPE has reduced repetition rates through provision of textbooks. This agrees with study by Kamwitha (2015) whom in his findings majority of teachers (65.3%) indicated that there were no adequate textbooks for all pupils in every subject. Majority of teachers (77.8%) felt that there were cases of repetition due to inadequate text books.

When there are adequate textbooks the students are able to access them without straining, they will be able to take assignments and read on their own. This will improve their academic performance and reduce repetition. In Mexico the government devised a policy on provision of free textbooks for primary school pupils to improve educational efficiency. This raised academic standards and increased efficiency of production (Psacharopoulos & Woodhall, 1985). Lack of instructional materials was experienced in Philippine and Nicaragua. The Philippine with assistance of World Bank launched US dollars 37 million textbook to provide textbooks and to increase the ratio textbook and pupils from 1:10 to 1:2 whereas in sub sample schools, ratio of 1:1 was realized in teacher training in use of textbooks. The increase in number of textbooks had a sizeable impact on pupil achievement (Bray and Lillies, 1998). Bacolod et al (2005) observe that Pupils with low academic ability are often victims of grade repetition.

The view that FPE has influenced repetition rates through provision of electricity according to Head teachers: 3.08% very low influence, 16.92% low influence, 21.54 % moderate, 41.54% high while 16.92% very high influence. This gave a mean rating of 3.52 that mean moderate influence. Class teachers 6.15%stated very low influence, 16.92% low influence, 16.92% moderate, 47.69% high while 12.31% very high influence. This gave a mean rating of 3.43 that indicated moderate influence. Both rating of head teachers and class teachers is almost equal. This implies that both respondents agree that FPE has reduced repetition rates through provision of electricity in public primary schools. This may be because through provision of electricity the teachers are able to vary teaching methods through the use of ICT and media technology which makes learning interesting. Kimberly and Gamble (2001) in their study among people of Benin found out that there are many factors that influenced learning in schools. He noted that lack of facilities in schools such as water, electricity and enough workers negatively influenced learning.

The view that FPE policy has influenced repetition rates through provision of stationary, 7.69% of head teachers stated very low influence,6.15% low influence,41.54% moderate,35.38% high while 9.23% very high influence. This gave a mean rating of 3.32 that mean low influence. Concerning class teachers 9.23%stated very low influence, 16.92% low influence, 33.85% moderate, 30.77% high while 9.23% very high influence. This gave a mean rating of 3.14 that mean moderate influence. Both rating of head teacher and class teachers are almost equal. This shows that both respondents agree that FPE policy has reduced repetition through provision of stationary. This agree with Kamwitha (2015) who found that in Mwala Division provision of instructional materials influenced pupils to repeat. This was reported by the repeaters, dropouts who resumed

classes and also head teachers who noted that their schools did not have adequate instructional materials.

The view that FPE policy has influenced repetition rates through provision of exercise books according to head teachers, 13.85% stated very low influence, 15.38% low influence, 26.12 % moderate, 24.62% high while 20.00% very high influence. This gave a mean rating of 3.22 that mean moderate influence. Class teachers 7.69% stated very low influence, 23.08% low influence, 38.46% moderate, 21.54% high while 10.77% very high influence. This gave a mean rating of 3.09 that imply moderate influence. This rating is not very high by both head teachers and class teachers. It may be due to the fact that the exercise books that are provided by the government may not be enough to sustain the pupil throughout the term. In addition sometimes there is delay by in disbursement of FPE funds and pupils have to buy exercise books. Head teachers said that; "There is delayed disbursement of FPE funds to schools therefore pupils are sent home to bring some money for continued running of activities in school". This agrees with the findings by Kipkoech and Kyalo (2010) "titled Challenges facing implementation of FPE in Kenya where one of the challenges cited by one of the head teachers was delay in disbursement of FPE funds.

Repetition rates has reduced through employment of school workers .On this view 12.31% of head teachers   stated very low influence,33.85% low influence,20.00 % moderate,18.46% high while 15.38% very high influence. This gave a mean rating of 2.91 indicating moderate influence. Class teachers 6.15% stated very low influence, 53.85% low influence, 26.15% moderate, 7.69 % high while 6.15% very high influence. This gave a mean rating of 2.54 that mean low influence. This high rating by head teachers

compared to class teachers could be due to the fact that the head teachers have experience in financial management and are aware of the cost pupils had to meet to cater for payment of school cook and watchman before introduction of FPE policy.

The view Free Primary Education policy has reduced repetition rates through provision of physical facilities as indicated by headteachers;13.85% stated very low influence, 33.85% low influence,33.85% moderate,12.31% high while 6.15 % very high influence. This gave a mean rating of 2.63. Class teachers 9.23% stated very low influence, 56.92% low influence, 20.00% moderate, 9.23% high while 4.62% very high influence. This gave a mean rating of 2.43. The rating of head teachers and class teachers are not high. This may be attributed to the fact that physical facilities may not be adequate since FPE led to increase in enrolment and led to increase in and thus overcrowding in public primary schools. This concurs with findings by Bicker (2011) where 23(27.1%) had a "YES "response, 59(69.4%) had "NO" response and there was3 (3.5%) non response on to whether they have adequate physical facilities. Alexander (2008) found that repetition and dropout results from limited learning opportunities in overcrowded classrooms.

Free Primary Education policy has reduced dropout rate by provision of contingency (sanitary towels). On this view 20.00% of head teachers indicated very low influence, 46.15% low influence, 26.15% moderate, 4.62% high while 3.08% very high influence. This gave a mean rating of 2.25. Class teachers 26.15% stated very low influence, 52.31% low influence, 9.23% moderate, 9.23% high while 3.08% very high influence. This gave a mean rating of 2.11. Provision of contingency (sanitary towels) as having reduced repetition was rated low by both head teacher and class teachers. This concur with findings by Owuor (2012) that three hundred (65.8%) of pupils were of the opinion

that class repetition could be as a result of in adequate menstrual hygiene management. It was further reported that girls absented themselves during menstruation and absenteeism led to poor academic performance which eventually led to dropout and repetition.

To establish the influence of Free Primary Education policy on repetition rates, data on repeater rates for 2007 cohort and FPE funds per school were computed. According to UNESCO (2009) cumulative cohort repeater rate can be calculated for the whole level of education by dividing the sum of repeaters in all grades of the level by the total enrolment of that level of education and multiply by 100.This was adopted to get the cumulative cohort repeater rate per school for 2007 cohort. The following formula by (UNESCO, 2009) was used.

$$\text{Cumulative cohort repeater rate} = \frac{R_i^{t+1} + R_i^{t+1} + \ldots\ldots + R^{t+7}}{E_i^t} \times 100$$

Table 4.18: Cumulative Repeater Rates in Emuhaya Sub County per school based on 2007 cohort (n=65)

Repeater rates (%)	Frequency(f)	Percentages (%)
0.00-9.99	0	0.00
10.00-19.99	7	10.77
20.00-29.99	33	50.77
30.00-39.99	21	32.31
40.00-49.99	4	6. 15
Total	**65**	**100.00**

Source: Field data

Table 4.18 shows repetition rates in Emuhaya Sub County as indicated by 65 Head teachers. No school had repetition rates betweeen0.00% to 9.99%. Seven (10.77%) between 10.00% and 19.99%, thirty three (50.77%) between 20.00% and 29.99%, twenty one (32.31%) between 30.00% and 39.99% while six (6.15%) ranged between 40.00% and 49.99%.To establish the strength and direction of relationship between FPE funds and repeater rates for 2007 cohort, data on repeater rates and FPE Funds received per school as shown in table 4.10 and table 4.18 whose details are in appendix K were correlated and their relationship represented as in the Table 4.19 below.

Table 4.19: Influence of FPE funds on repetition rates in Public Primary schools in Emuhaya Sub County

		Repetition Rate
FPE Funding	Pearson's (r)	-0.832
	Sig (2-tail)	0.000
	N	65

From Table 4.19 results show that there is a strong negative relationship between FPE funds and repetition rates as signified by Pearson's Coefficient of -.832.This relationship was significant at 0.05.This implied that an increase in FPE funding would led to a decrease in repeater rates. The influence of FPE funds on repetition rates is illustrated in a scatter plot (Figure 4.1).
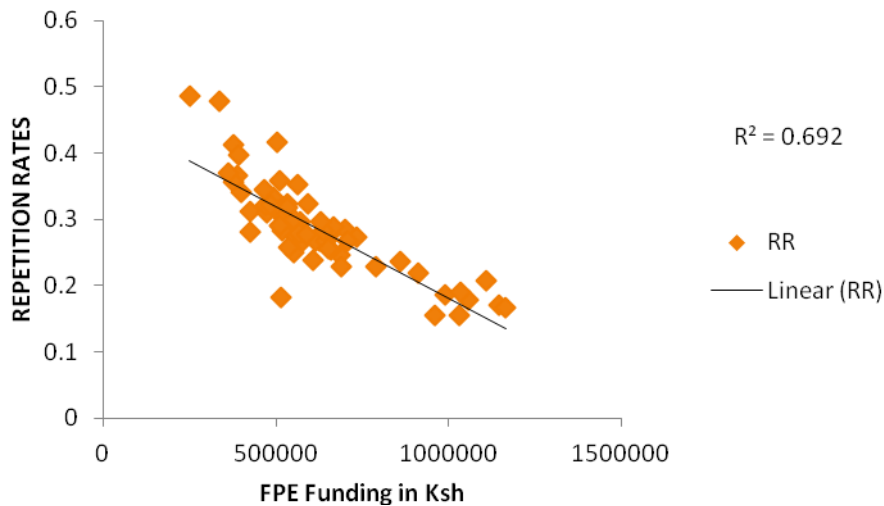
Figure 4.2: Scatter plot with regression line showing relationship between FPE funding and repetition rates

From Figure 4.1 it shows that there is a negative relationship between FPE funding and repetition rates. This diagram helped in getting the direction of the relationship. From the diagram schools which received more funds have low repetition rates while those that received less funds have high repetition rates. Since FPE fund is given per child it means schools that have higher enrolment receive more funds than those with low enrolment. According to economies of scale addition of one more pupil result to lower average cost instructional contact hour or their unit service. Schools that have higher enrolment receive more funds therefore can acquire more goods and service at a lower cost since they are purchasing them in bulk. This means they can be able to acquire more facilities i.e

textbooks, exercise books, maintenance of more classrooms, employment of more workers which in turn reduce repetition rates.

Regression line drawn show that R^2 = 0.692 which mean FPE funding accounted for 69.2% variation in repetition rates. Regression analysis was done to get the adjusted R Square which is free from any error and the results recorded in Table 4.20 below.

Table 4.20: Model Summary Influence of FPE funds on repetition rates in Public Primary schools in Emuhaya Sub County

Model	R	R square	Adjusted R square	Standard error of the estimate
2	0.832	0.692	0.687	0.384246

From Table 4.20 it can be noted that Adjusted R square (Coefficient of determination (R^2) was 0.687. This meant that FPE funds accounted for 68.7 % variation in repetition rates. Some of the factors contributing to repetition were eliminated by FPE. Pupils unable to pay school levies were sent home and those who could not manage to pay could sit at home for long leading to poor academic performance that made them repeat. Those who were absent from school for long were made to repeat. There are other factors which affect repetition which include poor academic performance. Head teachers said; ''There are high rate of repetition because Kenya education is based on academic certificates, learners therefore are made to repeat in order to acquire quality academic certificates''

Table 4.21: ANOVA

Model	Sum of squares	Df	Mean squares	F	Sig
1 Regression	0.209	1	0.209	141.548	0.000^b
Residual	0.093	63	0.001		
Total	0.302	64			

a. Dependent variable: Repetition   b. Predictor: FPE funds

From Table 4.21 it shows that FPE fund is a significant predictor of repetition rates. This means it can be relied on to explain influence of FPE policy on repetition rates. Analysis of variance confirmed that FPE is a significant predictor of repetition rates because most children were repeating because of poor academic performance due to absenteeism as a result of not being able to pay school fees, now that the government pays their school fees it is possible to know if they will repeat or not because one of the reasons of repetition has been removed.

Table 4.22: Showing simple linear regression analysis of influence of FPE Funding on repetition rates

Model	B	Std error	Stdised Coefficient Beta	T	Sig
1 Constant	0.459	0.0155		30.193	0.000^b
FPE fund	-2.778E-0.007	0.000	-0.832	-11.897	

a. Dependent variable: Repetition rate   b. Independent variable: FPE funds

Table 4.22 shows the actual influence. It shows that for every one unit increase in FPE funds there will be a decrease of 2.778 in repetition rate. This mean FPE has reduced repetition rates. This finding do not concur with South Africa Basic Education (2011) in which household survey in 2009, found that on average 9% of learners enrolled in schools were repeating the grade they were in previous year indicating repetition rates were on increase. Similarly findings do not agree with findings by Nishimura *et al* (2007) in which they established the status of dropout and repetition under UPE policy in Uganda. They found that the probability of repetition was higher in public schools than in private schools. To them there was a possibility that capitation grant might make schools want to have as many pupils as possible to extend of increasing repeaters. These findings agree with findings by Ngeno (2015) in her study in Kericho County in which she established that there was a moderate negative relationship between Free Secondary funding and repetition rates. This meant an increase in FSE funding led to a decrease in repetition rate.FSE funding contributed to 0.81% variation in repetition rates. The finding agrees with that of Mwangi (2012) on repetition rates before and after introduction of FSE. In his study he found that repetition in public secondary schools had declined under FSE policy. Before the introduction of FSE, repetition rates were high in schools he studied with the leading causes of repetition being irregular school attendance due to lack of school fees.

Study by Kiplangat (2012) established FSE had influenced completion rate positively and repetition rate had reduced by 0.51% in 2011.Alot of factors contributing to repetition were eliminated by FPE. For example pupils whose parents were unable to pay school fees were sent home and those who could not manage to pay the levies could sit at home for long time leading to poor academic performance that made them repeat a class.

Similarly pupils whose parents could not pay school levies were sent home continuously and this made them to miss exams as a result they were forced to repeat. Before FPE funding pupils used to pay for tuition, personal emolument, electricity, water, local travel transport, activity and repair and maintenance. This meant that parents had a financial burden and pupils who could not afford to pay ended up being sent home continuously lead to poor academic performance hence leading to repetition.

With introduction of FPE the government pays for tuition, personal emolument, electricity, water, local travel transport, activity and repair and maintenance. This mean parents have been relieved the burden of paying school fees therefore pupils can be in schools throughout making them attend all lessons hence improved academic performance.

Findings of this study agree with those of Ogada (2014) found that pupils (56.47%) alluded that repetition was carried out due to poor academic performance, they indicated that 47 (8.56%) made their own choice 77 (14.03%) said they had to repeat due to indiscipline. It also agrees with Nyae (2012) who found that poor performance was main factor that contributed to repetition. Others include underage, illness, school transfer, absenteeism, poverty and truancy.

4.5 To determine Coefficient of Efficiency of Public Primary Schools

The research question responded to, was: 'What is the coefficient of efficiency of public primary schools in Emuhaya Sub County?"

Coefficient of efficiency can be used to determine the level of efficiency of an educational system. From table 4.3 Coefficient of efficiency were calculated by dividing the ideal number of pupil-years required to produce a number of graduates from a given

school cohort for the specific level of education, by the actual number of pupil-years spent to produce the same number of graduates, and multiply the result by 100.Results a approaching 100% indicate high overall level of internal efficiency. Coefficient of efficiency below 100% reflects inefficiency of the education system.

Coefficient of efficiency = $\dfrac{\text{ideal number of pupil years}}{\text{Number of pupil years actually spent by cohort of pupils}}$

Average year   per graduate for the year 2002

=4076+3682+3363+3086+2774+2335+1856+1598=22770

Gradates the year 2002=1590

Average year per graduate for the year 2002=$\dfrac{22770}{1590}=14.32075$

Coefficient of efficiency=$\dfrac{8}{14.32075}=0.5586$

0.5586×100=55.86%

Input −output ratio=$\dfrac{1}{0.5586}=1.7902$

Coefficient below 100% reflects the impact of repetition and dropout on efficiency of the education process. Optimum input-output ratio is one, and inefficiency rises from any point which is greater than one (UNESCO, 2005).This procedure was repeated for the other cohort and results presented as shown in Table 4.23.

Table 4.23: **Coefficient of efficiency in public primary schools in Emuhaya Sub County for the period 1995-2002 and 2007-2014**

Year	A.Y.P.G	Coefficient of efficiency (%)	Input-output ratio
2002	14.32075	55.86	1.7902
2014	11.1893	71.50	1.3986

Source: Field data

From Table 4.23 before introduction of FPE policy in the year 2002 pupils used 14.3275 years to complete Public primary school Education in Emuhaya Sub County instead of the expected eight years. This mean before introduction of FPE pupils used more years to complete the primary cycle instead of the expected 8 years. The coefficient of efficiency was 0.5586 which as a percentage is 55.86%. This mean before FPE policy Public primary schools in Emuhaya were 55.86% efficient. The table further shows that the input-output ratio of this cohort was 1.7902. This was obtained by taking reciprocal of coefficient of efficiency. It implied that before FPE policy internal efficiency of public primary schools was 1.7902 meaning public primary schools were inefficient. Internal efficiency can also be measured in terms of input-output ratio. According to Ayodele (2005) input-output ratio of 1 shows a perfect internal efficiency. The near the input-output ratio to one the more efficient the system. This further reveal that the schools were internally inefficient based on 1995 cohort.

In the year 2014 pupils used 11.1893 years to complete in Public primary school Education. With introduction of FPE funding the pupils are able to remain in school and complete the cycle than before introduction of FPE since dropout rates have reduced. The findings agree with findings by Yonge (2017) who found that the average number of

years spent by graduates to complete secondary education reduced after the introduction of FSE policy with 2008 cohort taking the least average number of years of 4.82 years to complete secondary cycle while 2003 and 2004 cohorts taking longest number of years of 5.58 and 5.49 years respectively.

In 2014 the coefficient of efficiency was 0.7150 which as a percentage is 71.50%.This mean after introduction of FPE policy efficiency of public primary schools increased to 71.50% in 2014. Results close to 100% indicate high overall level of internal efficiency. This mean though coefficient of efficiency is not 100% there is some degree of improvement in level of internal efficiency. On the other 28.50% of education resources were wasted on repeaters and dropouts during the period 2007-2014.The table further shows that the input-output ratio of this cohort was 1.3986.This mean the internal efficiency of public primary schools was 1.3986 meaning it improved by 0.3916.Free Primary Education was reintroduced in Kenya in the year 2003. With introduction of FPE funding the pupils are able to remain in school and complete the cycle than before introduction of FPE since dropout rates have reduced. One of the head teachers said; ''The pupils are taking less time to complete primary education than before FPE''

It is evident from this finding that with the introduction of FPE internal efficiency public primary schools in Emuhaya Sub County has improved. This findings agree with study done by UNESCO (1998) in which Coefficient of efficiency in 12 Arab States varied from 63% to 96%for half of these countries from which data was available range from 78% to 93% with a median 87%.In all the 11 East Asian countries, the coefficient of efficiency ranged from 44%to 98%.Coefficient of efficiency for half of these countries ranged between 67% and 95% with a median at 83%.From these study the education

system in Arab countries wasted between 4% and 37% of resources on repeaters and dropouts and half of these countries wasted between 7% and 22% of its resources on drop outs and repeaters.

This findings concur with study done by Adeyemi (2012) in Nigeria which found that coefficient of efficiency was 87.7% indicating that primary schools in Ekiti Estate are 87.7% internally efficient. This findings are consistent with study done by Ojwang (2012) in which he found that in East Karachuonyo Division coefficient of efficiency of Public primary schools was 0.79 and input-output ratio was 1.3 which revealed that Public primary schools in East Karachuonyo are internally inefficient. With introduction of FPE pupils are able to be in school throughout therefore this enhances their academic performance which minimizes cases of dropout and repetition. Those who repeat still remain in the system.FPE has helped to reduce the average years per graduate therefore increasing internal efficiency.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents summary of the research findings, conclusion of the study and recommendation based on the research findings.

5.2 Summary

This section presents a summary of findings based on research objectives.

5.2.1 Influence of Free Primary Education policy on dropout rate in Public Primary Schools in Emuhaya Sub County

After the introduction of FPE Policy dropout rates in public primary schools in Emuhaya have reduced by 54.40%. Qualitative data revealed that FPE had become affordable and pupils who dropped out due to lack of school fees no longer drop.

5.2.2 Influence of Free Primary Education Policy on Repetition rate in Public Primary Schools in Emuhaya Sub County

After the introduction of FPE Policy repetition rates in public primary schools in Emuhaya have reduced by 68.7%%. Qualitative data revealed that FPE policy had become affordable and pupils who repeated due to absenteeism as a result of lack of school fees no longer repeat because their academic performance has improved.

5.2.3 Determination of coefficient of efficiency in public primary schools

After the introduction of FPE Policy coefficient of efficiency in public primary schools i between 1995 and 2002 increased from 55.86 % to 71.50 % between 2007 and 2014 showing an increase of 15.64 %.Before FPE policy more students would not participate in

education continuously, they would drop out and take more years in school. With FPE policy pupils study continuously and are able to complete studies in time.

5.3 Conclusions

The purpose of the study was to establish the influence of FPE policy on internal efficiency in public primary schools in Emuhaya Sub County, Kenya. Based on the findings of the study the following conclusions were made:

(i) FPE policy reduced dropout rates. This means that few pupils dropped out of schooling. This also implied that FPE was achieving one of its objectives and improved internal efficiency.

(ii) FPE funding reduced repetition rates. This mean few pupils repeated in school. As an indicator of internal efficiency it means it has improved internal efficiency. This also means that FPE policy is achieving one of its objectives.

(iii) Internal efficiency in has improved since coefficients of Efficiency were 55.86% and 71.50% in 2002 and 2014.

5.4 Recommendations

In line with the study objectives the study recommends that:

(i) FPE funds should be sent to schools in time to avoid pupils being sent home for levies due to delay in disbursement of funds.

(ii) Policy on automatic promotion implemented fully to reduce cases of repetition.

(iii) FPE policy should be enhanced since it is improving internal efficiency.

5.5 Suggestions for Further Research

This study established the influence of FPE implementation on internal efficiency in public primary schools. Despite FPE dropout rates and repetition rates are still a stumbling block in achieving Universal Education in Emuhaya Sub County. The researchers suggest that further research should be done on:

(i)   Influence of FPE policy on pupil academic performance in KCPE.

(ii)   Challenges facing head teachers in Implementation of automatic promotion policy in Public primary schools.

(iii)   More studies carried out to establish other policies that influence internal efficiency.

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APPENDICES

APPENDIX A: LETTER FROM MASENO UNIVERSITY ETHICS REVIEW

COMMITTEE

MASENO UNIVERSITY ETHICS REVIEW COMMITTEE

Tel: +254 057 351 622   Ext: 3050   Private Bag – 40105, Maseno, Kenya
Fax: +254 057 351 221   Email: muerc-secretariate@maseno.ac.ke

FROM: Secretary - MUERC   **DATE**: 16th January, 2017

TO: Joash Mark Olenja   **REF**: MSU/DRPI/MUERC/00342/16
           PG/MED/00090/2012
           Department of Educational Management and Foundations
           School of Education, Maseno University
           P. O. Box Private Bag
           Maseno, Kenya

RE: Influence of Free Primary Education Implementation on Internal Efficiency of Public Primary Schools in Emuhaya Sub County, Kenya. Proposal Reference Number: MSU/DRPI/MUERC/00342/16

This is to inform you that the Maseno University Ethics Review Committee (MUERC) determined that the ethics issues raised at the initial review were adequately addressed in the revised proposal. Consequently, tne study is granted approval for implementation effective this 16th day of January, 2017 for a period of one (1) year.

Please note that authorization to conduct this study will automatically expire on 15th January, 2018. If you plan to continue with the study beyond this date, please submit an application for continuation approval to the MUERC Secretariat by 16th December, 2017.

Approval for continuation of the study will be subject to successful submission of an annual progress report that is to reach the MUERC Secretariat by 16th December, 2017.

Please note that any unanticipated problems resulting from the conduct of this study must be reported to MUERC. You are required to submit any proposed changes to this study to MUERC for review and approval prior to initiation. Please advice MUERC when the study is completed or discontinued.

Thank you.

Yours faithfully,

Dr. Bonuke Anyona,
Secretary,
Maseno University Ethics Review Committee.

Cc: Chairman,
Maseno University Ethics Review Committee.

MASENO UNIVERSITY IS ISO   9001:2008 CERTIFIED

HEAD TEACHERS' QUESTIONNAIRE

I am carrying out a research in Emuhaya sub county public primary schools on influence of Free Primary Education Policy on internal efficiency public primary schools in Emuhaya Sub County. Your school is one of those schools that have been chosen for study. All your responses and information obtained will be treated with confidentiality and used for purposes of the study. Please give your honest views by filling the blank spaces or putting a tick (✓) in the appropriate spaces that correspond to your responses

SECTION A: BACK GROUND INFORMATION

Tick or write your responses where appropriate

1. Gender of the head teacher; Male ( ) Female ( )

2. How long have you been a head teacher in this school?

   Years…………

3. What is your highest professional qualification?

   ATS ( ) Diploma Ed ( ) BED ( ) Med ( )

   Others (specify)………………………………

SECTION B

4. Provide any other important information on influence of FPE on

   (a)Drop out

   (b)Repetition

5. Amount received from the Government for FPE for the 2007 cohort.

Amount in Ksh	

6. Dropout and Repetition

Year	Class								
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**Graduates**
2007E									
R									
N									
2008 E									
R									
N									
2009 E									
R									
N									
2010 E									
R									
N									
2011 E									
R									
N									
2012E									
R									
N									
2013 E									
R									
N									
2014 E									
R									
N									
2015 E									
R									
N									

KEY: E – Enrolment R – Repeater N-New pupils

7. Influence of Free Primary Education policy on drop out in public primary schools in   Emuhaya Sub County Kenya.

FPE policy was introduced to reduce dropout in public primary schools. Based on your knowledge and experience rate the ways in which FPE influences dropout using a tick (√)

 VH = Very High, M = Moderate, L = Low VL = Very Low.

Influence of Free primary education policy on drop out in public primary schools.

Statement	Rating				
	VL	**L**	**M**	**H**	**VH**
Provision of text books					
Provision of exercise books					
Employment of school workers					
Provision of physical facilities					
Provision of stationary					
Provision of electricity water and conservancy					
Provision of contingency(purchase of sanitary towels)					

8. Influence of FPE policy on repetition rates in Public primary schools in Emuhaya Sub County Kenya.

FPE policy was introduced to reduce repetition in public primary schools. Based on your knowledge and experience rate the ways in which FPE influences repetition using tick ($\sqrt{}$)

 VH= Very High, H=High, M=Moderate, L=Low, VL=Very Low.

Influence of FPE policy on repetition in public primary schools in Emuhaya Sub County.

Statements	Rating				
	VL	L	M	H	VH
Provision of textbooks					
Provision of exercise books					
Employment of school workers					
Provision of physical facilities					
Provision of stationary					
Provision of electricity and water conservancy					
Provision of contingency(purchase of sanitary towels)					

9) Suggest the amount that should be given out by the government per pupil under FPE.

…………………………………………………………………………………………

………………………………………………………………………………………….

APPENDIX C

CLASS TEACHER'S QUESTIONNAIRE

I am carrying out a research in Emuhaya sub county public primary schools on influence of free primary education policy on internal efficiency of public primary schools. Your school is one of those schools that have been chosen for study. All your responses and information obtained will be treated with confidentiality and used for purposes of the study. Please give your honest views by filling the blank spaces or putting a tick (✓) in the appropriate spaces that correspond to your responses.

SECTION A: BACKGROUND INFORMATION

Tick your response where appropriate

1) Gender of class teacher. Male ( ) Female ( )

2a) what is your highest professional qualification? Dip Ed ( ) B.Ed ( ) Med ( )

b) Others (specify)…………………………………………………………………

3) Provide any other important information on the influence of FPE on pupil

a) Dropout

b) Repetition

SECTION B

4. Influence of Free Primary Education policy on drop out in public primary schools in Emuhaya Sub County Kenya.

FPE was introduced to reduce dropout in public primary schools. Based on your knowledge and experience rate the ways in which FPE influences dropout using a tick (√)

 VH = Very High, M = Moderate, L = Low VL = Very Low.

Influence of Free primary education on drop out in public primary schools.

Statement	Rating				
	VL	L	M	H	VH
Provision of textbooks					
Provision of exercise books					
Employment of school workers					
Provision of physical facilities					
Provision of stationary					
Provision of electricity and water conservancy					
Provision of contingency(purchase of sanitary towels)					

5. Influence of FPE policy on repetition rates in Public primary schools in Emuhaya Sub County Kenya.

FPE policy was introduced to reduce repetition in public primary schools. Based on your knowledge and experience rate the ways in which FPE influences as stated with a tick (√) on your position on the listed statements below where;

VH= Very High, H=High, M=Moderate, L=Low, VL=Very Low.

Influence of FPE policy on repetition in public primary schools in Emuhaya Sub County.

Statements	Rating				
	VL	L	M	H	VH
Provision of textbooks					
Provision of exercise books					
Employment of school workers					
Provision of physical facilities					
Provision of stationary					
Provision of electricity and water conservancy					
Provision of contingency(purchase of sanitary towels)					

APPENDIX D

PUPILS FOCUS GROUP DISCUSSION (PFGD)

1. What are the reasons for pupils dropping out of school?

2. Do you think FPE has helped to reduce drop out?

3. (a) Do you think free primary education helps promotion of pupils from one class to another class in public primary schools?

    (b) Give reasons for your answer in (a) above

APPENDIX E

INTERVIEW SCHEDULE FOR SUB COUNTY QUALITY EDUCATION ASSURANCE OFFICER

1) How long have you been a sub county Quality Assurance Standards Officer?

2) What comments can you give concerning the influence of FPE following in the sub county?

    a) Drop out in public primary school

    b) Repetition in public primary school

3) Give reasons for your answers in a, b and

4) Has FPE been helpful to the sub county?

5) Do you face any challenges in implementing FPE policy? List them if any

APPENDIX F

INTERVIEW SCHEDULE FOR HEAD TEACHERS

1) What comments can you give concerning the influence of FPE on the following?

    a) Drop out in public primary school

    b) Repetition in public primary school

    c) Give reasons for your answers in a, b

2) Do you face any challenges in implementing FPE policy? List them if any?

3) Do you think money given by the government per pupil under FPE is enough? Explain

4) Comment on the number of years the pupils are taking to complete the primary cycle before and after FPE

APPENDIX G
FORMULA

From Table 4.5 Grade Dropout Rates (GDR) Grade Repeater Rate (GRR)were calculated using the following formula adapted from UNESCO guide line (2007b) as below:

Formula

$$DR_i^{\ t} = 100\text{-}(PR_i^{\ t} + RR_i^{\ t})$$

$DR_i^{\ t}$ 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*

Promotion rate is given by

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

$PR_i^{\ t}$ 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 school year *t+1*

$$DR_i^{\ t} = 100\text{-}(PR_i^{\ t} + RR_i^{\ t})$$

Using table 4.3 calculation of Grade Dropout Rate in percentage for Grades grade 7 to 8

$$\text{Promotion rate} = \frac{2684}{2927} \times 100 = 91.70$$

$$\text{Repetition rate} = \frac{132}{2684} \times 100 = 5.14$$

Dropout rate=100-(91.70+5.14 =3.16

Grade Repeater Rates were calculated using the formulae as given by UNESCO (2009b) and it was expressed in percentages.

$$RR^t{}_i = \frac{R_t^{t+1}}{E_i^t}$$

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

$R_i{}^{t+1}$ Number of pupils repeating grades i in school year t.

$E_i{}^t$ Number of pupils enrolled in grade i in the school year t.

Cumulative dropout rate=100-(SR$_{g,i}{}^k$ +R$_{g,i+1}{}^{t+1}$)

$$SR_{g,i}{}^k = \frac{\sum_{t=1}^{m} P_{g,i}{}^t}{E_g{}^K} \times 100$$

i grade (1,2…….n

t year (1,2….. ….m

g pupil cohort

SR$_{g,i}{}^k$ Survival rate of pupil-cohort g at grade i for 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

R$_i{}^t$ Number of pupils repeating grade i in school year t

APPENDIX H

Document Analysis Guide

Year	Class	No. of pupils enrolled	Number of pupils		
1995	1		Repeaters	(	)
			Drop outs	(	)
			New pupils	(	)
1996	2		Repeaters	(	)
			Drop outs	(	)
			New pupils	(	)
1997	3		Repeaters	(	)
			Drop outs	(	)
			New pupils	(	)
1998	4		Repeaters	(	)
			Drop outs	(	)
			New pupils	(	)
1999	5		Repeaters	(	)
			Drop outs	(	)
			New pupils	(	)
2000	6		Repeaters	(	)
			Drop outs	(	)
			New pupils	(	)
2001	7		Repeaters	(	)
			Drop outs	(	)
			New pupils	(	)
2002	8		Repeaters	(	)
			Drop outs	(	)
			New pupils	(	)

YEAR	Class	No. of pupils enrolled	Number of pupils
1996	1		Repeaters ( ) Drop outs ( ) New pupils ( )
1997	2		Repeaters ( ) Drop outs ( ) New pupils ( )
1998	3		Repeaters ( ) Drop outs ( ) New pupils ( )
1999	4		Repeaters ( ) Drop outs ( ) New pupils ( )
2000	5		Repeaters ( ) Drop outs ( ) New pupils ( )
2001	6		Repeaters ( ) Drop outs ( ) New pupils ( )
2002	7		Repeaters ( ) Drop outs ( ) New pupils ( )
2003	8		Repeaters ( ) Drop outs ( ) New pupils ( )

Year	Class	No. of pupils enrolled	Number of pupils
2007	1		Repeaters ( ) Drop outs ( ) New pupils ( )
2008	2		Repeaters ( ) Drop outs ( ) New pupils ( )
2009	3		Repeaters ( ) Drop outs ( ) New pupils ( )
2010	4		Repeaters ( ) Drop outs ( ) New pupils ( )
2011	5		Repeaters ( ) Drop outs ( ) New pupils ( )
2012	6		Repeaters ( ) Drop outs ( ) New pupils ( )
2013	7		Repeaters ( ) Drop outs ( ) New pupils ( )
2014	8		Repeaters ( ) Drop outs ( ) New pupils ( )

Year	Class	No. of pupils enrolled	Number of pupils		
2008	1		Repeaters	( )	
			Drop outs	( )	
			New pupils	( )	
2009	2		Repeaters	( )	
			Drop outs	( )	
			New pupils	( )	
2010	3		Repeaters	( )	
			Drop outs	( )	
			New pupils	( )	
2011	4		Repeaters	( )	
			Drop outs	( )	
			New pupils	( )	
2012	5		Repeaters	( )	
			Drop outs	( )	
			New pupils	( )	
2013	6		Repeaters	( )	
			Drop outs	( )	
			New pupils	( )	
2014	7		Repeaters	( )	
			Drop outs	( )	
			New pupils	( )	
2015	8		Repeaters	( )	
			Drop outs	( )	
			New pupils	( )	

Map of Kenya Showing Emuhaya Sub-County
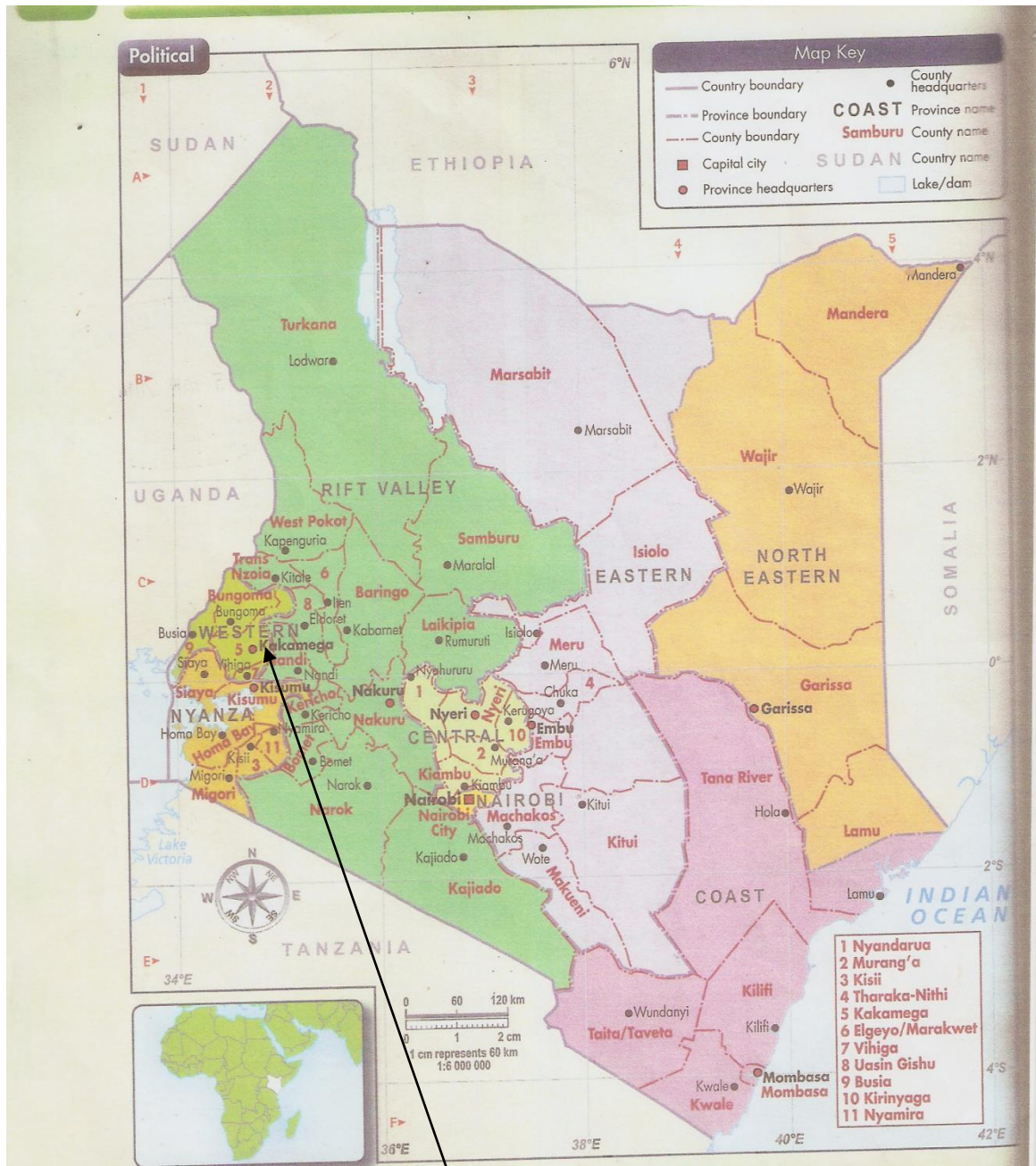
Source: Vihiga County plan

Location of Emuhaya Sub-County

APPENDIX J

EMUHAYA SUB COUNTY MAP

SOURCE: EMUHAYA CDF OFFICE

FPE FUNDS PER SCHOOL

	SCHOOL	FPE FUND	DR	RR
1		554604	0.2046	0.2758
2		626472	0.2000	0.2667
3		576303	0.1074	0.2676
4		1029204	0.0931	0.1550
5		988524	0.1628	0.1860
6		861060	0.1727	0.2364
7		249504	0.2288	0.4854
8		425784	0.1875	0.3125
9		336288	0. 1739	0.4783
10		375612	0.1523	0.4130
11		513924	0.2167	0.1833
12		570876	0.1690	0.2958
13		523416	0.2023	0.2923
14		387816	0. 2115	0.3654
15		561384	0. 1912	0. 3529
16		503076	0. 2121	0.3182
17		911232	0.1491	0.2193
18		503364	0.2166	0.3167
19		391884	0.2453	0.3962
20		490872	0.1834	0.3333
21		522060	0.1667	0.3030
22		615624	0.1972	0.2676
23		958692	0.1273	0.1545
24		573588	0.2114	0.2816
25		504432	0. 2166	0.4167
26		553248	0. 2031	0.2500
27		566811	0.2057	0.2796
28		790548	0.1630	0.2283
29		661833	0.1831	0.2817
30		474600	0.2160	0.3103
31		683424	0.1852	0.2469
32		1144464	0.0853	0.1705
33		1109208	0.1167	0.2083
34		732240	0.1310	0.2738
35		470532	0.2712	0.3220
36		466464	0.2069	0.3448
37		485448	0.2712	0.3220

38		511212	0.2985	0.3582
39		509856	0.2762	0.2903
40		649524	0.1942	0.2702
41		550536	0.2286	0.3000
42		701052	0.1562	0.2840
43		709188	0.1463	0.2683
44		592572	0.2363	0.3243
45		532908	0.2514	0.3231
46		425784	0.1832	0.2816
47		665796	0. 1579	0.2893
48		638676	0.1629	0.2838
49		642744	0.1733	0.2667
50		627828	0.1350	0.2973
51		657660	0.1626	0.2533
52		517992	0. 2167	0.2833
53		536976	0.1935	0. 2581
54		606132	0.1791	0.2388
55		652236	0.1666	0.2581
56		1054968	0.0982	0.1786
57		534264	0.2063	0.3175
58		687492	0.1950	0.2292
59		1165992	0.1190	0.1667
60		1033372	0.1364	0.1904
61		511212	0.1613	0.2903
62		588504	0.1693	0.2769
63		376968	0.2444	0. 3556
64		398664	0.2341	0.3404
65		363408	0.2391	0.3696