Effect of Free Primary Education (FPE) Policy on Pupils' Enrolment in Public Primary Schools in Kakamega County, Kenya

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ABSTRACT

This study investigated the effectiveness of Free Primary Education (FPE) policy as one of the integrated education management strategies (IEMS) on enrolment aspect of pupils' participation in public primary schools of Kakamega County, Kenya. The study conformed to the 8-4-4 system of education in 3 phases: pre-FPE Phase (1995 – 2002), First-FPE Phase(2003-2010) and Second-FPE Phase (2011- 2018). A sample size of 82 schools representing 30% of Public Primary Schools was purposively sampled from 273 schools in four selected sub-counties: Lurambi(20), Shinyalu(24), Mumias East(18) and Navakholo (20). The research found that FPE policy had positive impact on enrolment of pupils in school.

Introduction

The idea behind the development of human capital is the formal education system of primary, secondary and tertiary training (Kariyana, Maphosa & Mapuranga, 2012; Lekhetho, 2013). OECD (2019) defines human capital as "the knowledge, skills, competencies and other attributes embodied in individuals or groups of individuals acquired during their life and used to produce goods, services or ideas in market circumstances". Formal education is admittedly a sure approach to achieving economic stability for a nation (Grajcevci and Shala, 2016).

This education is delivered at structured levels through firm commitment by various governments (Mamoeketsi, 2013).

This commitment has been well illustrated through Global Government initiatives such as the Jomtien Conference in Thailand, 1990 and the Dakar Declaration in Senegal, 2000 on Education For All (EFA), Republic of Kenya and UNICEF (2012) and the Millennium Development Goals by 2015 according to UNDP (2000). The core mandate of any Government is to address the access of its citizens to education at all levels. This has however remained a pipe dream in most developing countries mainly due to ineffective policies on education (Mats, 2011).

Kenya has committed itself to the above global declarations on education delivery. This has led to continuous improvement of education in Kenya through such policy initiatives like the Sessional Paper No. 1, 2019 (Ministry of Education, Kenya (2019) and Directorate of Committee Services (2019). These policy documents provide guidance in the development of the entire education sector in Kenya.

The Government of Kenya has made tremendous effort in conforming to the above commitments through major education policies, namely, the Free Primary Education (FPE) policy in 2003 (Republic of Kenya, 2012) which followed the passing of the Children's Act in 2001 (Republic of Kenya, 2001).

Study Objective

To determine how free primary education policy affects enhancement of enrolment aspect of pupils' participation in Public Primary Schools in Kakamega County, Kenya.

Hypothesis

The study was guided by the following Hypothesis:

$H_{0(e)}$: Free Primary Education (FPE) Policy has no significant effect on enhancement of retention aspect of pupils' participation in Public Primary Schools in Kakamega County, Kenya.

Integrated Education Management Strategies

Effective implementation of integrated education management strategies in education has a direct impact on participation of pupils as based on enrolment, retention and academic performance. Mortrude (2017) has given an analysis of various strategies in integrated education and training. At lower levels of education, the researcher found that preparation of learners includes activities, programmes or services. These are designed to help an individual acquire a combination of various skills that include academic, critical thinking, digital literacy and self management. Other skills include competencies in utilizing resources, using information, working with others, understanding systems and skills necessary for transition into higher levels of education.

Kenya has been putting a lot of emphasis on the sufficiency of educational resources being offered to public primary schools. Aggressive attempts have been made to align the education system to the enacted Kenya Constitution, 2010 and subsequent revisions of the Education Act (Ministry of Education, Kenya, 2019). As a result of this, the Kenyan education sector has undergone major transformations in the last thirty years through the work of special commissions and

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working parties established by the government (Ministry of Education Kenya, 2012).

Through these approaches and initiatives, the government has sought to address challenges facing the education sector (Wycliffe and Christopher, 2009). The period from 1985 to 2018 has witnessed major changes in the Kenyan education sector; change of education system from the 7-4-2-3 system to the 8-4-4 system in 1985 and FPE policy in 2003. These researchers, too, state that focus has been on the attainment of Universal Primary Education (UPE) and Free Day Secondary Education (FDSE) as well as achieving greater enrolment, retention and academic performance through public provision of teaching and mobilisation of learning resources such as parental involvement (Abdul et. al., 2018).

Free Primary Education Strategy

The concept of Free Primary Education (FPE) policy is actualisation of global and regional affirmative action to ensure that education is accessible by all. This was initiated through forums such as the recommendations by the Jomtien World Conference of (1990) on Education For All (EFA), which was later reconfirmed at the World Education Forum in Dakar, Senegal and at the United Nations Millennium Summit where 189 nations guaranteed to have Universal Basic Education to all citizens by 2015. EFA initiative (Dakar Framework for Action, 2000) and MDG targets (UNDP Declaration, 2000). The Dakar Framework of Action (DFA) assented to six regional EFA frameworks. Two of these that related to provision of education, stated that, "the heart of EFA lies at country level" and that "no countries seriously committed to EFA will be thwarted in their achievement of this goal by a lack of resources".

The eight MDGs ranged from having extreme poverty to provision of Universal Primary Education (UPE) for all by the target date of 2015 (UNDP Declaration, 2000). MDG Goal No. 2 committed to the provision of universal education. Based on the MDG Report 2015 (UNDP, 2015) the following highlights can be listed:

● Primary school net enrolment rate in Developing Countries had risen from 83% in the year 2000 to 91% in the year 2015.

● The number of school drop outs had fallen by almost half to an estimated 57 million pupils in 2015 from 100 million pupils in 2000.

● Between 1990 and 2012 the number of enrolled children in primary schools of sub-Saharan Africa had doubled from 62 million to 149 million.

● In developing regions children in the poorest households were four times as likely to be out of school as those in the richest households.

● The literacy rate among youths aged between 15 – 24 years increased globally from 83% to 91% between 1990 and 2015.

According to World Population Review (2020) the global literacy rate in 2020 was quite high. Males aged over 15 years had a literacy rate of 90% while female lacked behind at 87%. In developed countries the literacy rate was 99.2 % against a high illiteracy rate in developing countries where over 95% of world's illiterate people reside with 70% being women (Verner, 2005). The literacy rate in Kenya has been declining from 82.23% in 2000 to 72.16% in 2007, 73.73% in 2014 before rising to 81.54% in 2018 which was still below the literacy level in 2000. The Kenya Population Census of 2019 showed that the literacy rate for male was 81.03% and 74.9% for female (KNBS, 2019). The results or decline in the literacy rate in Kenya coincided with the introduction of FPE.

This may be attributed to the high cost of education during the cost sharing policy before FPE.

Based on these findings global commitments were undertaken and countries in developing world such as Kenya domesticated the principles into the FPE. Similarly other countries implemented these principles in their specific frameworks. For example, in Zambia Free Basic Education started to enable children to participate in education as a strategy for retention of pupils in school (African Development Bank, 2003).

The introduction of Free Primary Education (FPE) in 2003 followed the passing of the Children's Act in 2001. This led to vital educational achievements. Enrolment in public primary schools increased significantly from 5.9 million pupils in 2002 to 6.9 million pupils in 2003 which was a remarkable 17% increase. This represented an admirable level of 99 % Gross Enrolment Rate (GER) made up of 102% girls and 97% boys (Reche et al., 2012).

The FPE policy in Kenya is anchored in Children Rights 2001 and implemented in 2003 (Republic of Kenya, 2001). The allocation is pupil-based and limited to pupils in public primary schools.

Based on the above reviews this study used the case of schools from Kakamega County in Kenya to investigate how FPE impacted on enrolment, retention and pupils performance. Views from respondents were sort through questionnaires on adequacy of learning resources, teacher to pupil ratio, quality of education and its affordability.

Research Design

Resign design constitutes advance planning of the methods to be adopted for data collection and analysis to achieve the research objectives. This study required collection of both qualitative and quantitative data. Qualitative data was obtained through surveys which included interviews, observations and questionnaires administered to competent respondents who were carefully selected to ensure representation of different types of opinion. Quantitative data included pupil enrolment statistics, length of stay in school and reasons for pupils transfer.

According to Kothari (2005), qualitative methods provide greater in-depth of understanding about a limited number of subjects, while quantitative methods give a less in-depth understanding, but cover a wider scope of subjects. By using mixed approach, one obtains a more comprehensive research (Guba and Lincoln, 2005). Therefore, a complementary mixture of quantitative and qualitative data were sought in the methods to be used where the strengths of each approach was fully utilized.

This study employed a descriptive survey research design. Descriptive survey research design is used in preliminary and exploratory studies to allow researchers to gather information, summarize, present and interpret resuls for the purpose of clarification (Orodho, 2005). Mugenda and Mugenda (2006) on the other hand give the purpose of descriptive research as determining and reporting the status of issues. The design was adopted because it intended to produce statistical information about aspects of education that interest policy makers, parents, educators and other stakeholders.

The design was useful in describing the characteristics of formed opinion from a large population, by making use of large samples, thus making the results statistically more reliable even when analyzing multiple variables. Many questions can be asked about a given topic giving

considerable flexibility to the analysis (Mugenda and Mugenda, 2006).

The researcher used mixed approach method whereby both qualitative and quantitative data were collected. The study fitted within the provisions of descriptive survey research design because the researcher collected data and through analysis reported findings

Study Area

The study area was carried out in Kakamega County in western Kenya. Kakamega County is located 50 km north of Kisumu City along the Kisumu-Webuye-Kitale road. It borders Bungoma and Trans Nzoia counties in the North, Uasin Gishu and Nandi counties in the East, Vihiga and Siaya counties in the South, and Busia county in the West. It is located between latitudes $0^0 17'1.18"$ N and $34^o 45'5.27''$E (Figure 1). It has an area of 3,033.8 km^2 and is located at an average altitude of 1535m above sea level.

Kakamega County is divided into 12 Sub-counties: Lugari, Likuyani, Malava, Lurambi, Navakholo, Mumias East, Mumias West, Matungu, Butere, Khwisero, Shinyalu and Ikolomani sub-counties. Out of the twelve sub-counties in Kakamega County the researcher selected four sub-counties using simple random sampling. This represents the required minimum of 30% of the sampled sub-counties in Kakamega County (Mugenda and Mugenda, 2006). These were Lurambi, Shinyalu, Navakholo and Mumias East. Kakamega County, with a population of 1,867,579 according to 2019 Kenya Population census (KNBS, 2019) is the second largest county in Kenya after Nairobi County and hence provided the best choice as a case study area. It provided a high diversity of public primary schools located in both rural and urban centres.

Kakamega county was a convenient choice since it neighbours Bungoma county where the researcher's institution is located and where the pilot study was carried out. The selection of Kakamega county as a case study was also influenced by the in-depth knowledge of its characteristics by the researcher. The researcher introduced the subject through formal introductory letters.

Source:https://Kakamega.go.ke/download/map-of-Kakamega-County/
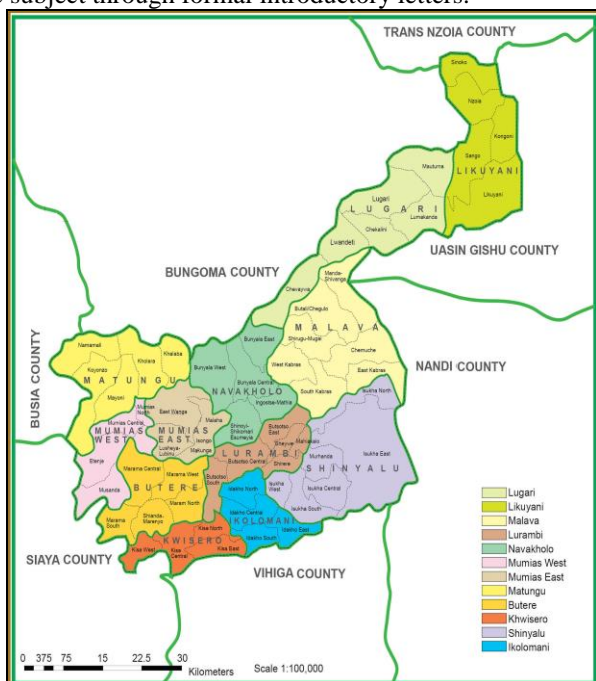
Figure 1. Map of Kakamega County.

Target Population

The statistical data for 2017 (KNBS, 2019) showed that Kakamega County had a total of 898 public primary schools with a pupil population of 533,695 (KNBS, 2019). With a teacher population of 9800 in public primary schools the Teacher: Pupil ratio was 1:54 as at 2017. Of the total pupil population of 537,237, a total of 264,639 (49.3 %) were male and 272,598 (50.7 %) were female. This study targeted 273 public primary schools in the four selected sub-counties out of the 898 public primary schools of Kakamega County, which represented 30.4% of public primary schools in Kakamega County as at 2017.

Sampling Techniques

Kothari (2005), and Mugenda and Mugenda (2006) have recommended 30% as minimum sample from the target population. Four sub-counties were selected from Kakamega county with a total of 12 sub-counties. This represents a minimum of 30 % of sub-counties selected (Mugenda and Mugenda, 2006). The target population of 273 public primary schools in the four selected sub-counties represented 30.4% of the 898 public primary schools in Kakamega County.

From this target population purposive sampling was used to deliberately select 82 (30.04%) of public primary schools in the four selected sub-counties to constitute the final sample size. The selection of the final sample of 82 schools was through convenience sampling based on ease of access by use of available public means of transport and public schools which provided necessary information for the study since 1995.

Sample Size for Respondents

The distribution of sample size in each sub-county was based on the total number of schools in each sub-county to constitute the 82 schools. The proportionate distribution of sample size by sub-county is as shown in Table 1.

Table 1. Proportionate Distribution of Sample Size by Sub-County

Sub-county	Number of Schools	Sample Size
Lurambi	66	20
Shinyalu	81	24
Mumias East	61	18
Navakholo	65	20
Total	273	82

For example, Lurambi sample size was obtained as follows based on the 66 public primary schools in Lurambi;

$$\text{Sample size} = \frac{66}{273} x82 = 20 \qquad (1)$$

Similarly the sample size for Navakholo with 65 schools was 20, Mumias East with 61 schools was 18 and Shinyalu with 81 schools was 24 (Table 1).

Respondents in the study were stratified into four categories representing the Employer, School Managers, Employees and Subjects of study who were represented by SCDE, Head Teachers, Teachers and pupils respectively.

Through Census survey, Head Teachers of the selected school were chosen as the respondents. This gave a total of 82 Head Teachers. For Teachers purposive sampling was used to select two teachers from each school, one of whom was the Senior Teacher and the other was the Class Teacher for Class 8 for the case where class 8 had only one stream or else the representative of the Class 8 class teachers was chosen by the Head Teacher in the case where class 8 had more than one stream.

Table 2. Sample Size for Distribution of Respondents.

Category of Respondents	Sampling Technique	Sample Size	Sub-County	Distribution per Sub-County
Head teachers	Census Survey	82	Lurambi	20
			Shinyalu	24
			Mumias East	18
			Navakholo	20
Teachers	Purposive	164	Lurambi	40
			Shinyalu	48
			Mumias East	36
			Navakholo	40
Pupils	Snow Ball	164	Lurambi	40
			Shinyalu	48
			Mumias East	36
			Navakholo	40
SCDE	Census Survey	4	Lurambi	1
			Shinyalu	1
			Mumias East	1
			Navakholo	1
Total Number of respondents				414

This gave a total of 164 Teachers from the 82 selected schools. By simple proportion the Teachers in the 82 schools were distributed by sub-county as follows: Lurambi, 40 teachers, Shinyalu, 48; Mumias East, 36 and Navakholo 40 Teachers.

Through Snow Ball sampling two pupils, one male and one female, were selected from Class 8 by the Class Teacher or the selected Class 8 class teachers' representative. This gave a total number of 164 pupils from the 82 selected schools. By simple proportion the pupils in the 82 schools were distributed by sub-county as follows: Lurambi, 40 pupils, Shinyalu, 48; Mumias East, 36 and Navakholo 40 pupils. For Sub-County Directors of Schools (SCDE) Census survey sampling was used being one SCDE for each selected sub-county. This gave a total of 4 SCDE being one from each sub-county of Lurambi, Shinyalu, Mumias East and Navakholo (Table 2).

Sample Size for Enrolment Data

Enrolment data for the study was obtained from three phases, namely, Pre-FPE, First-FPE and Second-FPE Phases. The cohort selected in each phase was the one that commenced with Class 1 at the beginning of the phase and ended with Class 8 at the end of the phase. The Pre-FPE phase is where class 1 pupils were enrolled in 1995 and completed their 8-year primary education in 2002. The First-FPE phase is where class 1 pupils were enrolled in 2003 and completed their primary education in 2010. The Second-FPE phase is where class 1 pupils were enrolled in 2011 and completed their 8-year education cycle in 2018. This phase was under the 2010 Constitution of Kenya which introduced significant changes in the education sector through the devolved Government structure and also ushered in the Education Act 2013.

Questionnaires

The questionnaires were developed and categorized in such a way that the study objective was addressed, by ensuring that there were specific questions that addressed each issue. The tools were used for data collection because they offered considerable advantages in their administration. The tools also presented even opportunities to large numbers of people simultaneously and provided the investigator with an easy accumulation of data. Gay (2003) maintains that questionnaires give respondents freedom to express their views or opinion and also to make suggestions. They are also anonymous. This anonymity helps to produce more candid answers than is possible in face-to-face interview. The questionnaires were used to collect data from head teachers, teachers and pupils.

Likert – type statements anchored by a five – point scale ranging from Strongly Agree (5) to Strongly Disagree (1) was used to capture specific indicators for each objective. The Likert – type scale is widely used in many social science studies (McLeod, 2019). A 5-point or 7-point scale are popularly used to get the mean and standard deviations for each indicator. In this study, a five point scale was used as it was seen to be sufficient to provide clear distinctions between the levels of responses to various attributes, which made it unnecessary to use higher scales.

Document Analysis Guide

Document Analysis Guide was used to collect data on enrolment statistics, demographic data, enrolment and length to complete the 8 years of primary education as well as reasons for long stay and pupil transfers.

Pilot Study

Before the actual data was collected, the researcher conducted a pilot study in five public primary schools in Kanduyi sub-county of the Bungoma County which were not included in the final study population. The purpose of the pilot study was to enable the researcher ascertain the reliability and validity of the research instruments, and to familiarize with the administration of the data collection tools and therefore improve on the instruments and procedures if necessary. The pilot study enabled the researcher to assess the clarity of the questionnaire items so that items found to be inadequate or vague were modified to improve the quality of the research instrument thus increasing its reliability.

Validity

Validity, according to Borg and Gall (1989), is the degree to which a test measures what it purports to measure. ''All assessments of validity are subjective opinions based on the judgment of the researcher'' A research instrument is regarded as being valid if its content is relevant and appropriate to set research objectives (Yamane, 1967; Kimbo and Tromp, 2006). Burton and Mazerolle (2011) has outlined the following three types of validity: Content validity; Face

validity and Construct validity. Content validity provides an evaluation of instruments' representativeness of topic to establish their credibility, accuracy, relevance and breadth of knowledge regarding the domain (Burton and Mazerolle, 2011). Face validity provides evaluations of instruments' appearance by a group of respondents to establish their ease of use, clarity, and readability. Construct validity determines the degree to which an operational measure correlates with the theoretical concept investigated and provides the researcher with confidence that a survey actually measures what it is intended to measure.

The pilot study helped to improve face validity of the instruments. According to Borg and Gall (1989), ''content validity of an instrument is improved through expert judgment.'' Content validity provides adequate coverage of the topic under study. If the instrument contains a representative sample of the universe, the content validity is good. Its determination is primarily judgmental and intuitive. It can also be determined by using a panel of persons who shall as such, the researcher will seek assistance of his supervisors, who, as experts in research, will help improve content validity of the instrument.

On the other hand construct validity is the most complex and abstract. A measure is said to possess construct validity to the degree that it conforms to the predicted correlation with other theoretical proposition. It's also the degree to which scores on the test can be accounted for by the explanatory constructs of a sound theory. To determine construct validity a set of other propositions are associated with the results received from using the measurement instruments. If measurements on devised scale correlate in a predicted way with these other propositions we can conclude that there is some construct validity.

Instrument validation was by content analysis in which each item of the instrument was carefully analyzed and checked to ensure that it conveyed the required information. The instrument was divided into several sections to ensure that each section reflected material for the specific objective. Validation was also accomplished through thorough examination by the supervisors. This involved several presentations to Departmental Board, School Board and Postgraduate Committees.

A pre-test through pilot study was done by administering the instrument to three conveniently selected Head-teachers to fill, without disclosing to them that this was not the final research. The Head-teachers were also asked to evaluate the statements for relevance and whether they were meaningful and clear, loaded or offensive.

This approach of pre-testing a questionnaire for validity and reliability was successfully used by Dixon, Spiro and Jamil (2001). The same approach was used and upon the responses, the instrument was adjusted appropriately before embarking on the actual data collection exercise.

The results of the adjusted instruments for SCDE, Head Teachers, Teachers and Pupils are shown in Table 3.

Table 3. Distribution of Items in Questionnaires and Interview Schedule.

Category of Respondent	Number of Items in Questionnaire	
	Before Pilot Study	After Pilot Study
SCDE	9	11
Head Teachers	10	9
Teachers	8	8
Pupils	10	8
Total	37	36

The validated items are shown in Appendices II to V. The content validity index CVI = 0.97, was computed as follows (Amin, 2005):

$$CVI = \frac{K}{N} = \frac{36}{37} = 0.97 \tag{2}$$

Where CVI = content validity index, K = total number of items in the questionnaire after adjustment and N = total number of items in the questionnaires before adjustment.

Reliability

Reliability refers to the consistency or stability in the measurements (Kothari, 2005). Best and Khan (2012) suggested that the Pearson product moment correlation is most often used because of its precision. Both reliability and validity should be high to be desirable (Burton and Mazerolle, 2011). To test reliability of the instruments, the questionnaires were piloted to 5 Head Teachers and 10 Teachers of public primary schools in Kanduyi Sub-County. The test instruments on Parental Involvement in pupils' education were administered to both Teachers and Head Teachers in order to obtain two sets of responses on the same items (Hinton- Bayre, 2010). Pearson product moment correlation (r) was used to determine the correlation coefficient as shown in Table 4.

Table 4. Computation of Pearson Product Moment Correlation Coefficient.

Items	Head Teachers(X)	Teachers (Y)	XY	X^2	Y^2
Homework	3.957	3.968	15.701	15.658	15.745
Follow up Activities	3.694	3.768	13.919	13.646	14.198
Co-curricular activities	3.869	3.779	14.621	14.969	14.281
Sum	11.520	11.515	44.241	44.273	44.224

The Pearson Product Moment correlation coefficient, r, was computed by use of Equation 3 (Hinton-Bayre, 2010):

$$r = \frac{n(\Sigma XY) - (\Sigma X)(\Sigma Y)}{\sqrt{\left(n(\Sigma X^2) - (\Sigma X)^2\right)\left(n(\Sigma Y^2) - (\Sigma Y)^2\right)}} \tag{3}$$

Where,

r = Pearson Moment Correlation Coefficient, n = number of paired scores, X = scores of Head Teachers, Y = Scores of Teachers, XY = product of the two paired scores. Substitution of values for X and Y from Table 4 gives r = 0.7879 which satisfies the minimum requirement of r = 0.7 (Bowling, 2002).

Data Collection Procedure

The School of Graduate Studies, Kibabii University granted a research authorization letter. A research permit was obtained from the National Commission for Science Technology and Innovation (NACOSTI). The County Director of Education issued an authority letter for research to be conducted in the specified sub-counties.

The researcher personally administered the questionnaires and the interview schedule to the relevant respondents by visiting the selected schools. The respondents were assured that strict confidentiality would be maintained in dealing with their responses. In most cases Head-teachers requested for period of 1 – 2 weeks in order to complete the questionnaires, after which the filled-in questionnaires were collected. This procedure applied to Teachers and Pupils as well. Face-to-face interviews were conducted for the SCDE, upon arranged appointment.

Data Analysis Procedure

This study made use of descriptive findings which provided interpretations and analyses of responses. The researcher used questionnaires and interview schedules. The instruments were personally administered to the respective respondents. The respondents were given both open-ended and closed questions.

Questionnaires were assigned ordinal numerical values in accordance with Lickert qualitative scale which coded the responses as Strongly Agree, Agree, Undecided, Disagree and Strongly Disagree with coding 5, 4, 3, 2 and 1 respectively as a form of data collection. By use of SPSS programme, descriptive statistics and the exploration of possible inter-relationships between pairs of variables were investigated. It was adequate to say that so many respondents as a proportion or percentage of the total answered given questions in a particular way and that the answers given to a particular question appeared to be related.

Data analysis involved the use of descriptive statistics in terms of proportions and percentages, various measures of central tendencies expressed as mean and dispersions in terms of standard deviation were applied in the analysis. Skewness as a measure of symmetry or lack of symmetry was computed to ascertain if data was the same to the right and to the left of the centre point or neutral position. Kurtosis was used as a measure of whether data were heavy or light tailed relative to the normal distribution. Generally a skewness of (-1.96, 1.96) and (-2, 2) for Kurtosis are acceptable ranges (Kothari, 2005) and Creswell (2009).

Based on the outcome of the magnitude of Skewness the following deductions were derived: If skewness is less than -1 or greater than 1 the distribution is highly skewed towards strongly agree or strongly disagree respectively. If skewness is less than -1 and -0.5 or between 0.5 and 1 the distribution is moderately skewed. If skewness is between -0.5 and 0.5 the distribution is approximately symmetric. Significance in difference on correlated pairs of data was determined by the use the two-tailed t-test, in which dependent paired samples (x, y) which were essentially connected was computed to obtain the t-calculated as follows:

$$t = (\sum(x-y)/N)/\sqrt{((\sum(x-y)^2 - ((\sum(x-y)^2/N))/(N-1)(N))} \qquad (4)$$

Where x and y are pairs of values and N = number of data in each pair of values, which gives the degrees of freedom df = N-1. These are tests are based on the same group, person or thing. In this study a cohort of enrolment into Class 1 was followed up to Class 8 where the enrolment was re-evaluated on the same pupils. By computing the p-value and comparing it with the table value at given degree of freedom (df), at alpha level of 0.05 (5 %) a judgment on significance in difference was determined. If the magnitude of the calculated p-value is greater than the table value then there is significant difference in the attribute. The analysis focused on the following: a) demographic Characteristics which included age and gender b) breakdown of schools per county c) length of stay of pupils in primary schools d) reasons for transfers e) class enrolments f) interview schedule for SCDE g) impact of FPE policy on enrolment.

Ethical Considerations

Ethical considerations are mandatory to be observed by researchers since they provide protection of participants' rights by ensuring anonymity and confidentiality (Campbell, 2007). Gregory (2003) has justified why it is highly unethical for the researcher to share confidential information regarding the study with anyone else who is not associated with the study. Creswell (2009) has postulated that these ethical provisions are put in place to maintain the required integrity researchers and respondents. If confidentiality is not used cautiously it can threaten the researcher's sources of information and undermine the whole research (Gregory, 2003).

Anonymity is used in the form of disguising respondents' identity and is used to protect the respondents' integrity (Campbell, 2007). Israel and Hay (2006) have postulated that legal obligations on the part of researchers is shared by all participants in the research and it guarantees protection of the infringement of minors' rights. The fact that a researcher belongs to a particular professional group imposes certain standards of ethical conduct attributed to the code of practice observed by the profession (Mauthner et. al., 2002).

The researcher observed highest integrity with regard to originality and quality. The article is complemented by referenced sources which are duly acknowledged. Content of the article was subjected to independent verification under anti-plagiarism protocols. Participation by respondents may pose challenges since they may be the same stakeholders for which the research is undertaken. For example one may interview pupils as respondents yet the research concerns academic performance of the same pupils (Walford, 2001). All the respondents were assured of the highest level of information confidentiality and that their views were to be used only for the purpose of the study. Protection of respondent's identity was highly observed by not capturing respondents' names, their telephones or names of schools on the questionnaire.

Questionnaire Response Rate

This study administered eighty two (82) questionnaires to Head Teachers, one hundred and sixty four (164) to Teachers and one hundred and sixty four (164) to pupils. Information from the SCDE's was collected through interview schedule. The return rate of questionnaires was as shown in Table 5.

Table 5. Return Rate of Questionnaire.

Category of Respondent	No. Issued	No. Returned	Percentage (%)
Head Teachers	82	56	68.3
Teachers	164	118	72.0
Pupils	164	118	72.0
Total	410	292	71.2

A total of 410 questionnaires were issued out of which 292 were returned representing an overall return rate of 71.2%. Out of these, fifty six (56), representing 68.3% were returned by Head Teachers, one hundred and eighteen (118), representing 72.0% were returned by Teachers and one hundred and eighteen (118) representing 72.0% were returned by pupils. According to Babbie (2010), Mugenda & Mugenda (2006) and Best and Khan (2012), a response rate of 50% is considered adequate, 60% good and above 70% very good. Therefore, the response rates from these respondents were considered to be good for Head Teachers and very good for Teachers and Pupils. On overall the return rate at 71.2% was very good. Based on these outcomes, the researcher proceeded to analyze the data as scheduled.

Age of Pupils

This study sought to establish the age distribution of pupils in Class 8. Results of the findings are presented in Tables 6.

Table 6. Age Distribution of Class 8 Pupils in Public Primary Schools.

		Minimum	Mean	Maximum	
	Number	Age	Age	Age	Std. Deviation
Age	118	11	14.08	17	1.46075

The minimum age of a Class 8 pupil was found to be 11 years and the maximum age was 17 years. The mean age of the pupils was 14 years with a standard deviation of 1.46 years. In accordance with the KNEC guidelines the standard age for pupils to sit for KCPE examination is 13 or 14 years (KNEC, 2014) based on the premise that pupils commence Class 1 at age of 6 or 7 years. The presence of underage pupils has been recognized by the Ministry of Education. For instance, among the 2014 KCPE candidates were 19,000 below the age of 13 years out of 880,486 representing 2.15 % of candidates (KNEC, 2014). The official age for class 8 pupils is 13 years compared to the national average at 14 years and the average for Kakamega County is 14 years (EPDC, 2007; EMIS, 2005 and TSC, 2005).

Year of Enrolment in Current School

This study sought to establish the year of enrolment for the Class 8 pupils in their current public primary schools. This enabled the determination of the time taken to complete the 8-year cycle of primary education (Table 7).

Table 7. Enrolment and Length to Complete 8-Year Cycle of Primary Education.

Year	No. of Years	Frequency	Percentage (%)
2009	12	2	1.7
2010	11	5	4.2
2011	10	15	12.7
2012	9	25	21.2
2013	8	71	60.2
Total		118	100.0

From the results of analysis in Table 7, a majority of the pupils 71(60.2%) were enrolled in the current school in the year 2013 and completed the 8-year cycle of education within the scheduled time. However a total of 47 (39.8%) of pupils took more than 8 years. The longest time taken was 12 years for the pupils who enrolled in class 1 in the year 2009. Those who took 11 years were 5(4.2 %), 10 years 15(12.7%) and 9 years were 25 (21.2%).

Reasons for long stay in school were varied. Table 4.8 shows the breakdown of the reasons cited by pupils who stayed longer that the scheduled 8 years to complete the 8-year primary school education (Table 8).

Table 8. Reasons for Long Stay in School.

Reason	Frequency	Percentage (%)
Repeating of class	30	25.4
Transfer from other school	2	1.7
Parental conflicts	2	1.7
Sub-total for long stay pupils	34	28.8
Pupils who took 8 years	84	71.2
Total	118	100.0

Repeating classes, for betterment of grade, was the major reason for longer stay in primary school. Out of the 34 pupils who took more than 8 years in primary education, 30 (88.2%) was due to repeating classes. Pupils who transfer from other schools may end up enrolling in a class lower than their former schools due to mismatch of syllabus coverage.

Another reason cited by these pupils was due to parental conflicts. It is evident that pupils take longer in schools than necessary.

Though the Ministry of Education has issued guidelines on pupil progression in conformity with the Education Act No. 14 of 2013, which prohibits retention of pupils in the same grade, repetition of classes is a main reason why pupils do not progress to next levels of education. Repeating classes was the major reason for longer stay in primary school. Out of the 34 pupils who took more than 8 years in primary education, 30 (88.2%) was due to repeating classes. The Ministry guidelines on through Circular No. 32/03 of 2003 on registration of KCPE candidates while in Class 7 ensures that pupil transfers for purpose of sitting for the KCPE examination in different centres and repetition of classes was curtailed (Ministry of Education, Kenya, 2003).

Education Background of Class 8 Pupils

The study established the education background of class 8 pupils. Through this, pupils who did not first register in the current school were identified and reasons for their transfers documented as presented in Table 9.

Table 9. Reasons for Pupils' Transfer.

Reasons for Transfer	Frequency	Percentage (%)
Relocation of parents	10	8.5
School levies	11	9.3
Performance	7	5.9
Death of parents	2	1.7
Separation of parents	2	1.7
Distance to school	8	6.8
Sub-total for transfers to present school	39	33.9
First Enroled in present school	79	66.1
Total	118	100.0

The results of the analysis showed that most pupils 79 (66.1%) of class 8 pupils originally enrolled in the current school. A total of 39 (33.9%) of pupils had transferred from a different school. The most common reason for transfer was inability to pay school levies 11(9.3%) followed by relocation of parents 10(8.5%) and third reason was distance 8(6.8%).

School levies which some of the pupils are unable to pay relate to provision of lunch at schools where pupils are required to contribute in kind such as through collection of maize and beans. Indeed when pupils were interviewed on factors that retained them in schools most of them said, "*Contributin of maize and beans makes pupils to concentrate on learning activities*".

Class Enrolment Statistics

The study analysed class enrolment statistics of pupils from class 1 to class 8 based on three phases: the Pre-FPE phase where class 1 pupils were enrolled in 1995 and completed their 8-year primary education in 2002; the First-FPE phase where class 1 pupils were enrolled in 2003 and completed their primary education in 2010, and the Second-FPE phase, in which pupils were enrolled in class 1 in 2011 and completed their primary education in 2018. In the Second-FPE phase is where the 2010 Constitution of Kenya introduced the devolved Government structure and also ushered in the Basic Education Act 2013.

The enactment of the 2010 Kenyan constitution brought about many changes including strong collaboration between national Government and the County Governments, Devolved ECDE level of education to County Governments, Employment of ECDE Teachers by County Governments and

Table 10. Class Enrolment Statistics.

	Pre-FPE Phase		First-FPE Phase		Second-FPE Phase	
Class	Year	Enrolment	Year	Enrolment	Year	Enrolment
1	1995	73	2003	78	2011	93
2	1996	59	2004	75	2012	93
3	1997	57	2005	63	2013	91
4	1998	51	2006	61	2014	85
5	1999	47	2007	61	2015	83
6	2000	45	2008	54	2016	79
7	2001	43	2009	63	2017	72
8	2002	43	2010	57	2018	72
Mean		**52**		**64**		**84**

Enhancement of Funding to Education sector.

The enrolment statistics for a particular year represents the mean for a particular class in all the selected schools in the four sub-counties presented in Table 10.

The Pre-FPE phase had the minimum mean class enrolment of 52. The mean enrolment in First-FPE phase increased to 64 and the Second-FPE phase had the highest mean enrolment of 84. Table 10 clearly shows that FPE, which includes support from NG-CDF as well as the devolved government structure which involved counties had a positive impact on enrolment. A study by Ogolla (2010) found that over enrolment as a result of FPE policy had threatened to lower education standards. He reported that if FPE policy were to succeed there was need for political will and financier. On a positive note, the researcher reported that FPE policy had proved the EFA goals despite the challenges accompanying it. Outcome of interview for Head Teachers revealed that, "*Enrolment is high but employment of Teachers has declined, so FPE policy is not sustainable*". A look at Table 10 across the class shows a consistent trend for Pre-FPE, First-FPE and Second-FPE phases. The effect of FPE on overall enrolment shows an increase of 23.1% from 52 to 64 pupils per class for Pre-FPE to First-FPE phases respectively (Figure 2).
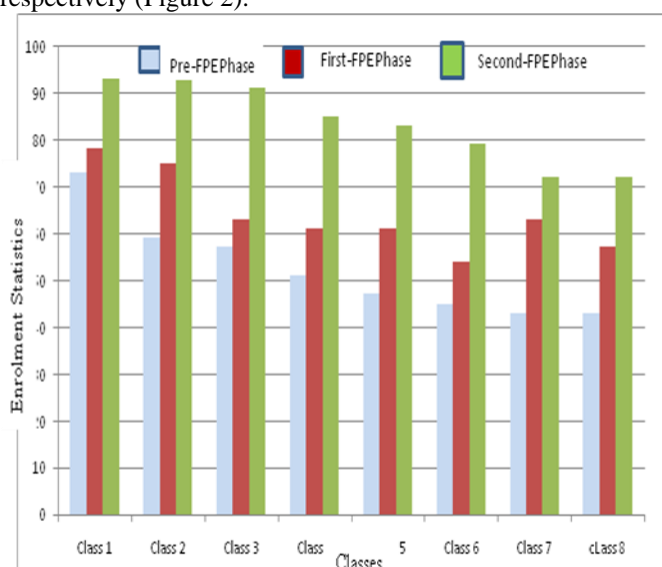

Figure 2 Class Enrolment for Pre-FPE, First-FPE and Second-FPE Phases

A look at the trends in enrolment statistics for the pre-FPE, First-FPE and the Second-FPE phases shows that the enrolment for Pre-FPE phase is lowest, followed by First-FPE phase and finally the Second-FPE phase. The pattern is exactly similar in all the classes. The enrolment in lower primary, classes 1 – 3 shows a falling trend for First-FPE phase. The falling trend for the Pre-FPE phase is not much magnified. The trend in the Second-FPE phase does not show a falling trend in lower primary classes where the influence of the devolved Government was felt. In upper primary classes 4–6, there is clearly a falling enrolment trend in all the three cohorts. Enrolment in classes 7 and 8 shows a pattern where the numbers in the enrolment are almost similar in the case of Pre-FPE and Second-FPE phases but the First-FPE phase showed a drop in the enrolment numbers between classes 7 and 8. A study by Owuor (2016) on impact of FPE inputs on educational outcomes in Kenya reported that enrolment was generally on the rise due to FPE.

Descriptive Statistics on Impact of FPE Policy on Enrolment

When asked whether FPE policy had a positive impact on the enrolment aspect of pupils' participation results of Teachers' responses are presented in Table 11.

Table 11. Teachers' Views on Impact of FPE on Pupils' Enrolment.

FPE has a positive impact on Pupils' Enrolment		
	Frequency	Percent
Disagree	9	7.6
Agree	42	35.6
Strongly Agree	67	56.8
Total	118	100.0

The majority of Teachers 67(56.8%) strongly agreed that FPE policy had positive impact on pupils enrolment and 42(35.6%) agreed that FPE policy had a positive impact on enrolment. Only 9 (7.6%) were of contrary opinion.

These results are in concurrence with the findings in Table 4.10 where the mean enrolment increased from 52 pupils per class for the Pre-FPE phase to 64 pupils per class for the First-FPE phase. Thus one can assert that FPE policy increased enrolment rate by 23 %. Further analysis showed that enrolment was enhanced to mean enrolment from 64 pupils per class in the First-FPE phase to 84 pupils per class for the Second-FPE phase. This was an additional enhancement of 31.25% in enrolment over the FPE level. On overall, the increase translates to an enhancement of 61.54% in enrolment from the Pre-FPE level of enrolment to the Second-FPE phase in 2018. Findings by Reche et al. (2012) showed increased enrolment levels upon introduction of FPE policy in Kenya.

Inferential Statistics on Impact of FPE Policy on Enrolment

Statistical significance of these results between the Pre-FPE and First-FPE, First-FPE and Second-FPE phase and the Pre-FPE and Second-FPE phases were analysed for N = 8, df = 7 at 5% level of significance ($\alpha = 0.05$) as shown in Table 12.

Table 12. Significance Tests for Enrolment Levels between Phases.

Phases	t-calculated	t-table	Inference	*Accept or Reject $H_{0(e)}$
Pre-FPE & First-FPE	-6.4559	2.365	Significant	Reject
First-FPE & Second-FPE	-8.6896	2.365	Significant	Reject
Pre-FPE & Second-FPE	-16.9879	2.365	Significant	Reject

*$H_{0\ (e)}$: FPE policy has no significant effect on enrolment aspect of pupils' participation in Public Primary Schools in Kakamega County

Significance test on enrolment levels between the Pre-FPE and Firs-FPE phases gave a magnitude of a calculated value of t-calculated = 6.45595 against a table value of t = 2.365 at 7 degrees of freedom calculated from df = (8-1) = 7 and alpha level, α = 0.05. Comparing the magnitude of the two values, calculated t-value (is greater than the table t-value (t-table = 2.365, at df = 7 and α = 0.05) which means that there is significance difference in enrolment levels between the Pre-FPE and the First-FPE phases at 5% level of significance.

Significance test on enrolment levels between the First-FPE and Second-FPE phases gave a magnitude of a calculated value of   t-calculated = 8.6896 against a   table value of t = 2.365 at 7 degrees of freedom calculated from df = (8-1) = 7 and alpha level, α = 0.05. Comparing the magnitude of the two values, calculated t-value (is greater than the table t-value (t-table = 2.365, at df = 7 and α = 0.05) which means that there is significance difference in enrolment levels between the First-FPE and the Second-FPE phases at 5% level of significance.

Significance test on enrolment levels between the Pre-FPE and Second-FPE phases gave a magnitude of a calculated value of t-calculated = 16.9879 against a table value of t = 2.365 at 7 degrees of freedom calculated from df = (8-1) = 7 and alpha level, α = 0.05. Comparing the magnitude of the two values, calculated t-value (is greater than the table t-value (t-table = 2.365, at df = 7 and α = 0.05) which means that there is significance difference in enrolment levels between the Pre-FPE and the Second-FPE phases at 5% level of significance.

For all the three paired cohorts (Table 12) the statistical test results reject $H_{0(e)}$, that FPE policy has no significant effect on enhancement of enrolment aspect of pupils' participation in Public Primary Schools in Kakamega County and hence accept H_1 that FPE policy has significant effect on enhancement of enrolment aspect of pupils' participation in Public Primary Schools in Kakamega County.

The study findings are in line with the global trends that reported general increase in enrolments as reported through the MDG Report 2015 (UNDP, 2015) where the Primary school net enrolment rate in Developing Countries had risen from 83% in the year 2000 to 91% in the year 2015, which is an increase of 7%.

Conclusion

The study established that FPE policy had a high impact on enrolment where an increase of 23% in enrolment level was achieved upon introduction of FPE policy.

Recommendation

Whereas FPE policy increased enrolment and retention of pupils in public primary schools in Kenya, which gives more access to a large number of pupils to education fulfilling the EFA and MGD targets, it results into large class sizes with low mean scores in academic performance. It is recommended that FPE policy which been in operation in Kenya for close to two decades, since 2003, should be reviewed to address the emerging issues. It is an opportune moment as the country is implementing the 2-6-3-3-3 competency based curriculum as a new education system to replace the current 8-4-4 system of education (Rebulic of Kenya, 2017).

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