Novelty Journals

ISSN 2394-9694

International Journal of Novel Research in Humanity and Social Sciences
Vol. 5, Issue 5, pp: (81-103), Month: September - October 2018, Available at: www.noveltyjournals.com

DETERMINANTS OF THE SUSTAINABILITY OF FREE PRIMARY EDUCATION PROGRAM IN KENYA: EMBAKASI EAST SUB-COUNTY NAIROBI COUNTY KENYA

[1]TOBY OYOO OKELLO, [2]MS. VIVIENNE OWINO

SCHOOL OF OPEN AND DISTANCE LEARNING UNIVERSITY OF NAIROBI

Abstract: **The declaration of Free Primary Education (FPE) in Kenya led to a rise in pupils' enrolment which has an implication on teaching and learning. Management of schools is the key to realizing the national educational goals. The immediate effect of the FPE was increase in enrolment in primary schools. The Gross Enrolment Rate (GER) of the school age population increased from 92 per cent in 2002 to 104 per cent in 2003. The enrolment of girls rose by 17 per cent from 3 million in 2002 to 3.5 million in 2003, while that of boys rose by 18 percent from 3.1 to 3.7 million in the same period. By 2006, the total enrolment in primary schools was 7.63 million up from 7.59 million in 2005. It is also important to note that some of the students enrolling were adults. The dramatic rise in enrolment rates in schools presented a number of challenges. For example, there was overcrowding in classrooms as most schools did not have adequate classrooms to accommodate the large number of pupils that enrolled under the FPE. As a result KCPE performance in Embakasi East Sub-County, Nairobi County has been dismal since the inception of the FPE program. The study was based on four specific objectives; to determine how staff, availability of learning materials, pupil to teacher ratio and government funding influence the sustainability of free primary education in Embakasi East Sub-County, Nairobi City County, Kenya. The study employed a descriptive survey design. The target population comprised 10 public primary schools in the sub-County therefore of 10 head teachers 50 senior teachers and 200 teachers. The sample for the study was 157 respondents. This study used questionnaires to collect data while descriptive statistics was used to analyze data. The analyzed data was presented using tables, percentages and frequencies. The study concluded that the independent variables significantly influenced the sustainability of the FPE program among public primary schools in Embakasi East Sub-County. The study established that there were inadequate teaching and learning resources among the schools which affected delivery of quality content to the learners. However, the effective learning was a challenge as the teachers complained of the high number of pupils and needed much more attention that could be provided. This may have influenced the sustainability of the FPE. The study also established that government funding was inadequate and this negatively influenced sustainability and running of the FPE program. A number of teachers and head-teachers were found not to have attended capacity building trainings aimed at improving their content delivery. This affected their efficiency and effectiveness in service delivery. The study recommended that there is need for government to allocate more funds to enable smooth running of the FPE program and acquire more learning and teaching materials, employ more teachers to counter the influx of pupils and also sensitize and facilitate more trainings for teachers. Further studies need to be done on other factors that may be influencing sustainability of the FPE program in the same context or other parts of the country.**

Keywords: **Determinants of the Sustainability of Free Primary Education Program.**

Novelty Journals

ISSN 2394-9694

International Journal of Novel Research in Humanity and Social Sciences
Vol. 5, Issue 5, pp: (81-103), Month: September - October 2018, Available at: www.noveltyjournals.com

ABBREVIATIONS AND ACRONYMS

EFA	Education For All
FPE	Free Primary Education
GoK	Government of Kenya
KCPE	Kenya Certificate of Primary Education
KCSE	Kenya Certificate of Secondary Education
KNUT	Kenya National Union of Teachers
MDGs	Millennium Development Goals
MoEST	Ministry of Education Science and Technology
NACOSTI	National Commission for Science, Technology and Innovation
PTR	Pupil Teacher Ratio
STAR	Student-Teacher Achievement Ratio
UNESCO	United Nations Educational Social Cultural Organization
UNICEF	United Nations Children's Fund
UPE	Universal Primary Education

1. INTRODUCTION

Education can be used as a tool to drive economic development. With the help of NGO'S and donor funding organizations, third world countries have put more efforts on realizing the (MDGs) of universal primary education by 2015. Education concerns itself with the acquisition of knowledge, skills and attitudes which are relevant to the survival of human beings. Education can make a positive contribution to the economic and social development of communities. The United Nations Educational Social Cultural Organization (UNESCO, 2005) contended that up to 20% of income growth could be traced to education. According to United States Aid (USAID 2001), education is the key to sustaining democracies, improving health, increasing per capita income, and conserving environmental resources. In this context, education can be seen as an investment in human skills which help to foster economic growth, enhance productivity, contribute to national and social development, and reduce social inequality.

School fees have often been found to be a major deterrent to educational access, and to have large negative effects on take-up of educational services in a variety of settings (Holla & Kremer, 2008). Consequently, governments have instituted policies that reduce or eliminate education fees in order to boost school enrollments. While developing countries in Latin America have generally chosen targeted fee reduction schemes, many African countries, in contrast, have eliminated public education fees for all students.

According to UNESCO, Universal Education for All in Uganda was introduced in 1997 aimed at making education for primary schools free. The goals of Education For All (EFA) comprise more than universal enrolment, and the story of this considerable Ugandan achievement needs to be tempered with the outstanding challenges that have been identified both in the ESIP Mid-Term Review (MTR) and the Evaluation of Impact of the UPE Implementation (Government of the Republic of Uganda, 2003). This program has improved school enrolment levels despite facing a myriad of challenges.

In Zambia, the Government declared that education would be free for all pupils from grades 1 – 7 in 2002 due to a backdrop of enrolment of pupils tremendously in the 1990s. The tuition fee and putting on of uniforms were scrapped off to encourage parents to enroll their children in school. Schools used other means to raise fee and no child was denied education based on lack of fee payment. In the case of Zambia, the adoption of policy materials regarding universal access to education was a bit different as compared to other countries: the SWAp came before the PRSP, which preceded a strategic plan for the sector. In 1999, the Basic Education Sub-Sector Investment Programme (BESSIP) began, building on the national educational policy of 1996, Educating Our Future. This program also faced challenges in implementation ranging from poor planning, cost of running it but above all a positive impact on enrolment and access to basic education has been realized by over 92% of the population.

The emergency of Free Primary Education (FPE) in Kenya in 2003 meant the abolition of school fees and levies for tuition. As a result, the state and donor organizations were responsible for the costs of tuition, learning materials and staff salaries and co-curricular activities. Parents and communities were not required to build new schools. The policy expected them to refurbish and use existing facilities which included community and religious buildings. The development partners who have continuously funded the Free Primary Education (FPE) program in Kenya include the World Bank, the British Government through its international development agency Department for International Development (DFID), Organization of the Petroleum Exporting Countries (OPEC), UNESCO and the Swedish Government (GOK, 2005).

The report compiled by the UNISCO Institute for Statistics (2015) points out that globally, one in every five adolescents and one in every eleven children with age of attending primary school is not given an opportunity to access school. So this therefore means that adolescent children are twice unlikely to acquire knowledge as the other younger children (UNESCO Institute for Statistics, 2015)**.** The study conducted on five African countries tends to provide an answer to the above question. Riddell (2003) studied Kenya, Malawi, Tanzania, Uganda and Zambia and from the study, he found similarities in both all the five countries. He found out that eliminating tuition fee in schools removes hindrances to attending school. However, the study also revealed problems which were brought about by Free Primary Education Policies and effects of HIV/AIDS (Riddell, 2003)

With the existence of FPE policy in sub-Saharan Africa, many pupils living in the urban slums still pay fees in private schools Oketch, Moses, Mutisya, Maurice, Ngware, Moses and Ezeh, Alex, Chika (2010) . The concern has always been if the FPE satisfies the needs of the poor when their needy parents who live in the slums are still paying fees for the poor-quality of education in the private schooling system when they could still benefit from free schooling system in the public domain (Oketch, *et al*, 2010). UNICEF (2015) report is aware that although major efforts have been made to reduce issues related to education in quantitative terms, we still have serious negative issues in the Kenyan education (UNICEF, 2015). As much as more efforts are put in 8-4-4 education system, Okwach and Odipo (1997) indicate that, enrolment at various capacity levels of education is seen to have issues of regional and gender imbalances and decreasing gross enrolment rates. We also see that the quality and applicability of education at all cadres have been doubted. Equally, the system of education witness high wastage brought about by repetition and drop-out rates (Okwach & Odipo 1997). In the late 1963 during independence, the incoming government of President Kenyatta to power brought an affirmative action of enhancing free, compulsory primary education. The challenge was that they did not have a deadline for accomplishing it.

There was an acute deficit of the required manpower from the secondary schools and university graduates who would take over the responsibilities of both middle and high-level posts from returning expatriates and bring about a blue print plan for economic growth which dictated enlargement post primary education. As a result of this, the fees for primary school were retained. This went on until 1964 and subsequent years when fees were stagnated at 60 Kenya shillings per year. Primary school participation levels increased even with the continued charging of fees in the periods after Independence, more in the upper cadres. With the last destruction of the Common Entrance selection barrier at Grade 4, the enrolment to the upper grades increased. For instance in 1962, the enrolment level of the grade 7 totaled to 42,000.The increases in the enrolment rate at lower primary level were less spectacular, but to some extent substantial. Between the years 1964 - 1966 there was a gradual rise in grade one intake from the figure

180,000 to 194,000 after which the increase was random and hit 296,000 by the year 1970. Using the 1969 Census data, enrolment ratio for the year 1964 could be estimated at 60, while 1970 the value would be 79, showing that four years prior to the initial FPE project, Kenya was headed to attaining universal primary enrolment. But in the year 1969 in the Kenya Census finding, Central Bureau of Statistics noted a considerate under-enumeration, in which the GERs are overestimates, to some larger margins. The original Free Primary Education (FPE) project came ten years after Independence, when, in the year 1974, formal fees for the initial four grades were scrapped off whereas fees for those student in the hardship areas had been scrapped off a year ago. Those pupils in upper classes had their fees retained, but as the enrolment increased in 1974 the fees were completely crapped off (Somerset, 2009).

According to Oketch and Rolleston (2007), in 1974 the Kenyan education policies were formed to provide universal primary education to populations from marginalized areas like north eastern and urban slums. This was done by removing tuition fees and other similar charges in primary schools. Regardless of these efforts, universal access to education has not been successful in Kenya because the quality and confidence of education provided in the public schools quickly faded off. However, there have been some considerate levels in enrolment as a result of commitments made by Kenyan government and UNICEF since 2003 (Oketch & Rolleston, 2007).

In 2003, the Kenyan government implemented an agenda of providing free and universal primary education. The current situation on FPE in Kenya like other sub-Saharan African countries is elusive. This has been caused by the unprecedented economic growth which in turn resulted to an increase in the middle class who are willing to spend a little bit more in schools to improve the quality of education for their children .This in addition to high inflation in 2011 all through to 2012 and inadequacy in disbursement of funds to cater for primary education resulted to the increase in tuition fees in many primary schools. Although Kenya introduced free primary education policy in 2003, many schools still ask parents to pay tuition fee for their children. As much as this practice is illegal, county education officers and school board has continually ignored the practice because of inflation and the rising demand for quality education. The tuition fee paid by parents is meant to fill in the gap that is created by inadequate government funds.

Statement of the Problem:

In 2003, Primary school education in Kenya was declared free Kenya (2007) and every child had a right to walk into any government primary school and acquire knowledge. There was an influx in registration of pupils in primary school as a result of abolishing payment of tuition fee. The influx in registration of pupils in primary schools brought about a number of challenges that threatened the achievements that would be enjoyed by different stake holders in education including pupils, parents, government and employers. The greatest challenge that came with free primary education is compromise on the quality of education in classes because the number of pupils doubled others tripled while the number of teachers remained constant. As a result of this some parents have removed their children from government primary schools to privately owned schools so as to improve on the quality of -the education given to their children while other parents who were struggling to pay tuition fee in privately owned schools transferred their children to government schools to scrap off the burden of paying tuition fee (Kenya P, 2007).

There have been concerns over the sustainability of free primary education in Kenya where the quality of education and the levels of literacy right from the period of independence to date have been subjects of discussion. From Independence back in 1963, Kenya as a country has been striving towards expanding the system of education to enhance a wider participation. This has been as a result of many concerns like to fight ignorance, poverty, disease and to make sure that each and every child in Kenya enjoys free access to basic education. The government is obliged to provide the people of Kenya with an opportunity to engage in political and socio-economic development so as to improve the standards of living. Education is also seen as an important pillar in the development of human capital and to increase opportunities in education the government came up with a number of policy documents and plan of actions. With these problems faced by the governments free primary education has been seen as an elusive venture (Sifuna, 2003).

This study comes 15 years after free primary education was implemented in Kenya .This has been a very long time to make sure that the goals and objectives of implementing free primary education have been met. Kenyan government promised to avail funds for the purchase of learning and teaching materials in primary schools, programs aimed at capacity building and improvement in teachers‟ remunerations. Despite of this promise, reports indicate that there is delayed or insufficient funding in schools (GoK, 2007). This study to be conducted in primary schools based in Embakasi East sub-county with the help of literature review seeks to explore the gap in implementation of free primary education program and the performance levels of pupils in Kenya.

Purpose of the Study:

The purpose of the study was to assess the implementation of free primary education program and performance levels of pupils in Kenya: A case of Embakasi East Sub-county; Nairobi county.

Objectives of the Study:

The study would be guided by the following objectives:

1. To determine how staff training influences the sustainability of free primary education in Kenya.
2. To examine how availability of learning materials influence sustainability of free primary education in Kenya.
3. To assess how pupil to teacher ratio influences the sustainability of free primary education in Kenya.
4. To determine how government funding influences the sustainability of free primary education in Kenya.

Research Questions

The study was guided by the following research questions:

1. How does staff training influence the sustainability of free primary education?
2. To what extent does the availability of learning materials influence the sustainability of free primary education?
3. How does pupil to teacher ratio influence the sustainability of free primary education?
4. To what extent does government funding influence the sustainability of free primary education?

Significance of the study:

The findings from this study would be beneficial to various stakeholders i.e. pupils, teachers, parents and the Kenyan government. Pupils may be sensitized on the rights of access to free primary education provided by the government, teachers may benefit by understanding the need for an enabled teaching environment and what is required to register good results in the national examinations, parents may be elevated on the need to take their children in primary schools without worrying about paying tuition fee and government may get informed on its funding policy and sustainability of free primary schools and the necessary steps to be taken to ensure free primary education policy is realized.

Assumptions of the Study:

In conducting the study, the researcher assumed that the aimed respondents in Embakasi East Sub-County would be willing to take part in the study and provide honest answers and that no adverse weather, conflicts or tragedies would happen.

Limitations of the Study:

Embakasi East Sub County is one of the sub-counties in Nairobi with poor road infrastructure. The current road is under construction and this would pose a hindrance towards conducting research in the area because of high traffic experienced during the construction of the road. The other limitation to the study is that since the study is intended to be conducted in the months of April and May which are anticipated to be rainy seasons, roads in the area are expected to be impassible due to road construction. Nonetheless, this would be mitigated by selecting an appropriate time when the area is less muddy and construction workers are off from duty for this would render roads a bit accessible.

Definition of significant terms:

Availability of learning materials: Refers to the presence of learning materials in Kenyan primary schools. The materials include books, pens, boards, computers, charts and seats.

Government funding: Refers to the donation either in monitory or material provided by the government of Kenya to the Kenyan primary school pupils geared towards meeting tuition fee and infrastructure.

Staff training: Refers to the amount of skills and qualifications undergone by the Kenyan primary school teachers.

Pupil to teacher ratio: Refers to the number of pupils viza-viz the number teachers in Kenyan primary schools.

Sustainability of Free Primary Education: Refers to the continuity of learning in Kenyan public funded primary schools.

2. LITERATURE REVIEW

According to UNESCO (2005), the Millennium Development Goals required that all countries by 2015 have full access to basic education. These MDGs are now Sustainable Development Goals aimed at sustaining the goals that were set and have been met or are on course. Developed countries like the USA, education is provided by government, private investors, and home schools. State department bench matches standards, often mandate tests for K–12 public school systems, and monitor, through specialized education personnel, state colleges and universities. Funding comes from the state, local, and federal government (US Department of Education, 2009). The education budget for 2007 for USA was $1 trillion which indicates a heavy commitment to making education accessing and affordable to all. Education is universal for children of ages between five and eight and while optional for ages between sixteen and eighteen. This policy varies from one state to another depending on the needs of the state. This requirement can be satisfied in public schools, state-certified private schools, or an approved home school program.

According to UNESCO (2015), In Russia education is majorly provided by the government and monitored by the ministry of education. Regional authorities control education within in their reach as stipulated by the law making expenditure on education to rise from 2.7% of the GDP in 2005 to 3.8% in 2013, but remains below the OECD average of 5.2%. Education is free in government owned secondary schools but *first* tertiary (university level) education is free with reservations: a substantial number of students are enrolled for full pay. Male and female students have equal shares in all stages of education, except tertiary education where women lead with 57%.The literacy rate in Russia, according to a 2015 estimate by the Central Intelligence Agency, is 99.7% courtesy of the well planned, funded and implemented education for all program.

According to Yusuf (2016), Tanzania has implemented well the free education policy amid challenges. Shortage of desks and classrooms for pupils in primary schools may not be a major story in the media, but how the government and the education stakeholders are overcoming the challenges would be something worth reading. The FPE program has impacted the economy positively since it made it possible for the increased number of enrolment in schools. However, during the implementation of FPE programme serious issues emanated, which included the rise in congested classrooms, reduced number of learning materials and decreased number of qualified teaching staff, which may negatively impact on the quality of education and learning on one hand and indiscipline on the other, similar problems faced by Zanzibar.

The declaration of Free Primary Education (FPE) in Kenya led to a rise in pupils' enrolment which in turn posed challenges on teaching and learning practices. Management of schools is key to realizing the national educational goals. The immediate effect of the FPE was the increase in enrolment rate in primary schools. The Gross Enrolment Rate (GER) of the school age population increased from 92 per cent in 2002 to 104 per cent in 2003 (Republic of Kenya, 2007). The enrolment of girls rose by 17 per cent from 3 million in 2002 to 3.5 million in 2003, while that of boys rose by 18 percent from 3.1 to 3.7 million in the same period. By 2006, the total enrolment in primary schools was 7.63 million up from 7.59 million in 2005. It is also important to note that some of the students enrolling were adults.

The sudden rise in enrolment of pupils in government primary schools brought about a number of problems. For example, the pupil to teacher ratio increased since there was no sufficient number of classrooms to accommodate the mushrooming number of pupils enrolling for the FPE (UNESCO, 2005). The pupil teacher ratio increased from 35:1 in 2000 to 43:1 in 2004. Many schools especially in lower classes experienced an influx in enrolment of pupils i.e the average of 40 to 120 pupils, which resulted to overworked teachers while pupils were forced to seek other avenues available as classrooms to study in. Many pupils were thus forced to study under trees or in an open place. There were reported cases of shortages of learning material such as desks as well (Republic of Kenya, 2006).

Despite making primary school education free in 2003, parents continued to contribute funds towards the study of their children in public primary schools. For instance, parents paid activity and examination fee (Sifuna, 2000). A study by Chepchieng and Kiboss (2010) in a selected number of developing countries for instance Nigeria and India; showed that there was a wide range in pupil teacher ratio of between 1:30 to 1:80 in public primary schools. This is in sharp contrast to a pupil teacher ratio of 1:25 commonly observed in developed countries. In under developed and developing countries, high enrolment rates have made it difficult to achieve a similar ratio as that observed in developed countries. The high enrolment rates have led to poor examination performance which could be due to the fact that the high number of pupils has strained educational resources which were meant for a lower enrolment rate. (Chepchieng & Kiboss, 2010).

A study by Chimombo (2005) in Malawi showed that one teacher was assigned 240 pupils and the one 150 pupils both of them teaching under a tree. A similar study by Alubisia (2005) in Nigeria indicated that high enrolment in public primary schools brought about challenges in management of classes. A study in Nigeria on FPE showed similar effects of free primary education on enrolment and teacher pupil ratio. According to the World Bank (2006), in Nigeria, schools' enrolment increased from 5.0% to 24.9% after the introduction of FPE. However, in some schools the ratio was high than the national average. Further this ratio and enrolment rate varied from region to region.

In Kenya enrolment shot up from 5.9 million pupils to 7.6 million pupils representing 29% enrolment increase between 2002 and 2003 (UNESCO, 2005). By 2011, school enrolment had shot up to 9.6 million pupils representing a 63% increase in nine years (Republic of Kenya, 2011). According to MOEST, (2003); enrolment rose from 6,314,726 to 7,614,326 by the year 2003. Therefore, there is need to carry out region specific studies to monitor changes in teacher to pupil ratio and enrolment trends so as to obtain information that can be used in providing appropriate teacher to pupil ratios in public primary schools.

Werunga et al (2012) carried out a study on the influence of FPE on Kenya Certificate of Primary Education performance in Kenya. The study was carried out in Kaptama Division, Mt. Elgon District, Kenya. The researcher used descriptive survey design. A sample of 310 respondents consisting of 253 standard eight pupils, 40 teachers, 13 head teachers and 4 education officers was used. The main tools of data collection were a questionnaire and interview schedule. Document analysis was also used in the study. Data analysis involved the use of frequencies, percentages, tables, charts and graphs. The findings of the study established that implementation of FPE led to high enrolment which witnessed high pupil-teacher ratio and ill-discipline among pupils. It has also led to inadequate learning facilities such as classrooms, desks and chairs; fewer tests for pupils which lack in content and depth; and increased work load among teachers.

Ocharo and Mokeira, (2015) carried out a study to determine the effects of excessive enrolment of pupils in public primary school on the performance of KCPE. The study used stratified random sampling and descriptive survey design. The instruments used were questionnaires, interview schedules, focused group discussions and observations checklist. The total target population was 18 primary schools, 8326 pupils, 204 teachers 18 Head teachers, 180 school committee members and 2 education officers. The total population sampled was 372. The sample size constituted of 250 pupils, 80 teachers, 30 committee members, 10 Head teachers and 2 education officers in the Division. The study found out that the enrolment of pupils in public primary schools was high, schools had uneven distribution of teachers, pupil to textbook ratio was inadequate and that physical facilities were not enough. Chi square analysis showed no significant improvement in KCPE performance in the schools studied after the introduction of FPE. The study recommended that disbursement of funds be sent in time to cater for high enrolment, teacher to pupil ratio to be improved, pupil to textbook ratio to be at 1:1, physical facilities to be improved to ensure quality education and good KCPE results. The results that will be obtained in this study will be useful in informing policy on the improvement on sustainability of the FPE program in Embakasi-East Sub-County, Nairobi County and the whole country in general.

According to Nyipir (2010), the performance of pupils has been a great concern to parents since the introduction of formal education. Performance of pupils has also been emphasized by many countries globally because without a good foundation in primary schools, many innovations that happened and still happening would be impossible. The world has for long experienced failures in the performance of pupils in school and as the blame goes to various stakeholders, parents have their own share of this blame. This is because parents engage pupils in domestic chaos and garden work that limits pupils‟ time to fully attend school or complete on their home works (Nyipir, 2010). At any level of education Nzabihimana (2010) the performance of pupils in schools depends on variety of factors such as qualification and motivation of teachers, the learning facilities available in schools and the type of management and administration practiced. A quality school is where pupils respect each other, teachers and administration at large exhibiting proper communication channels between major stakeholders. Teachers need to be valued and accorded the necessary support to make them innovative and employee applicable learning techniques for the benefit of the pupils in schools. The school as a unit ought to be committed to continuous improvement and create partnerships beyond the school. It should plan and set targets, embrace feedback and celebrate its achievements because individual wellbeing and quality of life depends on the quality of education. Therefore the performance of pupils in primary schools in their final examinations will depend on the quality of education gained (Nzabihimana, 2010).

Examination is a vital tool that is used to measure the performance of pupils in class in any system of education with clear objectives globally. Examination is used to test the abilities and achievement of pupils in academic programs in schools. A study conducted at Bahauddin Zakariya University Multan, Pakistan Rasul and Bukhsh (2011) by administering questionnaires to students in the university to examine the reaction of students on each measure of items under study provided. The study findings were made on the feedback given and the conclusion clearly showed that the respondents felt that most of the physical, psychological, socio-economic and educational factors influenced their examination performance. They also felt that change in the pattern of setting examination question papers, unfair means used in administering examination and the absence of adequate guidance all affected the performance of students in examinations.

To increase education quality and efficiency and measure pupil performance Hizmetleri (2015) it is prudent to measure the process of learning and the success of pupils with reliable methods. Some of the recommended approaches used to increase education quality and efficiency in class include the use of pupil/ student approach, use of applications in necessary areas that require intelligence and enhance performance that is based on the learning activities. It is also necessary to measure the performance of each and every pupil independently especially in cognitive areas of study in

which pupils turn new information into acquiring knowledge in their respective areas of personal development (Hizmetleri, 2015). The SAQMEC III 2005-2010 research Spaull (2011) conducted in Botswana in seven regions: Centra-l-south, Central-North, South-central, South, North, West and Gaborone. Gaborone being the capital city of Botswana, many schools in the North region are located in Francistown and its vicinities. Study shows that contrary to expectations, West and South locations have a larger number of schools located in the rural setup hence many pupils from this region come from humble backgrounds. It was noted that the country uses 10 regions of education with a goal to decentralize the education management. These regions used were to bring out the differences in socioeconomic backgrounds of pupils and link the regions with the differences in the performance of pupils. The research findings showed that pupils from poor background perform dismally especially in Mathematics and reading English as compared to pupils that come from wealthy backgrounds. The findings also indicated that pupils in Botswana perform better in reading English than they do in Mathematics and that pupils from Gaborone city perform better than pupils from all other six regions under study (Spaull, 2011).

Staff training and Sustainability of free primary education:

In global formal education, Harris and Sass (2008) indicates that government ministries of education agitate for proper training of teachers before carrying out the functions of a teacher to pupils in classes. The educational teacher technical colleges and universities in these countries are mandated to give the necessary skills and expertise to the designate teachers in preparation for the roles in schools. The level of teacher training and experience has a direct influence on the performance levels of pupils in class. In the United States of America, promoting teacher training improves on the quality and the performance levels of primary and secondary school children hence increase on sustainability of education. The No child left behind law" set in the U.S was meant to ensure that teachers are highly trained and children get quality education in their classrooms. Looking at the relationship between teacher training and productivity, we include various factors; education background of the teacher just before joining the teachers technical training college, during the professional development in service in school and the informal knowledge acquired during the professional teaching sessions in classrooms. From the previous studies conducted on the teacher training and performance levels of pupils, there were inconsistent findings that resulted to quite a number of prescriptions. Some of the studies found out that formal education is necessary and it provides support for strengthening the already available programs in colleges and thus reduces expenses incurred in post-college training. Similarly, there is a school of thought that argues that formal education is unnecessary and training colleges should be eliminated (Harris & Sass, 2008). The UNESCO (2014) report indicates that in the developing African countries, attendance and qualifications of teachers are problematic with about 75% of teachers having not met sufficient training in accordance to the National standards (UNESCO, 2014).

A report on International Journal of Educational Development (2016) indicates that schools in rural parts of Pakistan, Zambia and Kenya exhibited teacher absenteeism of 10% 18% and 20% of their time in class (International Journal of Educational Development, 2016). A study conducted in Nigeria Adegbile and Adeyemi (2008) to establish the influence of teacher training on the performance of pupils in class reveals that quality of education provided by teachers affects both the learning rate and achievement levels of the pupils in their final exams. The study also showed that teacher quality whether measured by training, content, credentials experience or general intellectual expertise influence the sustainability of the education program as a whole. One of the recommendations from the study indicates that qualified and experienced teachers with the mastery of syllabus improve on the performance of pupils in class. These teachers should be remunerated well as opposed to those teachers without experience but holding higher academic credentials. The awareness of teachers on the best approach to assessing pupils is key in achieving good performance in schools. This approach helps the teacher to be creative and resourceful when imparting knowledge to pupils (Adegbile & Adeyemi, 2008).

In sub-Saharan Africa, cases of non-performing pupils have largely been attributed to poor staff training. The ILOPS study conducted in Malawi, Senegal, Burundi and Uganda Marphatia, Legault, Edge and Archer (2010) provides sufficient evidence on issues affecting teaching profession including contemporary trends in teacher recruitment, levels of training and pay. The biggest concern has been an alarming rate of recruiting untrained teachers because it gives no evidence on how different levels of training and qualifications affect teaching practice and the performance of pupils in schools. This has in turn made it difficult to identify the most important inputs needed to strengthen the system of education and monitor the influence of teachers on pupils in sub-Saharan African countries. From the ILOPS report,

Marphatia *et al* (2010) recommends the need to reform the management and training system of teachers. From the data collected, efforts must be put in training and supporting ongoing development for all teachers in schools. The 2009 Conference conducted in Bamako, Senegal on Non-professional teachers has already taken consideration on the teacher training and student performance. This is not enough because the need for preserving and protecting teaching profession should be made a priority gathering the right plans and resources through dialogue between unions, teachers, parents, ministry of education and researchers (Marphatia *et-al*, 2010). Investment in training staff makes individuals engage effectively in the development of national issues Nafula (2002) and more so in education, it brings about an important role in human development. Training empowers teachers and improves on the quality of content delivered to students in class. When students perform well in their exams and improve their livelihood, their standards of living and the Country's economy improve as well. The Kenya's situation ten years after independence saw high enrolment rates in schools. However, this virtue has decreased at all carders of education, more so primary and secondary cadre levels registering high numbers of repetition and dropout ratios, minimum completion and transition rate. These losses are as a result of inability to afford the cost of education, and this has negatively impacted on availability, equity, quality and retention of education (Nafula, 2002).

Learning materials and Sustainability of free primary education:

Learning materials are divided into three categories; physical, instructional material and human resources. Physical material resources include charts, textbooks, audiovisual, maps and electronic. Lyons (2012) Instructional materials are things like tape recorder, radio, video tape, television and recorder. Human resources entail well trained and motivated. These learning materials in addition to student morale, curriculum demands and skills used in teaching play a very complex role in imparting knowledge in classroom (Lyons, 2012). The past studies conducted DFID (2007) indicate that learning materials are inadequately available in schools and this has posed a serious problem to the educators in the world (DFID, 2007)**.**

With the emergency of universal primary education in government schools, the number of pupils enrolled has doubled in some cases tripled. This means that there has been some strain on the available learning materials like classrooms, books, toilets and furniture which serve a large number of pupils. The study conducted in the United States Ball and Cohen (1996) reveals that as much as the syllabus is set to provide guidance in teaching students, reformers have always agitated for the use of material instruction as the means to shape what students acquire in classrooms. Critics however argue that the strategy of using materials is never effective in delivering knowledge in classroom. This is because teachers are never incorporated in designing the materials used and thus despise using them or selectively use the materials that suit them while teaching. This creates a gap between the material developers‟ intentions and the actual goal the materials play in class rooms. Each teacher in classroom shapes the curriculum he/she uses because there is no strong curriculum guidance provided to psychologically prepare teachers on how to use them (Ball & Cohen, 1996). Most African Primary schools use text books provided by the state through the institutes of Education. Zimbabwe and Malawi for instance DFID (2007) use the monopolized textbooks to teach in classrooms while Tanzania contemplates using textbooks provided by the private sector (DFID, 2007).

The study conducted by the Economic policy research center Madina, James and Lawrence (2010) in four districts in Uganda i.e Iganga, Hoima, Apac and Kiboga, reveals that since the emergency of Universal Primary education, the enrolment rate of Pupils in primary schools increased. The figure rose from 2.6 million in 1995 to 5.3 million in 1997 and further 7.96 million in 2008. The influx did not match the available training resources mentioned above. The government of Uganda responded by increasing on the number of training materials with the hope of improving the quality of education in schools. However the study findings were not as expected because it indicates that supplying more learning materials adversely affect the quality of education in primary schools. This implies that supply of learning materials is done at the expense of effective teaching of education. The study also indicates that teachers employ teacher centered approach in imparting knowledge instead of child centered learning approach which improves on the quality of education in primary schools. Lastly, the study proposes that government needs to provide extra resources in form of funds to cater for inspection and monitoring to ensure that teachers actually attend classes (Madina, James and Lawrence, 2010). In Kenya, the government is considering to give, Kenya Institute of Curriculum Development (KICD), a parastatals the sole mandate of publishing all textbooks used in classrooms. The World Bank report indicates that Kenya has inadequate learning materials in regards to text books, pupil teacher ratio and infrastructural availability (DFID, 2007).

Pupil to teacher ratio and Sustainability of free primary education:

Many countries with PTR of more than 40:1 are in Asia and Sub-Saharan Africa. The largest PTR is found in Sub-Saharan Africa with countries like Congo, Mali, Mozambique, Rwanda, Ethiopia and Malawi having PTR's of 54:1, 55:1,67:1,65:1, 70:1 respectively. South Asian countries such as Afghanistan, Cambodia and Bangladesh have PTRs of 83:1, 50:1 and 50:1 respectively. (UNESCO, Institute of statistics, 2008). High PTR witnessed in many developing counties is as a result of increased pupil enrolment rates in schools while the number of teaching staff remains constant. The number of teachers available thus faces serious obstacles in an attempt to deal with mushroomed classes. As a result, the increased enrolment rates in developing countries have decreased the standards of education (UNESCO, 2006).

The classroom conditions are particularly acute in a number of developing countries where large class sizes often swell up and go beyond 100 pupils (Ron, 2003). The reality, however, is that high PTR due to overcrowded classrooms affect the quality of education in resource poor schools. Brewe, Gamoran, Ehrenberg and Willms (2000) noted that PTR is a global measure of human resources brought to bear, both directly and indirectly, on children's learning. For the last one decade the debate on PTR and teacher shortage in public schools in developing countries has caused much concern in both political and educational arena. Over the same period concerns have been particularly raised regarding the alarming shortage of teachers, increased enrolments and raising PTR. This has been pointed to have detrimental impact on the quality of education pupils receive and has from time to time been addressed by political and educational leaders. The figures on PTR have been growing and the reasons for teachers leaving the profession are mounting thus compromising quality of education and performance in national examinations.

While increased enrolments may suggest school systems have increased their capacity to accommodate more children, this did not necessarily translate into improved educational quality. The FPE was a noble idea, but the intended gains are being eroded by lack of effective teaching-learning process (Daily Nation, 2011: 19). Though developing countries have been able to improve the percentage of literacy to impress the international fraternity, the quality of education provided has been a major concern due to congested classrooms resulting from high enrolments. One of the major indicators of quality is the pupil-teacher ratio (PTR). The primary school PTR did not keep pace with rapid increase in enrolments. The greatest challenge facing developing countries in their efforts to attain the international goals of EFA and the MDGs have therefore been provision of quality education. The PTR in most developing countries is in a worrying state. UNESCO (2006) estimated that over 84 per cent of classrooms in developing countries had over 40 pupils per teacher.

According to Benbow, Oliver and Said (2007) an ideal pupil-teacher ratio should be 40:1. In a study done in Ethiopia, Verwimp (1999) argued that there is a negative correlation between the quality of teaching and the pupil-teacher ratio. However, the Ethiopian study was quick to acknowledge that class-size is not a relevant variable in the quality debate. A study covering 11 of the 19 countries in the World Economic Indicators (WEI) programmes reported a lower pupil-teacher ratio for the participating countries. Most WEI- countries (India, Philippines, Malaysia, Sri Lanka Tunisia, Peru, Argentina, Brazil, Chile, Paraguay & Uruguay) had in average a Pupil-teacher ratio in the range of 20 to 30. India had the highest number (59) especially in the villages while Malaysia had the lowest number, with a Pupil-teacher ratio of 18. In the WEI-Countries Zhang Postlethwaite and Grisay (2008) revealed that there was slight difference in students" achievements across the countries despite variations in Pupil-teacher ratio. The Pupil-teacher ratio in public primary schools in Kenya was 43 in 2005 and 50 in 2007 (GOK, 2008). An indication that either the number of teachers is declining or the number of pupils is growing at a much faster rate than that of the teachers.

A teacher in the classroom is a main instrument for bringing about qualitative improvement in teaching and learning activities. Such quality is maximized where there are enabling and supportive environments where the pupils participate actively in the process and where pupils, teachers and schools have opportunities for institutional growth. The pupil-teacher ratio in primary school in Tanzania was last reported at 50 and 76 in 2010, according to a Word Bank report (2012). The official Basic Education Statistics in Tanzania (2010) indicates that, there has been a steady increase in pupil teacher ratios in recent years from 1:50 to 1:60 in 2011. Beniamin (2005) indicates pupil-teacher ratios in some regions in Tanzania are: 1:71 to 1:79 in both rural and urban areas. The government had set a target by the year 2002 – 2006, that the teacher –pupil ratio should be 1:40, but this has not yet been achieved due to the inconsistency with the current primary school staffing formulas of eight teachers for seven classes in rural schools and nine teachers for seven classes in urban schools.

Pupil to teacher ratio is very crucial Adegbile and Adeyemi (2008) when determining the quality of education delivered. It is imperative to note that the ratio affects comfort of both teacher and pupil in classroom and efficiency and effectiveness of the learning process. Crowded classes with only one teacher are perceived to produce poor grades because it is very hard for the teacher to narrow down on each pupil to identify the difficulties if any in the learning process. Several studies have shown that a larger pupil to teacher ratio contributes to the poor pupil performance in exams. Small schools with a lower pupil to teacher ratio are associated with greater achievement and performance by pupils across schools and Constituencies/Districts. The achievement is attributed to the availability of resources used in maintaining a small number of pupils in schools and the level of spending on teacher education in these institutions further improves on the quality of the education provided (Adegbile & Adeyemi, 2008). The UNESCO (2014) report indicates that Universal primary school policy in Sub-Saharan African countries resulted to influx in the number of pupils enrolled in primary schools. This growing number combined by low teacher recruitment implies that the pupil to teacher ratio is surpassing the 40:1 (UNESCO, 2014).

Malawi is the first Country in Sub-Saharan Africa to embrace the notion of Universal primary education. The Universal primary education has been in the political agenda of Malawi since 1960‟s and came to be implemented in phases from 1990‟s following Jontiem‟s 1990 recommendations. The pupils‟ enrolment in primary schools increased from 1.2 million to 3 million in 1994 and this increase resulted to unprecedented stress on the already existing learning resources such as classrooms and text books. Teacher to pupil ratio, pupil to classroom ratio and pupil to textbook ratio became insufficiently unaccepted. It was established that school, classroom and pupil factor influence on the performance level of pupils in English, Mathematics and Chichewa. The study was done by administering English, Mathematics and Chichewa tests to 6000 pupils in 100 primary schools and the results were as follows: low performance in Mathematics and English, greater performance in urban schools especially in English subject and better general performance in schools with teacher to pupil ratio of below 50 in class 7. The study concludes that a school with rudimentary learning structures requires well trained teacher to pupil ratios to enhance cognitive growth and performance of the pupils in classes (Demis, Elizabeth & Keiich, 2009).

Pupil to teacher ratio is very important in enhancing efficient and effective environment suitable for the performance of pupils in schools. The report conducted by UNESCO and the Teachers service commission in Kenya, Machakos County after running a regression using Pearson‟s product moment correlation coefficient revealed that PTR immensely influences the performance of pupils in their national examinations. The study findings were also used in making recommendations to the government and to all stakeholders in education to pay necessary attention to PTR because it affects the examination performance of pupils in Primary Schools. The government was also obliged to employ more teachers to counter the gap between PTR and ease teacher workload. The other recommendation made from the report was that pupils‟ admission to primary schools was to be based on the schools the required Pupil to Teacher ratio (Kaloki *et al*, 2016).

Government funding and Sustainability of free primary education:

The report by UNESCO Institute for Statistics (UIS) and UNICEF (2015) indicates that the second millennium development goal stated by the United Nations commonly known as MDG 2 agitates for universal primary education for all children around the world. Further to this, the goal brings out the need for all children both girls and boys to successfully complete the primary school course by the year 2015. It points out that education is very vital if other United Nations Millennium development goals are to be realized because providing education to children gives them an upper hand in eradicating poverty and diseases like AIDS and Malaria. Despite the emphasis on investing on education, the report done by the UNESCO and UNICEF (2015) reveals that the target set to ensure all children accessed universal primary education by 2015 was not met. The report indicates that there are 58 million school age children that are out of schools (UNESCO Institute for Statistics (UIS) and UNICEF, 2015).

The Office for standards in Education, Children services and skills, is responsible in inspecting and regulating children's rights to achieve their excellence, education and development of skills. The report also points out that inspecting primary schools‟ physical Education and school sport indicates that the United Kingdom government in 2013 announced the

release of 150 million Euros funding to increase and improve on the physical education and Sport. Funding was meant to be made to all maintained government funded schools with primary phase pupils and special needs schools. Primary schools were to receive a funding of 9,250 Euros yearly in two academic periods of 2013/2014 and 2014/2015. The schools funded were given free will to decide on the best strategies to use in improving the quality and magnitude of physical education and sports (OFSTED, 2014).

Sub-Saharan Africa in the past one decade has strived to eliminate the burden of pupils paying tuition fees in schools. This has been done with an effort to ensure that the education sector in Sub-Saharan African region is revived and also to counter the reduction in the number of enrolment in schools way after independence. There was cost sharing policy that was fostered by financial institutions like World Bank and International monitory fund in eighties and early nineties. The cost sharing meant that parents of the pupils met some costs when taking their children in school. This brought about a sharp drop in school enrolment rate because most parents were poor and could not meet the cost of tuition. Female children were immensely affected than their counter part boys because girls were the first to be allowed out of schools. The question remains whether free primary education has seen improvement in school enrolment rate (Riddell A, 2003). The effort to reform education in the third world countries has targeted turning Education into an effective means for national development. Governments and other concerned stakeholders have emphasized that third world countries are required to invest more in education and see to it that the education systems are properly managed, that scarce resources are indeed allocated to the areas with maximum impact, and that measures geared towards recovering costs are reiterated (Okwach & Odipo, 1997).

In Kenya, providing free primary education was to make sure that the opportunities in education are benefitted equally across segments of the population, and more so those living in economic hardship regions like slums and Northern frontier district currently the north eastern county (Nafula, 2002). The provision of FPE came with both advantages and disadvantages on the Kenyan system of education. For example, the notion of cost-sharing arrangements in education were started in 1988 to solve the issues of large share of the recurrent budget, more enrolment and decreased quality of education, less funds for stationery and equipment. The beginning of the notion of sharing costs in 1988, however, could have brought about the decrease in school enrolment. The cost-sharing system together with the previously outstanding costs of things like uniforms and logistics, families are bound to incur some of the other expenses that were earlier on taken care of by the state. These included building of school, buying of textbooks and other stationery, and at some point extra tuition fees while the state takes the initiative of issuing salaries to the teachers in primary school (Nafula, 2002).

3. RESEARCH METHODOLOGY

The study incorporates descriptive survey research design which incorporates qualitative and quantitative data. Descriptive survey research design is useful in this study because it captures and measures the strength of target individuals, opinion and behavior in respect to the subject given and also used to measure the demographical characteristics within a particular set of group i.e. income, age, gender and marital status (Fluid Surveys Report , 2014). The study will be interested in determining the influence of independent variable on dependent ones without interfering with the any variable; the research design is therefore quite relevant in this study because it focuses on the current situation in regards to the sustainability of free primary education in Kenya

Target Population:

A population is described as (Korb, 2012) the group of people that the researcher wants to draw a conclusion on at the end of the study. Identifying research population entails formulating criteria that determines the individuals to be considered and included in the study and the ones that would not be included depending on the desired characteristics under study i.e. the type of school under study, age and gender (Korb, 2012). A population is a group of individuals, objects or events which are aligned to particular specifications (Mugenda & Mugenda, 1999). The population of this study will comprise of strata of all the 10 head -teachers, 200 teachers and 50 heads of department totaling to 260. The above strata will particularly be chosen because of the role they play in the performance of pupils in primary schools. The data will be obtained from the 10 government primary schools in Embakasi East Sub-county attached in the appendices

Novelty Journals

ISSN 2394-9694

International Journal of Novel Research in Humanity and Social Sciences
Vol. 5, Issue 5, pp: (81-103), Month: September - October 2018, Available at: www.noveltyjournals.com

Table 3.1: Distribution of Respondent by Target population

Respondents	Population	Percentage
Head teachers	10	3.85
Senior Teachers	50	19.23
Teachers	200	76.92
Total	260	100

Source: Nairobi City County, Department of Education (2017)

Sample size and Sampling procedure:

A sample size is a section of the population whereas sampling is the act of choosing elements from a given population under study (Mugenda & Mugenda 2003)

Sample size:

The study would adopt proportionate stratified random sampling procedure because the data is divided in strata with known characteristics. By using proportionate stratified random sampling procedure the sample represented characteristics of interest of the population (Teddlie & Yu, 2007). From the target population of 260, the study will adopt a sample size of 20% of each stratum within the target population. To determine a sample size for a finite population the following formula was applied (Krejcie & Morgan, 1970):

$$\frac{x^2 NP\,(1-P)}{d^2\,(N-1)+x^2P(1-P)} \qquad \frac{x^2 NP\,(1-P)}{d^2\,(N-1)+x^2P(1-P)}$$

S =

Where:

S= Sample size required

X = Z value i.e. 1.96 for 95% confidence level

N = Size of population

P = Proportion of population (50%) or 0.5

d = Degree of accuracy (5%) and (0.05) as a proportion

Sampling procedure:

Sampling refers to taking a selected representative of the population and using the collected data as a source of information for the research. The use of correct sampling method allows researchers to be able to reduce the research costs, improve on the efficiency in terms of speed, be flexible and produce accurate results (Latham, 2007).

Table 3.2: Sampling frame

Respondents	Population	Ratio	Sample
Head teachers	10	0.60	6
Senior Teachers	50	0.62	30
Teachers	200	0.605	121
Total	**260**	**1.825**	**157**

Research Instruments:

The study will use both interview guides and questionnaires to collect primary data from the respondents. Questionnaires will be employed on heads of departments and teachers while Interview guide will only be used on the head teachers

because with interview guide, detailed information can be obtained from the respondents in regards to the research topic and also follow-ups will be used to confirm the past performance of pupils in primary schools. The most preferred instrument though are questionnaires which are less costly given the number of respondents and the nature of research topic that contains both qualitative and quantitative data (Kothari, 2004).

Pilot testing:

Pilot study was conducted to check consistencies with the research instrument to be used and necessary adjustments to be made. This was done by issuing questionnaires to few headmasters, heads of departments and class teachers of public primary schools neighboring kayole area. The researcher selected a pilot sample comprising of 10% of the sample population under the study. This Was done to determine whether the study is likely to fail or to succeed and thus inform the researcher on whether to halt or continue with the study. The researcher employed split half method as a reliability analysis tool which involves obtaining information from a group of respondents comprising of even and odd numbers by taking two halves in which Pearson's correlation coefficient is used. If the coefficient is more than 0.7 it would mean that the reliability of data is high and less than 0.7 would indicate that the data is less reliable.

Validity of research instruments:

Validity is the extent by which data findings through analysis specifically represent the variables under the study (Mugenda & Mugenda 2003). This study used content validity in measuring the extent to which data collected represents the variables under study. Content validity is a type of validity that different skills behaviors and elements are properly measured. It involves review of the study by the experts in the field under study (Zohrabi, 2013). To meet the content validity in this study, regular reviews were done by the supervisor assigned and other lectures in the department of extra mural studies, project planning and management who are experts in this study and also by constructing a pilot data that contains similar characteristics of the population under the study.

Reliability of Research Instruments:

Reliability refers to the stability and consistency of measures and measurement instruments (Kimberly & Winterstein, 2008). To enhance reliability; the researcher selected a pilot sample comprising of 10% of the sample population under the study. This will be done to determine whether the study is likely to fail or to succeed and thus inform the researcher on whether to halt or continue with the study. The researcher employed split half method as a reliability analysis tool which involves obtaining information from a group of respondents comprising of even and odd numbers by taking two halves in which Pearson's correlation coefficient is used. If the coefficient is more than 0.7 it would mean that the reliability of data is high and less than 0.7 would indicate that the data is less reliable.

Data Collection Procedures:

The researcher secured an introductory letter from the University of Nairobi, College of Education and Distance Learning, a permit from the Ministry of Education and were used to collect data since the respondents were informed and learned and therefore would make rational and independent decisions. The research assistants self-administered the questionnaires to the respondents through drop and pick method.

Data Analysis Techniques:

The study used both quantitative and qualitative data. Qualitative data was analyzed using descriptive statistics where mean; mode median, percentage and standard deviation will be applied. Quantitative data was analyzed using SPSS; a statistical computer analysis package used for social sciences studies. The researcher ran a regression to establish the influence of sustainability of free primary education (independent variable) on the performance level of pupils in school (dependent variable) by incorporating the below regression equation:

$S = \alpha_0 + \beta_1 LT + \beta_2 LM + \beta_3 PT + \beta_4 GF + \varepsilon_i$

Where; S = Sustainability of free primary education.

α_0 - intercept coefficient

ε_i – error term (extraneous variables)

LT – Level of training

LM –Learning material

PT– Pupil to teacher ratio

GF–Government funding

β_1, β2, β3 and β_4 = regression coefficients

Ethical consideration

The information collected from the respondents was treated with confidentiality. Before the researcher and the research assistants began collecting information from the respondents, they explained the need for the study. This therefore means that the respondent was not coerced to participate in the study. The respondents would be informed that no compensation whatsoever would be awarded to them for participating in the study and findings however would be shared with the respondents. The researcher also obtained a license from NACOSTI, a body that is mandated in providing approvals for all scientific researches in Kenya (National Commission of Science and Technology, 2013)

4. DATA ANALYSIS, PRESENTATION AND INTERPRETATION

Response Rate:

The respondent distributed 151 questionnaires and 6 interview guides. Out of these, 115 questionnaires were filled and returned while 5 interview guides were successfully administered. This represents a response rate of 79.47% as tabulated below;

Table 4.1: Distribution of Response Rate

Rate	Frequency	Percentage
Response	120	79.47
Non-Response	37	20.53
Total	157	100

This correlates with Mugenda and Mugenda (2003) recommendation that a response rate of 50% is adequate for analysis and reporting; a rate of 60% is good and a response rate of 70% and over is excellent. This clearly shows that the response rate in this study was excellent.

Staff Training and Sustainability of Free Primary Education:

The study sought to establish the kind of training that the teachers, head teachers and senior teachers had attended as part of strengthening their participation in sustainability of FPE in their respective schools. The table below indicates the outcome;

Table 4.2: Distribution of Respondents by training

Course	Frequency	Percentage
Guidance and Counseling	51	44.35
Prism course	15	13.04
RESSP	12	10.43
SBTDP	17	14.78
None	20	17.39
Total	**115**	**100**

Table 4.2 indicates that a significant number of teachers and head teachers had done a course on School based teacher development program (14.78%) while 44.35% of them had attended a course on guidance and counseling, 13.04% of them had trained on PRISM (a professional development course) and 10.43% had done a course on RESSP (to aid in providing psychosocial support to children and their families). The study on the hand established that a significant percentage of the teachers had not attended any of the courses (17.39%).

The study established that 67% of the schools had been sponsoring teachers to attend educational seminars/sources and organized for seminars to improve teacher skills since the inception of the FPE while 33% of them indicated otherwise citing lack of resources and insufficiency of teachers.

85% of the teachers indicated that quality content should be student or learner centered while 15% indicated that sometimes it should be but incorporation of other factors is essential to make learning a two way process. The teachers indicated that the quality of teaching depends on the number of teachers in an institution. They further argued that FPE faces challenges due to limited human resource among schools and irrelevance of courses which do not meet learner needs and prepare them adequately for the next stage in the learning process. The teachers and head teachers cumulatively indicated that they face quite a number of challenges in implementing the FPE program in their schools. The study established that 14.78% of the schools have a problem with non-cooperative parents, 18.26% of them have inadequate teaching/learning materials, 21.74% have inadequate teaching staff, 19.13% have over enrolment in classes, 14.78% suffer from unattended lessons while 11.30% of the head teachers have a problem in dealing with over age learners. This indicates that the FPE program among the schools have faced limited resources ranging from teachers, learning materials, infrastructure, poor stakeholder participation and poor lesson attendance among teachers coupled with over age learners who are heard to deal with. The study found out that training and in-service programs have or can assist greatly in empowering teachers on serving learners, observing time and supporting the school management while head teachers have or can improve on their administrative duties, understanding parent and student behaviour and also providing guidance and counseling to staff, learners and parents. The seminars have assisted in sensitizing teachers on how to effectively and efficiently assist in implementing the FPE program.

Availability of learning materials and sustainability of Free Primary Education Program:

In order to meet the second objective, the study sought to establish how the availability of learning materials affects the quality of education among schools in Embakasi East Sub-County. The respondents indicated that inadequacy of learning materials has paralyzed sustainability of the provision of quality education among the schools. Due to lack of learning materials teachers are not able to deliver quality content to the learners and learners do not enjoy nor grasp the content. This has led to poor performance of the learners. The study realized that enrolments by class in the year 2017 among the schools gone so high that the teachers are getting it difficult to serve and attend to individual learners. Most classes in the year 2017 among public primary schools in Embakasi East Sub-County had an enrollment of averagely more than 45 pupils courtesy of FPE. The enrolment is higher than the recommended number per class given the size of the classrooms and number of teachers who need to attend to each and every learner. This clearly indicates that high enrolment is a challenge in sustainability of FPE given the available resources and staff.

85% of the schools did not have enough textbooks for every pupil with more than 10 pupils sharing a textbook. Main subjects like languages, mathematics and sciences had a major deficit of text books among the schools with over 75% of the teachers indicating that over 14 pupils had to share a text book making it hard for a pupil to read or even see what is being discussed in class by the teachers. Home work was not had in time due to the same problem of inadequate textbooks. The study realized that limited text books were due to insufficient resources to purchase more books, government bureaucracy who took long to avail necessary resources, influx of pupils and lack of a library to store the books leading to loss of those available. 89% of the schools didn't have a functional and equipped library. This made learning difficult and even safe custody of books. 67% of the schools didn't have enough writing tools while 81% of them did not have reference materials or additional classroom objects for the pupils to use prompting the learners to look for their own measures to facilitate the learning. This made those who can't afford vulnerable. The respondents indicated that this was the case due to limited resources and lack of stakeholder support more especially parents and the government.

The teachers indicated that the learners did not proper and safe storage facilities for their books with most of them leaving them on the desks and their private bags. This made the books to wear out faster and even get lost. 65% of the schools involved sharing of a desk by over 4 pupils making the setting arrangement un-conducive for learning all blamed on inadequate resources. The study sought to establish performance of the schools for over 10 years; between 2001 and 2012 the period within which the FPE took effect. The mean scores on a 12 point scale. The graph generally indicates a generally improvement in performance from a mean of 5 which is the average to a mean of 6. This however is not significant despite of the FPE program. The trend however is positive although fluctuating.

International Journal of Novel Research in Humanity and Social Sciences
Vol. 5, Issue 5, pp: (81-103), Month: September - October 2018, Available at: www.noveltyjournals.com

Teacher-Pupils Ratio and Sustainability of FPE:

The study further sought to establish the role played by the teacher/pupils ratio on the sustainability of the Free Primary Education. It was realized that most schools had between 8 to 20 teachers and between 400 and 1200 pupils. This created a high ratio of averagely 1 teacher to 58 pupils which is way far above the international standards. The study generally established that 77% of the schools had teaching inadequacy due to limited number of teachers against the unlimited number of learners. It was further established that 65% of the teachers could not give assignments due to the large number of learners with most of the head teachers (71%) checking performance of their pupils once a week while 10% on daily basis and the remaining percentage never did that due to a large number of pupil population. For those who gave assignments or homework, few questions were administered with 80% of them giving less than 5 questions, 11% between 5 and 10 questions. 9% gave more than 10 questions. This was also blamed on the large number of learners. The study further sought to establish how the schools were coping with inadequate teaching staff. The findings were presented in the pie chart below;

Table 4.3: Distribution of Respondents by nature of teaching staff

Course	Frequency	Percentage
PTA Teachers		18
Volunteer		5
Multi-grade		56
Teaching in shifts		21
Total		**100**

It was evident that 18% of the schools employed PTA teachers in conjunction with parents to assist in meeting the learner demand, 5% incorporated volunteer teachers, and 21% employed teaching in shifts as an approach to bridge the gap while 56% of them engaged multi-grade teaching to meet the teaching demand among their schools. Multi-grade teaching was the most employed approach since it made use of the available teachers given the limited resources but compromised on quality of learning. Given the inadequacy of teachers 51% of the schools had teachers doing more than 40 lessons a week, 24% between 31 and 40 lessons a week, 19% between 20-31 lessons while only 6% had teachers doing less than 20 lessons a week. This clearly indicated that most teachers were being overworked among the schools due to influx of pupils and high teacher-pupil ratio therefore.

Government Funding and Sustainability of FPE

The study finally sought to establish how government funding determines sustainability of the free primary school education program in Embakasi East Sub-County, Kenya. The study established that 67% of the public primary schools in the sub-county receive below Ksh. 300,000 with a capitation of Kshs. 1020 per pupil per term which was disbursed in tranches. 33% of the schools however got above Kshs. 300000 but this equally came in tranches hampering planning and facilitation of the program. 92% of the respondents indicated that the government funding is not sufficient despite the fact that it has been increasing over the years. Schools have strived to look for donors and other funding agencies like the faith based organizations to fund some of the school programs. 57% of the schools indicated that they had started agricultural and business programs aimed at supplement the government funding and to enable them meet their bills. Some of the schools have engaged in greenhouse farming, water projects and sought donor assistance to raise funds. However this still was not sufficient with most of them not succeeding in their ventures of looking for extra funds given that the schools are public entities.

Regression Analysis:

The researcher conducted multiple regression analysis to establish the factors influencing the sustainability of FPE in Embakasi East Su-County. The findings are indicated as;

Table 4:4: Model Summary

Model	R	R-Square	R Square	Adjusted R Square
1	0.899	0.851	0.811	0.595

Source: Field Data, 2018

The table above indicates the model summary. From the findings, R was 0.899, R square was 0.851 and adjusted R squared was 0.811. An R square of 0.851 implies that 85.1% of changes in sustainability of FPE in Embakasi East Sub-County, Kenya are explained by the independent variables of the study. There are however other factors that influence sustainability of FPE in Kenya that are not included in the model which account for 14.9%. An R of 0.899 on the other hand signifies strong positive correlation between the variables of the study.

Table 4:5: ANOVA

Model	SS	df	MS	F	Significance
Regression	638.04	120	560.4	676.015	0.0912
Residual	281.40	37	0.950		
Total	**919.44**	**157**			

Source: Field data, 2018

From the ANOVA table above, the value of F calculated is 676.015 while F critical is 489.465. Since the value of F calculated is greater than F critical, the overall regression model was significant and therefore a reliable indicator of the study findings.

Correlation Analysis:

Table 4:6: Regression Coefficients

Model	Unstandardized coefficients		Standardized Coefficients	t	Sig
	B	Std Error	Beta		
Constant	5.49	0.674		8.012	0.000
Staff training	0.655	0.022	0.811	14.15	0.001
Availability of learning materials	0.876	0.033	0.120	11.04	0.002
Pupil to teacher ratio	0.945	0.029	0.127	1.15	0.004
Government funding	0.860	0.031	0.384	4.42	0.000

Source: Field data, 2018

The resultant regression equation becomes;

$$\mathbf{Y = 5.49 + 0.655X_1 + 0.876X_2 + 0.945X_3 + 0.860X_4}$$

Where Y is the sustainability of FPE in Embakasi East Sub-County, Kenya; β_0, β_1, β_2, $\beta 3$ and β_4 are the regression coefficients and X_1, X_2, X_3 and X_4 represent staff training, availability of learning materials, pupil to teacher ratio and government funding respectively. This implies that when all the variables of the study are held constant, sustainability of

FPE in Embakasi East Sub-County, Kenya will be at the intercept which is 5.49. A unit improvement in staff training while all other factors held constant results in 0.655 increase in sustainability of the FPE program among the selected schools, a unit increase in availability of learning materials with other factors *ceteris paribus* leads to 0.876 improvement in sustainability of FPE in Kenya. Similarly a unit increase in the teacher to pupil ratio while other factor *ceteris paribus*, translates to a 0.945 increase in FPE program sustainability in Kenya while a unit increase in government funding with other factors held constant leads to a 0.860 improvement in FPE sustainability in Kenya.

5. SUMMARY OF FINDINGS, DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

Summary of Findings:

The findings in the previous chapter are summarized as below;

Staff Training and Sustainability of Free Primary Education:

The study established that a significant number of teachers and head teachers had done a course on School based teacher development program, guidance and counseling, PRISM (a professional development course) and RESSP (to aid in providing psychosocial support to children and their families). The study however indicated that a significant percentage of the teachers had not attended any of the courses (17.39%). The study established that 67% of the schools had been sponsoring teachers to attend educational seminars/sources and organized for seminars to improve teacher skills since the inception of the FPE while 33% of them indicated otherwise citing lack of resources and insufficiency of teachers. 85% of the teachers indicated that quality content should be student or learner centered while 15% indicated that sometimes it should be but incorporation of other factors is essential to make learning a two way process. The teachers indicated that the quality of teaching depends on the number of teachers in an institution. They further argued that FPE faces challenges due to limited human resource among schools and irrelevance of courses which do not meet learner needs and prepare them adequately for the next stage in the learning process.

The teachers and head teachers cumulatively indicated that they face quite a number of challenges in sustaining the FPE program in their schools. The study established that 14.78% of the schools have a problem with non-cooperative parents, 18.26% of them have inadequate teaching/learning materials, 21.74% have inadequate teaching staff, 19.13% have over enrolment in classes, 14.78% suffer from unattended lessons while 11.30% of the head teachers have a problem in dealing with over age learners. This indicates that the FPE program among the schools have faced limited resources ranging from teachers, learning materials, infrastructure, poor stakeholder participation and poor lesson attendance among teachers coupled with over age learners who are heard to deal with. The study found out that training and in-service programs have or can assist greatly in empowering teachers on serving learners, observing time and supporting the school management while head teachers have or can improve on their administrative duties, understanding parent and student behaviour and also providing guidance and counseling to staff, learners and parents. The seminars have assisted in sensitizing teachers on how to effectively and efficiently assist in implementing the FPE program.

Availability of learning materials and sustainability of Free Primary Education Program:

The respondents indicated that inadequacy of learning materials has paralyzed sustainability in the provision of quality education among the schools. Due to lack of learning materials teachers are not able to deliver quality content to the learners and learners do not enjoy nor grasp the content. This has led to poor performance of the learners. The study realized that enrolments by class in the year 2017 among the schools gone so high that the teachers are getting it difficult to serve and attend to individual learners. It was realized that public primary schools in Embakasi East Sub-County, had an enrollment of averagely more than 45 pupils courtesy of FPE. The enrolment is higher than the recommended number per class given the size of the classrooms and number of teachers who need to attend to each and every learner. This clearly indicates that high enrolment is a challenge in sustainability of FPE given the available resources and staff. 85% of the schools did not have enough textbooks for every pupil with more than 10 pupils sharing a textbook. Main subjects like languages, mathematics and sciences had a major deficit of text books among the schools with over 75% of the teachers indicating that over 14 pupils had to share a text book making it hard for a pupil to read or even see what is being discussed in class by the teachers. Home work was not had in time due to the same problem of inadequate textbooks.

The study realized that limited text books were due to insufficient resources to purchase more books, government bureaucracy who took long to avail necessary resources, influx of pupils and lack of a library to store the books leading to loss of those available. 89% of the schools didn't have a functional and equipped library. This made learning difficult and even safe custody of books. 67% of the schools didn't have enough writing tools while 81% of them did not have reference materials or additional classroom objects for the pupils to use prompting the learners to look for their own measures to facilitate the learning. This made those who can't afford vulnerable. The respondents indicated that this was the case due to limited resources and lack of stakeholder support more especially parents and the government. The teachers indicated that the learners did not proper and safe storage facilities for their books with most of them leaving them on the desks and their private bags. This made the books to wear out faster and even get lost. 65% of the schools involved sharing of a desk by over 4 pupils making the setting arrangement un-conducive for learning all blamed on inadequate resources. There was a general improvement in performance from a mean of 5 which is the average to a mean of 6. This however is not significant despite of the FPE program. The trend was positive although fluctuating.

Teacher-Pupils Ratio and Sustainability of FPE:

The study established that most schools had between 8 to 20 teachers and between 400 and 1200 pupils. This created a high ratio of averagely 1 teacher to 58 pupils which is way far above the international standards. The study generally established that 77% of the schools had teaching inadequacy due to limited number of teachers against the unlimited number of learners. It was further established that 65% of the teachers could not give assignments due to the large number of learners with most of the head teachers (71%) checking performance of their pupils once a week while 10% on daily basis and the remaining percentage never did that due to a large number of pupil population. For those who gave assignments or homework, few questions were administered with 80% of them giving less than 5 questions, 11% between 5 and 10 questions. 9% gave more than 10 questions. This was also blamed on the large number of learners.

It was evident that 18% of the schools employed PTA teachers in conjunction with parents to assist in meeting the learner demand, 5% incorporated volunteer teachers, 21% employed teaching in shifts as an approach to bridge the gap while 56% of them engaged multi-grade teaching to meet the teaching demand among their schools. Multi-grade teaching was the most employed approach since it made use of the available teachers given the limited resources but compromised on quality of learning. Given the inadequacy of teachers 51% of the schools had teachers doing more than 40 lessons a week, 24% between 31 and 40 lessons a week, 19% between 20-31 lessons while only 6% had teachers doing less than 20 lessons a week. This clearly indicated that most teachers were being overworked among the schools due to influx of pupils and high teacher-pupil ratio therefore.

Government Funding and Sustainability of FPE:

The study established that 67% of the public primary schools in the sub-county receive below Ksh. 300,000 with a capitation of Kshs. 1020 per pupil per term which was disbursed in tranches. 33% of the schools however got above Kshs. 300000 but this equally came in tranches hampering planning and facilitation of the program. 92% of the respondents indicated that the government funding is not sufficient despite the fact that it has been increasing over the years. Schools have strived to look for donors and other funding agencies like the faith based organizations to fund some of the school programs. 57% of the schools indicated that they had started agricultural and business programs aimed at supplement the government funding and to enable them meet their bills. Some of the schools have engaged in greenhouse farming, water projects and sought donor assistance to raise funds. However this still was not sufficient with most of them not succeeding in their ventures of looking for extra funds given that the schools are public entities.

Staff training and Sustainability of FPE:

The study established that a significant number of teachers and head teachers had done a course on professional development however 17.39% of the teachers had not attended any of the courses. This had affected their output significantly. It was discovered that FPE faces challenges due to limited human resource among schools and irrelevance of courses which do not meet learner needs and prepare them adequately for the next stage in the learning process. Training improved the output of the teachers and their professional capacity. This is also indicated by Adegbile & Adeyemi (2008) in their study on universal education in Nigeria, training improves service delivery.

Availability of learning materials and sustainability of Free Primary Education Program:

The study established that inadequacy of learning materials had paralyzed sustainability of the provision of quality education among the schools. Due to lack of learning materials teachers are not able to deliver quality content to the learners and learners do not enjoy nor grasp the content. This has led to poor performance of the learners. 85% of the schools did not have enough textbooks for every pupil with more than 10 pupils sharing a textbook. The study indicated that an improvement in provision of learning and teaching materials would improve the sustainability of the FPE problem. A study by Madina, James & Lawrence (2010) on universal education program in Uganda however established that supplying more learning materials adversely affect the quality of education in primary schools. This study contracts the current one.

Teacher-Pupils Ratio and Sustainability of FPE:

The study generally established that 77% of the schools had teaching inadequacy due to limited number of teachers against the unlimited number of learners. It was further established that 65% of the teachers could not give assignments due to the large number of learners. An improvement in the number of teachers would go a long way in improving project sustainability. Adegbile & Adeyemi (2008) equally made the same conclusion that pupil to teacher ratio is crucial when determining the quality of education delivered.

Government Funding and Sustainability of FPE:

92% of the respondents indicated that the government funding is not sufficient despite the fact that it has been increasing over the years. Schools have strived to look for donors and other funding agencies like the faith based organizations to fund some of the school programs. An improvement in government funding was expected to improve the sustainability of the program. Nafula (2002) on her study on sustainability of FPE in the North Eastern Kenya region made a similar conclusion.

Conclusions:

The study concluded that the independent variables significantly influenced the sustainability of the FPE program among public primary schools in Embakasi East Sub-County. The study established that

On the issue of staff training, there was a considerate number of teachers that had not attended professional education development course. Schools also had to engage either volunteer or PTA teachers to assist in meeting learner demands. This compromised on quality and consistency in the learning process hence influenced on the sustainability of FPE. The availability of learning materials determined the sustainability of FPE to some extent as lack of some materials made it difficult for the learning process to continue smoothly.

On pupil to teacher ratio, it was established that effective learning was a challenge as the teachers complained of the high number of pupils that needed much more attention that could be provided. This may have affected the sustainability of the FPE.

The study also established that allocation of funds affected the sustainability of the FPE as the amount of funds allocated by the government was not adequate. However parents come in order to contribute to the extra needs that arise.

Recommendations:

The following recommendations were made;

The study established that staff training determined positively the sustainability of FPE in Embakasi East Sub-County. The study recommends that management of schools and teachers should be encouraged to facilitate and attend capacity building trainings for effective sustainability of FPE.

The study established that the availability of learning materials was not enough in schools. The study recommends that the government should increase the allocations for the purchase of the teaching and learning resources for effective sustainability of FPE.

The study recommends that it is necessary for the government to hire more teachers to meet the influx in number of pupils so as to reduce the ever growing pupil to teacher ratio.

Finally, the study recommends that the government should post more teachers to Embakasi East Sub County for effective sustainability of FPE. The study established that funds allocation per child was not enough as the funds allocated could not meet the needs of the school. The study recommends that the government should consider increasing the allocation towards the FPE.

Suggestions for further studies:

The following suggestion was made;

Other Studies should be replicated in other parts of the country since there are other determinants which might influence the sustainability of FPE apart from the four determinants covered in this study.

REFERENCES

[1] Abby et al (2003). *The Introduction of Free Primary Education in Sub-Saharan Africa*. OuP, London

[2] Adegjibe J.A and Adeyemi B.A (2010).*Does teaching methods and availability of teaching resources influence pupils' performance; evidence from four districts in Uganda*? Economic policy research center. Research series Vol. 8 No. 77

[3] Bedi, A.S., Kimalu, P.K., Manda, D.K. and Nafula, N.(2004). *The decline in primary school enrolment in Kenya. Journal of African Economies*, 13(1): 1–43.Articles Universalizing primary education in Kenya: the elusive goal.

[4] IPAR (2014). *Efficiency of Primary Education in Kenya: Situational Analysis and Implications for Educational Reform*. Institute of Policy Analysis and Research, Nairobi

[5] Katrina A. Korb (2012). *Influence of teacher quality variables on Nigerian primary school pupils achievement in English language*. Journal on Conducting Educational Research

[6] Krejcie R.V., & Morgan, D.W. (1970). Determining *Sample Size for Research* activities. *Educational and Psychological Measurement*, *30*, 607-610.

[7] Kothari, C.R. (2004). *Research Methodology, Methods and Techniques*: New Afe International (P) Ltd. Publishers, New Delhi.

[8] Madina M Gulabo, James Wokadala, Lawrence Bategeka (2005).*Social motivation, justice, and the moral emotions: An Attribution Approach.* 1st edition, psychological press, BernardWeiner.

[9] Morten Skovdal (2012).*Free Primary education in Kenya: Social inequalities in the making.* London school of economics and political science and University of Bergen.

[10] Mugenda, O.M. and Mugenda, A.G. (1999).*Research Methods: Quantitative and Qualitative Approaches*. Acts Press, Nairobi.

[11] Mugenda, O. M. & Mugenda, A. G. (2003). *Research methods: Quantitative and Qualitative Approaches*. Nairobi: African Centre for Technology Studies.

[12] Mbiti, D. M (1978). *Alternative to traditional systems and process of teachers' education. Teacher education for basic education*: Report of a conference held in Tanzania, 1978.

[13] MOEST (2003). *National Action Plan for Education for All*: Ministry of Education, Science and Technology, Nairobi.

[14] Mwiria, K.,& Wamahiu, S. (1995). *Issues in educational research in Africa*: East African Educational Publishers.Nairobi

[15] Namach, S.K.(1990). *A study of factors which affect the implementation of 8-4-4 syllabus*. Unpublished thesis, Kenyatta University.

[16] Oketch, Moses and Rolleston, Caine (2007). *Policies on Free Primary and Secondary Education in East Africa: A Review of the Literature, Create Pathways to Access*. Brighton , UK: University of Sussex. Research Monograph No. 10

[17] Oketch, Moses, Mutisya, Maurice, Ngware, Moses and Ezeh, Alex Chika (2010). *Why are there proportionately more poor pupils enrolled in non-state schools in urban Kenya in spite of FPE policy*? International Journal of Education Development, 30(1): 23–32.

[18] Oxfam, G. B. (2003). *Assessment of the Education Status in Kibera in the Light of Free PrimaryEducation (FPE)*. Policy in October 2003, Mimeo. Nairobi: Oxfam (GB).

[19] Oxfam International (2005). *Paying the Price: Why Rich Countries Must Invest Now in a War on Poverty*. Oxford, Oxfam International.

[20] UNESCO, Institute for Statistics (UIS) AND UNICEF (2015). *Fixing the Broken Promise of Education for All: Findings from the Global Initiative on Out-of-School Children*