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Challenges of Free Primary Education on KCPE Examination Performance in Public Primary Schools of Kemera Division, Manga Sub-Location, Nyamira County, Kenya

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Abstract: **The Kenya certificate of pimary education (KCPE) is crucial since it is the indicator of a child's basic education. The objectives of the study were to: determine the effects of enrolment of pupils on KCPE examinations performance, determine the effects of pupil to teacher ratio on KCPE examinations performance, find out the effects of pupil to textbook ratio on KCPE examinations performance, determine whether there is any significant improvement of KCPE in public primary schools of Kemera Division after the introduction of FPE using a chi square analysis and find out the effects of physical facilities on KCPE examinations performance in public primary schools. The literature was reviewed using the sub themes from the objectives. The study used stratified random sampling and descriptive 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 target groups from whom data was collected were pupils of class 4-8, teachers, Head teachers, school committee members and educational officers in the Division. 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 enrolment was high, schools had uneven distribution of teachers, pupil to textbook ratio was inadequate and physical facilities were not enough. Chi square analysis showed no significant improvement in KCPE performance in the schools of the Division after the introduction of FPE. The study recommended that disbursement of funds to 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 and these would bring quality education and good KCPE results. The results obtained would be useful in informing policy on the improvement of the KCPE performance in the Division.**

Keywords: **Kenya certificate of pimary education (KCPE), Division after the introduction of FPE.**

1. INTRODUCTION

Background to the study:

Education is the cornerstone of economic and social development. It facilitates the growth of a country politically, socially and economically (World Bank, 1990). It occupies a unique position in National development programs of any nation National Bureau of Standards (NBS, 2009). As part of their contribution towards achievement of Free Primary Education (FPE), international financial institutions promoted the policy of cost sharing in paying tuition fees from the late 1980s to mid 1990s. Despite this, direct and indirect costs of education to parents became serious impediments to continued schooling and enrollment of pupils (Riddell, 2004).

In India FPE led to congestion of pupils in classrooms making teaching and learning uncomfortable. Physical facilities were stretched and teaching aids were inadequate (Riddell, 2004). In contrast, a study conducted in Nigeria indicated that enrolment in schools represented the largest component of investment in human capital (Schultz, 2002). According to Central Bank of Nigeria CBN (2000) Schools enrolment increased from 5.0% to 24.9%in Nigeria. Girls' percentage increased from 48.5% to 49.0% with teacher to pupil ratio of 1:30. According to Adedeji (2009) there was shortage of classrooms, teachers and latrines. Studies in Malawi noted that enrolment increased from 1.9 million in 1993 to 3.2 million in 1994. Pupil to teacher ratio was 1:70 and textbooks were insufficient. Teachers and classrooms were few whereby a class holds 100 pupils (Chimombo, 2005). In Uganda FPE was introduced in 1997 with the aim of eradicating poverty. This led to an increase in enrolment from 74.3% in 2000 to 135% in 2001. Because of this, classrooms were congested, the teacher –pupil ratio and pupil –textbook rose to 1:55 and 1:4 respectively (Obasi, 2000).

Since independence, the Government of Kenya has been expanding its educational systems to address the concerns of combating ignorance, disease and poverty. This is due to the fact that every Kenyan citizen has a right of access to education and that the government has an obligation to provide quality education and training its citizens (Sifuna, 2000 & Kyalo, 2011). The FPE has its origins in the Declaration of Human Rights (DHR) adopted in 1948 that states *"everyone has a right to education"*, the World Conference on Education For All (WCEFA) held in Jomtien, Thailand in 1990, emphasized that to serve the basic needs for all more than a commitment to basic education (UNESCO, 2005) is required. The Dakar Conference went further to declare that children everywhere, girls and boys alike will be able to complete a full cycle of primary education (GOK , 2003).

The origins of FPE in Kenya are deeply rooted in the United Nations (UN) conventions and the Kenyan law. Its introduction in Kenya meant the abolition of school fees and levies for tuition. Government and development partners were responsible for the costs of basic teaching and learning materials and wages for staff 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 FPE program in Kenya include the World Bank, the British Government through its international development agency DFID, OPEC, UNESCO and the Swedish Government (GOK, 2003).

On one hand FPE achieved its objective of increased participation in primary school learning. However, it created a myriad of problems also witnessed in other developing countries which were implementing it over the same period (Sifuna,2007). These included insufficient teaching and learning facilities, overcrowding in class rooms, high pupil to teacher and pupil to text book ratios. Consequently in Kenya, these further led to reduced enrollment, poor quality of education and high dropout rates of pupils from public primary schools, defeating the purpose of FPE (Kyalo, 2007).

Currently in Kenya, problems facing FPE are further compounded by low budgetary allocation by the government. Since development partners may not be there to support the program for ever, it was suggested that activities which spur economic growth be encouraged to bring forth the much needed financial resources. Since FPE started, enrolment has been rising but the resources have not increased (MOEST, 2003). The Government of Kenya introduced Free Primary Education in 2003. 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, 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.This led to crowding in classes, shortage of teachers and learning materials. Sifuna (2007) indicated that due to FPE, the quality of education was affected leading to poor performance in examinations.

The foregoing observation noted that the national mean standard score in the Kenya Certificate of Primary Education KCPE examination performance averaged at 245.5 marks out of 500 marks between 2005 and 2007 (Ministry of Education, 2007). Out of 77,614 pupils who sat for KCPE examinations in 2011, only 48.28% attained 250 marks and above and only 5,806 representing 0.75% scored over 400 marks (Kiumi, 2012). Pupils' KCPE examinations performance in the study area (Kemera Division) averaged 230 marks between 2003 and 2012 (Manga District Education Office, 2012). In view of this, enrolment trends, pupils to teacher ratio, pupils to textbook ratio and physical facilities undermine KCPE examinations performance in the region. It is against this background that the study intended to establish the impact of enrolment trends, pupil teacher ratio, pupil textbook ratio and physical facilities on KCPE examination performance in Kemera Division, Nyamira County

Statement of the problem:

The Government of Kenya introduced Free Primary Education in 2003. 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, enrolment had shot up to 9.6million pupils representing a 63% increase in nine years (Republic of Kenya, 2011). The system has undergone only quantitative improvements in terms of number of institutions and pupils' enrolment while there has been little development in respect of capacity to maintain standards and efficiency in the process and products of education (Maiyo & Ashioya, 2009). This situation has been attributed to the manner in which education system is organized, planned and administered which is generally perceived as crisis ridden. There are issues surrounding KCPE examinations performance including enrolment trends, high teacher to pupil ratio, pupil to text book ratio and physical facilities (Republic of Kenya, 2005). The average national mean standard score in the KCPE examinations performance was 245.5 marks out of 500 marks between 2005 and 2007(Ministry of Education, 2007). Out of 77,614 who sat for KCPE Examination in 2011 only 48.28% attained 250 marks and 5,806 scored over 400 marks (Kiumi, 2012 . The statistics in performance in KCPE examinations in Manga sub-county indicates that the sub county recorded a mean score of 232 marks between 2003 and 2012 while in Kemera Division it has been recording an average score of 230 marks in KCPE which is below the sub county mean over the same period (Manga District Education Office, 2012). It is against this background that the study was designed to assess the impacts of free primary education on KCPE examinations performance in public primary schools of Kemera Division, Manga Sub County, Nyamira County.

The Purpose of the study:

The purpose of this study was to assess the impacts of FPE on KCPE examinations performance in public primary schools of Kemera Division of Manga Sub County, Nyamira County.

Objectives of the study:

This study was guided by the following objectives to;

The objectives that guided the study were to:

i. Find out the effect of pupil to textbook ratio on KCPE examinations performance in public primary schools of Kemera Division, Nyamira County.

ii. Determine whether there is any significant improvement of KCPE in public primary schools of Kemera after the introduction of FPE using chi square analysis.

iii. Find out the effect of physical facilities on KCPE examinations performance in public primary schools of Kemera Division, Nyamira County.

Research questions:

(i)What is the pupil to textbook ratio in public primary schools of Kemera Division, Nyamira County?

(ii) Has the introduction of free primary education improved or negatively affected KCPE performance in public primary schools of Kemera Division, Nyamira County?

(iii)Do public primary schools in Kemera Division, Nyamira County have sufficient physical facilities?

Significance of the Study:

This study seeks to establish the implications of free primary education on KCPE performance in primary schools of Kemera Division. It in particular investigated the KCPE results in the Division from 1995 - 2012. The study further evaluates the enrolment trends, teacher to pupil ratio, pupil to textbook ratio and physical facilities on KCPE examinations performance in the primary schools. Findings of the study would help the ministry of education to employ more teachers in Kemera Division to cater for high enrolment. It would assist the Ministry to allocate more funds to purchase textbooks for the increased enrolment in primary schools of Kemera Division. It would also help the ministry to provide funds for construction of physical facilities in the Division to cater for high enrolment caused by free primary education and these would foster quality education which would lead to better KCPE performance in primary schools of Kemera Division.

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Conceptual framework:

Ridell (2004) showed that insufficient textbooks affected the quality of education. Sifuna (2000) suggested that high enrolment in schools increased overcrowding of classrooms and queues in latrines were noticed during UPE and this caused a great challenge to FPE. Maiyo & Ashioya (2009) noted that the introduction of FPE brought understaffing in schools and this affected KCPE examination performance. The intervention by the administration is crucial by making sure that curriculum is strictly followed for the success of the pupils in their final examinations. Area Educational Officers and Divisional Quality Assurance Officers are responsible for regulating teachers' transfers and quality education in schools to enhance better results in KCPE examinations performance (MOE, 1999). Below is an illustration of the conceptual framework.

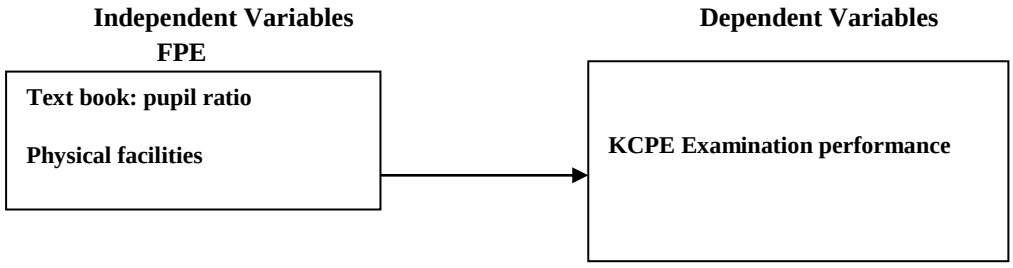

Fig. 1 Conceptual Framework

2. LITERATURE REVIEW

Impact of Pupil to Textbook Ratio on KCPE Examination Performance:

Instructional materials are critical in teaching and learning. Curriculum cannot be implemented without them. Textbooks are the most important materials in the classroom. When textbooks are available, instructional time is not wasted because pupils have references (GOK, 2003). Inadequacies of instructional materials will affect the quality of education .There is a consistent relationship between pupil achievement and availability of text books. Lack of textbooks interfere with syllabus coverage and that is why it was necessary to carry out in Kemera Division to find out whether it could be a factor affecting KCPE examinations performance (GOK, 2003).

Observations by Grogan (2006) indicated that in Uganda pupil to textbook ratio was 1:40 in Science, 1:55 in Mathematics, 1:49 in English and 1:44 in Social Studies. Katan (2004) in Kenya indicated that pupil to textbook ratio was 1:24. Provision of materials has helped to improve quality of education (UNESCO, 2005). When textbooks are available, instructional time is not wasted because pupils have references. On the other hand, teacher guides are effective if they include information on what and how to teach. There is evidence that children who had the most access to learning materials had the best achievement score irrespective of social economic background (Hungi & Thuku, 2009). Provision of instructional materials especially textbooks was recognized as one of the major achievements of FPE program (UNESCO, 2005**).** However the pupil to textbook ratio varies from school to school and from region to region. Case wise information on text book variation in pupil to text book ratio within schools and from region to region is scanty. This information is needed in order to help school managers to provide enough textbooks to pupils. Some older schools could have more textbooks hence better pupil to text book ratio than young schools. There is therefore need to study variation of text books within schools and region to region (Ubogu, 2004).

The Effects of FPE on KCPE Examination Performance:

Free primary education led to an increase in the number of pupils sitting for KCPE examinations in public primary schools (Sifuna, 2000). It is a well established observation that when there are more pupils in one class the performance is mostly poorer than when they are fewer. Teachers in primary schools have different qualifications, ranging from primary School Teacher two (P2) to a bachelor of education degree. The more highly qualified teachers are the more likely are the pupils to perform well in the examinations. This study focused on the qualification of teachers in the public primary schools of Kemera Division after the introduction of free primary education.

A dose response analysis by Meires (2012) in Brazil found that teacher qualification had a positive influence in the pace of learning mathematics. Good performance in examinations by individuals of the community plays a significant role in political, economic and social aspects of development. Appropriate staffing levels and provision of enough text books and

other learning materials enable good performance of pupils in their examinations (Maiyo & Ashioya, 2009). Education is considered by various stakeholders as a basic need and right. KCPE examinations performance ranks high on the National agenda, with educators and policy makers focusing on accountability, curriculum reform and teacher quality (MOEST, 2003).

Katana (2010) indicated that several factors have been attributed to the poor performance in KCPE examinations. These factors include understaffing, low motivation of teacher and pupil, poor time management, indiscipline standards, negative attitude of the community and lack of adequate teaching and learning textbooks. The influence of these factors differs depending on the region under study. There is therefore need to carry out studies in every region to ascertain the individual factors that affect KCPE examinations performance in the region (Morumbwa, 2006).

In Kenya's education system, passing examinations is the only benchmark for learning and performance. In primary schools examinations which are not national, for instance end term examinations, are not used in the final assessment of the pupil. Thus Kenya relies on examinations as a valid measure of achievement (Maiyo & Ashioya, 2009). For instance Secondary school placement and to some extent admissions depend on performance of Kenya certificate of primary education (KCPE) in standard eight (Michael et al, 2009). Although the introduction of free primary education has occasioned the provision of funds to the public primary schools, they continue to perform poorer in KCPE than pupils from private primary schools who pay high school fees. Thus most pupils admitted to National schools are from private schools (Ngugi, 2007).

Nationally the mean standard score in the KCPE examinations ranged from 245.5 marks out of 500 marks between 2005 and 2007(Ministry of Education, 2007). Out of 77,614 who sat for KCPE Examination in 2011, only 48.28% attained 250 marks and 5,806 scored over 400 marks (Kiumi, 2012). However the performance in KCPE examinations in Manga Sub County where Kemera Division is situated has been poor all along. For instance in 2009 out of 1374 candidates who sat for examination in Manga Sub County, none gained admission to secondary schools (Ministry of Education, 2007). KCPE results of Kemera Division have been poorer than the overall results of the Manga Sub County. Statistics in performance in KCPE examinations in Manga Sub County indicated that the sub county recorded a mean score of 232 marks between 2003 and 2012 while in Kemera Division it has been recording an average score of 230 marks in KCPE which is below the sub county mean over the same period (Manga District Education Office, 2012).

Effects of Physical Facilities on KCPE Examinations Performance:

Investigations conducted by UNESCO (2000 & 2005) noted that in developing countries most public primary schools had dilapidated or inadequate tuition facilities, for instance due to poor methods of constructions, classes corrupted after heavy rains, wind and storms often disrupted class activities due to the poor state of the tuition building blocks. In some schools pupils had poor or no sitting facilities and some pupils sat on the ground while receiving instructions from teachers. Studies conducted by Republic of Kenya (1998) found out that physical facilities have an effect on quantitative growth and quality of education, for instance, classroom space per pupil and furniture are necessary if enrolment is to be raised (UNESCO, 2005). After the introduction of free primary education the increase in enrolment was disproportionate with the increase in sitting space and classroom furniture.

In summary this literature review has indicated that even though the government has continued providing funds for free primary education, it indicated possible and uneven distribution of teaching staff, variation in the provision of text books, increased enrolment in the number of pupils and inadequate physical facilities. It is with all mentioned in mind that this study focused on the effect of introduction of free primary education on examinations performance in Kemera Division, Manga Sub County.

3. RESEARCH METHODOLOGY

Research design:

This study employed a descriptive survey design to collect information from public primary schools in Kemera Division. This method enabled the collection of information from a large sample and was useful in factual reporting of public opinions or attitudes. It facilitates the acquisition of precise information concerning current status of events and issues. It was highly recommended where large number of respondents gave answers to specific questions (Orodho, 2005).In this regard, a descriptive survey was used to establish the implication of free primary education on pupils' performance in K.C.P.E examinations in public primary schools of Kemera Division, Nyamira County.

Study area:

This study was carried out in Kemera Division of Manga Sub –County of Nyamira County. It is located within the Latitudeof (0^0, 1^0S and 34^0E, 1^0S') in Nyanza region of Western Kenya. It boarders Magombo Division to the East, Manga Division to the West and Rigoma Division to the North. In terms of climatic condition, the area experiences annual minimum mean temperature of 10.2^0c and a maximum mean temperature of 2 9.6^0c. The rainfall is throughout the year with amount ranging between 600mm to 2400mm annually. The economic activities of the area are dairy farming and crop farming including tea as the main cash crop. The area has 18 public primary schools.

Target population:

The study population in the division comprised of 18 public primary schools with an enrolment of 8326 pupils, 204 teachers, 18 head teachers, 2 education officers and 180 school management committee members. It is from this target population that respondents were chosen.

Sample and sampling procedures:

Sampling is a research procedure that is used in selecting a given number of subjects from a target population as a representative of that population. The researcher used stratified sampling technique. This is the dividing up of survey universe into sub- population called strata. In this study the target population was 18 public primary schools. Using the formula of Mugenda and Mugenda 1999, (30%)a sample size of 5 schools were randomly selected to obtain the sample size. However to increase the reliability of the results this sample size was doubled to improve the accuracy of the reliability of 10 schools. Again the formula by Mugenda and Mugenda 1999 was used to obtain other sample size as regarding the number of head teachers, teachers, pupils and the number of school management committee members. In effect 10 head teachers, 80 teachers, 250 pupil, 30 school committee members and 2 officers. Using class registers, 5 pupils were randomly selected from classes 4 to 8 to obtain a total of 25 pupils per school. Three teachers were selected to represent standard 4, 5 and 6. Two teachers were selected from standard 7 and lastly three teachers from class 8. So 8 teachers were selected from each school making a total of 80. This sample was used in the study.

Data collection instruments:

This research used questionnaires, focus group discussion, interviews and observation schedule.

Questionnaire:

The questionnaires were used to collect data from school head teachers, teachers and school committee members. Both closed and open ended questionnaires were used.

Head Teachers Questionnaires (HTQ):

The questionnaire was used to obtain necessary information from 10 head teachers (appendix ll). The questionnaire comprised of section A and B. Section A was made of demographic information of the head teachers' background information such as age, gender, academic qualifications and teaching experiences. Section B of the questionnaires consisted both open – ended and close -ended items .The close ended questionnaires are suitable for the reader to get relevant responses on the implications of free primary education on the pupils KCPE examinations performance in public Primary schools of Kemera division, Manga Sub - County, Nyamira county.

Teachers' Questionnaire (TQ):

The teachers' questionnaires were used to obtain necessary information from 80 teachers. It comprised of section A and B(appendix lll) .Section A was made up of demographic information that give the back ground information of teachers, Section B of the questionnaires comprised of both open – ended and close -ended items .

School Committee Members' Questionnaire:

The school Committee members' questionnaire was used to obtain the information needed from 30 Committee members. It comprised of section A and B(appendix IV) .Section A was made up of demographic information that give the back ground information of school committee members, Section B of the questionnaires comprised of both open – ended and close -ended items .

Focus group discussion:

There were two categories of focused groups; one group comprised of classes iv and v and the other group comprised of class vi, vii and viii. (Appendix V). The proceeding of the focused group discussions was recorded on the book.

Interviews:

Interview guides provides flexibility and the ability to probe and clarify responses (Appendix VI). They note non- verbal as well as verbal behavior. They provide high responses rates and are adaptable (McMillan & Schumacher, 2001). Even though interview guides are costly; time consuming, biased and not anonymous can contain leading questions. They were used in the study because they allowed direct interaction with respondents and the collection of in- depth information on the effect of free primary education on KCPE examinations that the questionnaires may have not gathered.

Observation Schedule:

Observational procedures can record naturally occurring behavior and avoid some of the disadvantages associated with the questionnaires and interviews (Appendix VII). The researcher collected descriptive information on the school environment where learning takes place. Through this tool, the study aimed at collecting massive information on physical appearance of classrooms, textbooks, desks, chalkboards and latrines. Even though the observation schedules are costly, time- consuming and usually not anonymous they were used in the current study to gather information which was needed.

Validity of Instruments:

The validity of a test is a measure of how well a test measures what it is supposed to measure. The validity of research instruments was established before data collection with the assistance of my supervisors. Research experts' judgment in the Faculty of Education and Human Resource Development of Kisii University to evaluate the items contained in various instruments. For the purpose of this study, the expertise of supervisors assessed the relevance of the content to be used in the instruments. The supervisors examined the questionnaires individually and provided feedback. Their recommendations were used to fine- tune the final questionnaires.

Reliability of Instruments:

Reliability refers to consistence of measurement, the extent to which measures are free from error. The researcher used tests re-test method to determine the reliability of the instruments. The researcher selected two schools representing 10% of the schools for the test. The questionnaires were administered to respondents and after duration of two weeks, the researcher administered the questionnaires to the same respondents. The scores obtained from each respondent on the first and second test were recorded separately. Pearson's product moment formula was used to compute the correlation coefficient between the two tests. Apearson's moment correlation coefficient of 0.8 was obtained.

Data collection procedure:

The head teachers of the schools to be sampled were visited and informed about the intended study. Data collection refers to gathering specific information aimed at proofing or refuting some facts. The researcher sought permission to conduct research in the sub county by obtaining an introductory letter .An Endorsement from Kisii University authorizing the research was obtained. Finally the researcher distributed the questionnaires to the head teachers, teachers and filled questionnaires were collected at an agreed time and date. Ethics and confidentiality were maintained at all times during data collection exercise.

Methods of data analysis and presentation:

Data from questionnaires were coded and entered into an Excel Spread Sheet into the computer for analysis. This study employed descriptive statistics to analyze the data obtained. Descriptive statistics is commonly represented by use of frequency charts, polygons, graphs, pie charts, mean or percentages. Excel spread sheet was used to analyze data .The Chi- square was used to determine if there was a significant difference between 1995 and 2012 KCPE Examinations performance in public primary schools.

Quantitative data was tabulated according to the research questions and objectives. The analysis of data was carried out by tabulating the number of responses received from the instruments for each item by calculating the frequency distribution, percentages and bar-graphs to present the findings. Data analysis for all the research questions was done using Excel Spread Sheet and the results analysis summarized into frequencies ,percentages and bar graphs .

Qualitative data analysis was used to make general statements on how categories or themes of data are related. The researcher established the patterns among this category. Generating themes and categories were done using codes which were assigned manually and by use of computer software. After coding the data the researcher stored the information in electronic and printed hard copies. This was followed by data analysis using Excel Spread Sheet and the result analysis was summarized into frequencies, percentages charts and bar graphs. The researcher evaluated and analyzed the data to determine the adequacy of the information, credibility, usefulness, consistency and validity. The findings were presented using frequency distribution tables and pie- charts. Then conclusions were obtained.

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4. RESULTS AND DISCUSSIONS

Pupil to textbook ratio:

With the introduction of free primary education, it was expected that the government should have provided sufficient textbooks to facilitate learning of pupils. However this was not observed in sampled primary schools of Kemera Division, as in some cases more than 3 pupils were found to be sharing a text book Table 4.8.

Table 4.1 Pupil textbook ratio in public primary schools in Kemera Division from 2003-2012

Books	Pupil textbook ratio	%of books contribution to the total in Kemera Division	Total no. of pupils sharing a course book
Maths	1 :1	10.05	-
English	2: 1	69.09	5205
C.R.E /Science	3: 1	17.20	1305
Social Studies/Kiswahili	4: 1	3.94	298
Total		**100**	**7569**

There were a total of 8326 pupils in Kemera Division out of which7569 (90.91%) at least shared textbook. It depicts poor issuance of text books to pupils in public primary schools in the Division. The study indicated that 69.09% constituted cases in which two pupils sharing a textbook in English, 17.20% constituted cases in which three pupils shared a textbook in CRE and Science While 3.94% constituted cases in which four pupils shared a textbook in Social Studies and Kiswahili. It was also noted that 10.05% of the pupils were issued individual textbooks in mathematics Table 4.8, that is they were not sharing a textbook with any other pupil. This implies that more textbooks were purchased in Maths and English which are core subjects; however a large percentage of pupils are sharing one or more in these subjects. It also implies that the Division had not achieved the recommended pupil text book ratio of 1:1.This can affect the completion of pupils' individual assignments and syllabus coverage which in turn would affect KCPE examinations performance.

The sharing of text books was more pronounced among standard eight pupils who are KCPE candidate (Appendix IX). Generally mathematics textbooks in the Division had an average pupil to text book ratio of 1:1 whereas English had 2:1, CRE/Science had 3:1 respectively and Social Studies/Kiswahili 4:1respectively (Table, 4.1).Observations on KCPE performance (Table, 4.2) showed that school G with a better pupil to text book ratio had a better performance (KCPE MSS of 250) than school A with (KCPE MSS of 228).

Implications of FPE on KCPE examinations performance:

Information collected from head teachers on KCPE performance during the period 1995-2012 of public primary schools of Kemera Division is presented Table 4.2 below.

Table 4.2 Showing KCPE performance trend for the years 1995-2012 all schools in Kemera Division

Year	A	B	C	D	E	F	G	H	I	J	Div
1995	212	244	243	251	241	160	224	195	250	224	224
1996	173	234	222	249	243	203	284	206	255	206	228
1997	174	248	220	241	231	167	234	169	259	200	214
1998	198	243	218	257	214	145	203	171	238	194	208
1999	269	328	273	344	337	282	248	230	328	249	289
2000	276	292	264	313	321	269	225	245	316	238	276
2001	217	248	192	257	235	217	212	192	224	193	219
2002	213	210	195	229	235	197	248	186	230	226	217
2003	212	252	190	217	246	201	206	194	206	227	215
2004	204	272	225	233	264	229	205	182	226	211	225
2005	215	259	211	226	274	236	215	225	245	224	233
2006	222	243	204	264	226	229	193	218	213	199	221
2007	243	223	215	255	213	231	213	224	256	219	229
2008	258	223	200	240	248	183	216	223	250	223	227
2009	259	225	210	235	206	264	205	234	245	212	230
2010	229	210	208	219	215	257	240	214	220	210	222
2011	272	223	211	233	228	292	217	245	231	218	237
2012	265	236	238	246	230	266	244	271	275	233	250
	228	245	219	250	245	224	224	212	248	217	231

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Observations on the mean scores of sampled schools Table4.2 shows that the mean standard score (MSS) of pre- FPE ranged from 214 to289. Most National schools select pupils who obtain an mss of above 350 marks while provincial secondary schools select those with an mss of above 280 marks and district schools select pupils with 200 marks.

In the post FPE period the maximum mean standard score attained in one of the schools is 250and the lowest was 215 Table 4.2.This shows that the mss for post FPE were lower than pre FPE. Hence the implementation of FPE has not improved the KCPE examinations performance. The Division hardly took any pupil to a national school. Therefore few pupils end up in provincial and district secondary schools. The overall mss for Kemera Division generally dropped from 224 to 215 in 2003, when FPE was introduced. It only showed a slight increase to 237 in 2011.

From 2001 to present, the number of subjects a pupil can sit for KCPE examination is five. The maximum mark to be obtained is 500.

Chi square test was carried out to test whether there are any significant differences between the pre FPE and Post FPE KCPE mean standard scores. The null and alternate hypotheses tested were: HO: The null states that there is no difference between the pre FPE and post FPE KCPE mean standard score results in public primary schools of Kemera Division Manga District or FPE has not improved KCPE results in Kemera Division since it was introduced. HA: The alternate hypothesis states that there is a significant difference between the pre and post FPE KCPE results in public primary schools of Kemera Division, Manga District or FPE has improved the KCPE results in public primary schools of Kemera Division . This was done to find out if FPE has had any significant impact on KCPE performance in Kemera Division since its introduction The calculated Chi -Square value was 4.318 which is less than the tabulated chi square value α =0.05 of 27.587, meaning that there is no significant differences between the pre FPE KCPE and the post FPE KCPE results. The Null hypothesis is accepted. This is due to the observed poor pupil to textbook ratio, teacher pupil ratio, lack of appropriate physical facilities and high enrolment.

The trends of the KCPE mean standard scores for the different situations exhibited by three public primary schools in Kemera Division are depicted in (Figs 4.1-4.3).The three primary schools represent different generalizations that can be deduced from Table 4.2. School A depicts an insignificant positive trend in KCPE mean standard scores.

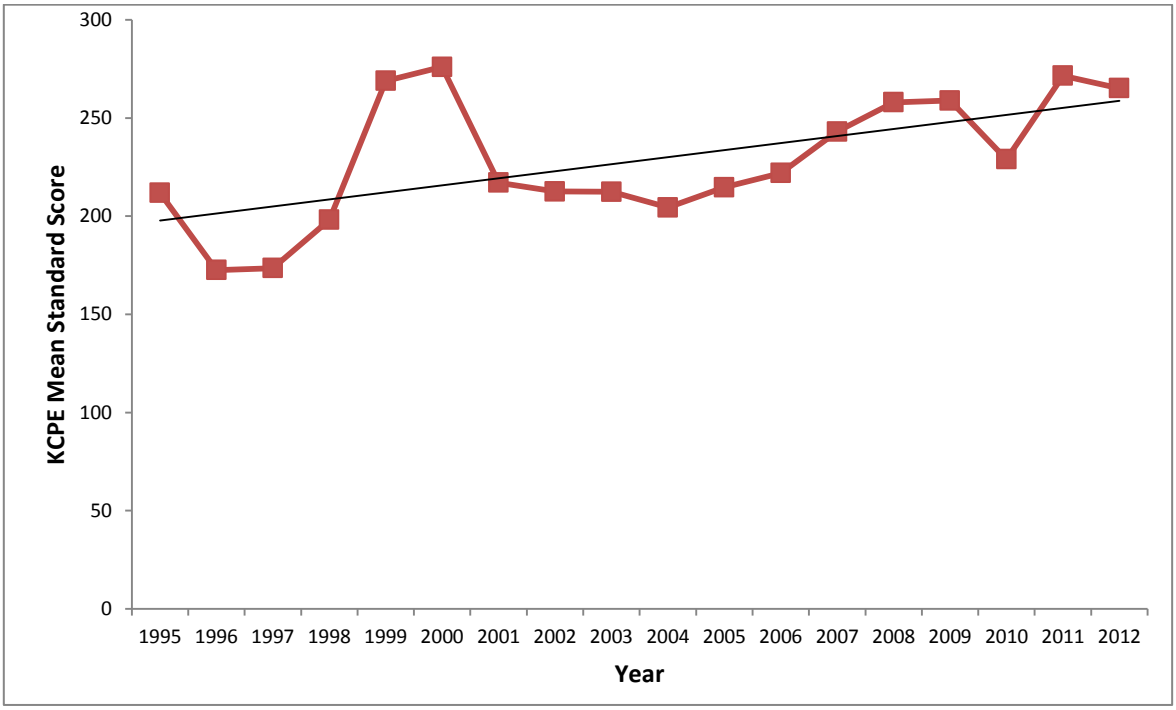

Fig 4.1 KCPE examination performance for school A during period 1995-2012

School A Fig (4.11) in 1995, the mean KCPE standard score for school A was 212marks. It dropped to 174 marks 1997. In 2003 it increased to 212 marks and went up in 2012 to 265.The KCPE of school D in 1995 to 2012 is presented in (Fig 4.12).

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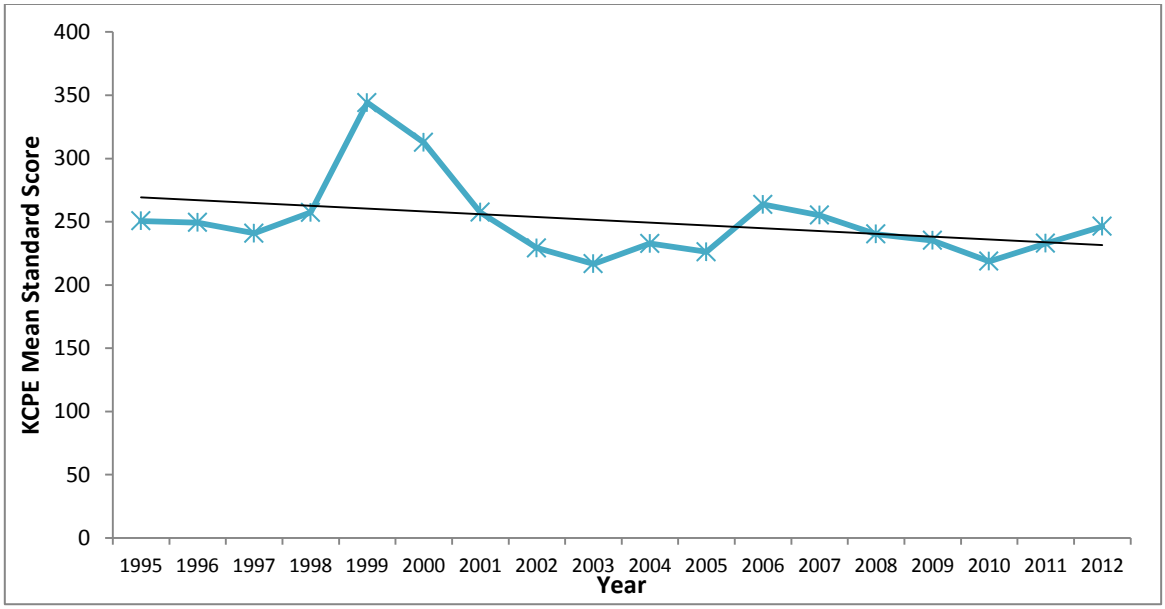

Fig 4.2 KCPE examination performance for school D primary period 1995-2012

In 1995 the mean KCPE standard score for school D was 251; it dropped to 217 marks and increased to 246 in 2012 (Fig 4.2).The KCPE mean standard score for Kemera Division in 1995 to 2012 (Fig 4.3).

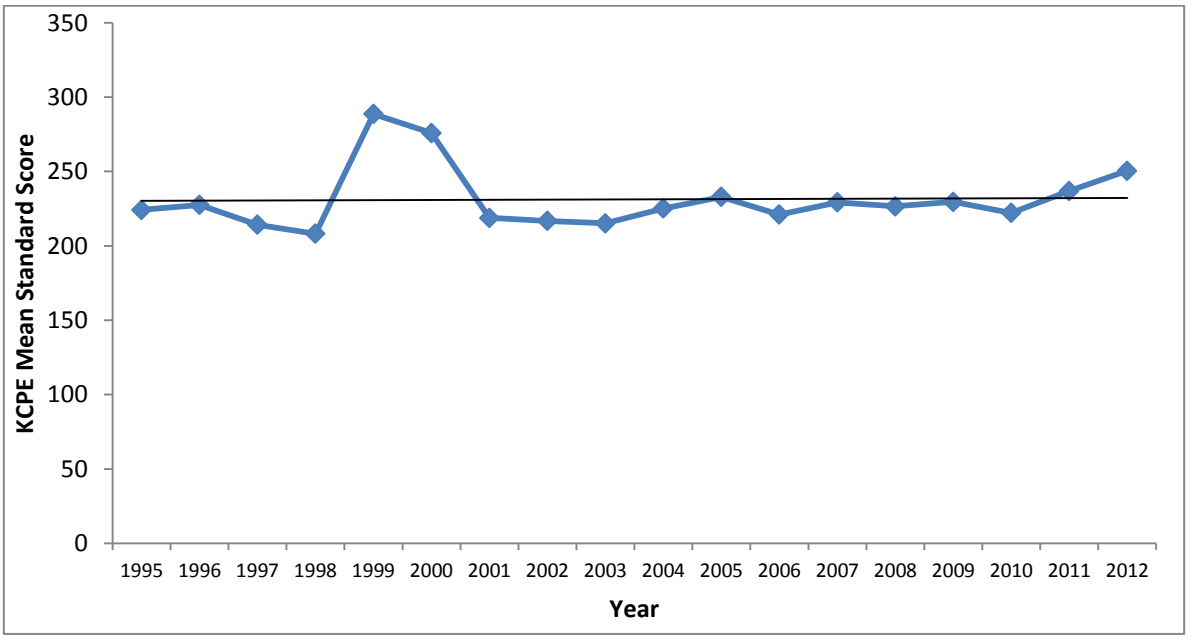

Fig 4.3Examination performance for Kemera Division during 1995-2012

The KCPE mean standard scores for Kemera Division did not show any changes (Figs,4.3).In 1995 the KCPE mean standard scores was 224, in 2003 it dropped to 215 and in 2012 it increased to 250.

Only a few schools experienced an increase in the mean standard scores which was due to lateral migration of pupils from neighboring schools. From the interview schedule, teachers reported that KCPE examinations were poorly done because the teachers were not evenly distributed in the Division. Both interview schedule and focused group discussions revealed that some schools had more teachers while others had few.

Physical Facilities:

The study investigated how school facilities have affected pupils' KCPE Examinations performance and the results are shown below.

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Classroom observations:

The walls of some schools were not plastered well and were unstable. The nature of buildings in the schools was largely in poor state and did not create a conducive environment for learning. Observations on the nature of the buildings in the schools are presented in table 4.2.

Table 4.3 Classroom characteristics of public primary schools of Kemera Division

School name	No. of permanent classes	No of temporary classes	No. of semi permanent classes	Total No. of classes	% of non permanent classes
E	10	0	2	12	16.67
I	8	2	3	15	33.33
J	11	1	4	16	31.25
A	8	1	7	16	50.00
F	11	0	4	15	26.67
H	11	1	3	15	26.67
C	9	0	6	15	40.00
D	12	1	2	15	20.00
B	6	0	2	8	25.00
G	8	1	1	10	20.00

Windows of classrooms of almost all schools were lacking panes. This caused the rain to fall into the classrooms thus disrupting learning during the rain period. Some of the schools had leaking roofs. The poor learning environment due to such dilapidated facilities does not encourage learning. This could be one of the factors contributing to the observed poor performance of KCPE in public primary schools of Kemera Division Table 4.2.Other facilities in the schools are depicted on Table 4.3.

Table 4.3 Nature of Schools in Kemera Division

School name	Area of land(ha)	Library facilities	Availability of playground	Lighting in class	Availability of pit latrines
E	1.50	Small	Good	Poor	Inadequate
I	1.50	Small	Good	Poor	Inadequate
J	1.00	Small	Good	Good	Inadequate
A	1.50	Small	Good	Good	Adequate
F	2.00	Big	Good	Poor	Inadequate
H	0.50	Small	Small	Good	Inadequate
C	1.50	Big	Small	Poor	Adequate
D	2.00	Small	Good	Good	Inadequate
B	0.50	Small	Small	Poor	Adequate
G	1.00	Big	Small	Poor	Adequate

Key: Small = insufficient for the number of pupils in that school
Big = Sufficient for the number of pupils in that school.
Poor = Insufficient

It can be deduced from the table that some schools do not have functional libraries .This together with poor textbook to pupil ratio and uneven distribution of teachers across the Division could be responsible for the poor KCPE performance. These coupled with the fact that lighting in classrooms was poor in most of the schools could further contribute to the poor KCPE performance in primary schools of Kemera Division.

The walls of classrooms were painted black and used by teachers to provide instructions to the pupils using a chalk Table 4.4.

Table 4.4 Condition of black wall in public primary schools in Kemera Division

School	Rough	Smooth	Portable	Permanent	Large	Small
E	x	Y	X	Y	X	Y
I	Y	X	X	Y	Y	X
J	X	Y	X	Y	Y	X
A	Y	X	X	Y	Y	X
F	X	Y	X	Y	X	Y
H	Y	X	X	Y	Y	X
C	X	Y	X	Y	X	Y
D	Y	X	X	Y	Y	X
B	Y	X	X	Y	X	Y
G	X	Y	X	Y	X	Y

Key: X = Not. Y = Yes

All schools in Kemera Division use this method to provide instructions to the pupils. It was observed that in some schools the black walls were not in a good state such that the writing on them could not be clearly seen Table 4.4.

Information obtained from focused group discussions indicated that free primary education has not provided enough physical facilities for instance toilets, classrooms libraries and desks. Due to lack of libraries and poor storage in some of the schools theft of textbooks was common. The fact that FPE was expected to provide all the learning requirements, this made parents complacent to the extent that they could not support the schools in providing the same. Enrolment declined in most of the schools two to three years after the introduction of FPE due to drop outs occasioned by forced repletion of classes by schools expecting better KCPE results. Focused groups were of the view that FPE has not been successful because in most of the schools they were not enough teachers whereas in some schools there were more than enough. The discussions further revealed factors within the school which affected examination performance. These include the fact that in some cases teachers do not mark pupils' assignments and are further unable to provide individual attendance to needy pupils due to high enrolment rate.

However, there was quite positive response fomenter viewed education officers indicating that most school age pupils were enrolled in primary schools despite provision of inadequate facilities by FPE. For the few who were not going to school the chiefs administration were addressing the situation. These challenges can be solved by the combined efforts of the community, NGOs and ministry of education. Further Community development funds can be used to augment these efforts. Generally the study indicated that there has been some minimal improvement in the KCPE performance.

Despite the challenges FPE is facing in public primary schools, the government has largely reduced most of the burden from parents in the provision of learning materials.

This study showed that the teachers were well qualified with the majority being p1teachers, followed by diploma holders and graduates in numbers respectively. There was no indication of untrained teachers in any of the sampled schools. Raquel (2012) found that teacher qualification had positive influence on examination performance. This study showed that the majority of teachers had less than 10 years' experience, a few had taught for more than 10 years and only one teacher had more than twenty years in the service. Other studies by You (2009) show that teachers with 10 or more years at work are considered experienced.

The finding of this study concurs with observations that KCPE performance has been on decline nationally despite the introduction of free primary education**.**

Further Wasanga (2007) shows that a decline in KCPE examination compromises the quality of education. Therefore Kyalo (2011) indicated that a survey of different regions in Kenya is necessary to determine the shortfalls and excesses of the free primary education. Studies on the effect of FPE on enrolment nationwide by Ridell (2004) show similar trends with those established in this study, whereby enrolment rose from 6 million to 7.2 million pupils in 2003. The number of teachers employed was not proportionate as compared to the number of pupils enrolled during the same period.

Similar observations were made in Malawi where the introduction of FPE led to increase of enrolment from 67.9% in 1999 to 158.1% in 2000. This caused the teacher pupil ratio to drop to 70:1 (Ridell, 2004).Hence high enrolment of pupils in both cases led to a drop in pupil teacher ratio which leads to inefficiency delivery of content in class.

Focus group said that they were unable to do assignments because textbooks were not enough. School management committee members complained of insufficient textbooks given by the school to their pupils. The key informants said that when they visited schools they counted textbooks and the number was small

5. CONCLUSION

To find out the effects of pupil to text book ratio on KCPE examination performance, it was found that the majority (69.09%) of the pupils in the Division share a text book in English while 1(10.05%) of pupils in the Division use Maths textbook individually. This implies that most pupils have access to reading materials which is likely to improve quality of education in Kemera Division.

It was noted that KCPE examination performance in 1995 was 158, 2003 was 215 mean standard score, 2006 was 221, 2010 was 222 and 250 in 2012 which was below mean standard score of 250.This implies that there is dismal increase in KCPE examinations performance in Kemera Division.

To find out the effect of physical facilities on KCPE examinations performance. The study findings revealed that most buildings and learning facilities such as the condition of blackboards and text book storage facilities were in dilapidated conditions. The roofs were made of iron sheets. Most schools had permanent buildings with a few having temporary classes to cater for high enrolment. Some classes in the schools were semi-permanent making teaching and learning uncomfortable. The walls of some schools were not plastered and were having cracks. Lighting in classrooms was not adequate since windows were small. Toilets were not enough to cater for high enrolment.

5.1Conclusion:

Books were inadequate because the study found out how textbooks are shared among pupils and this could be a reason of poor KCPE examinations.

The study showed how the KCPE examinations performance has not increased despite free primary education. There is minimal improvement but generally it is below average.

The government has provided learning materials to all public schools in Kemera Division. However, there are challenges affecting the implementation of FPE. The challenges include poor learning environment, understaffing, lack of commitments from both teachers and pupils, shortage of classrooms, lack of libraries and inadequate toilets. These challenges affected negatively KCPE examinations performance in Kemera Division.

5.2 Recommendations:

The study recommended that there is need to improve pupil to textbook ratio at least 1:1 to improve KCPE Examinations performance.

The study also recommends that the Mean standard scores should be improved to above average, the government should budget funds to build more toilets, more classrooms and libraries. This will greatly improve the KCPE Examinations performance of Kemera Division, Nyamira County.

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