

Implications of Free Primary Education on KCPE Examinations Performance In Public Primary Schools of Kemera Division, Manga Sub-County, Nyamira County, Kenya

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Abstract: The introduction of Free Primary Education in Kenya in 2003 increased enrolment from 5.9 million pupils to 7.6. By 2011, enrolment stood at 9.2 million pupils representing a 63% increase rate in nine years. It increased pupil to teacher ratio and pupil to textbook ratio. The Kenya certificate of primary 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: FPE, Examinations, performance, KCPE.

1. INTRODUCTION

Background to the study:

The main aims of the Universal Primary Education (UPE) policy of 2015 are; better family health, lower birth rate, high productivity, high earnings and improved economy of the country [17]. In the recent past, a number of countries notably Kenya, Malawi, India, Uganda and Zimbabwe have made attempts to abolish primary school tuition; this is in an attempt to re-resurrect their crumbling educational systems occasioned by reduced enrollment after initial growth following independence. 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 [17].

In India FPE led to the congestion of pupils in classrooms, making teaching and learning, uncomfortable. Physical facilities were stretched and teaching aids were inadequate [17]. 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. 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 [14].

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 [19]. The Amman Mid-Decade Review on Education For All (MDREFA) held in 1996 reaffirmed the commitment of the World Conference on Education For All (WCEFA) and further emphasized the provision of basic education for girls particularly in less industrialized countries; the Dakar Conference held in 2000 that set as one of the Education For All (EFA) goals, emphasized elimination of gender disparities in primary and secondary education by 2005 and achieving gender equality by 2015. 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 [3].

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 [3].

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 [19].

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 [10]. 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 [21]. By 2011, enrolment had shot up to 9.6 million pupils representing a 63% increase in nine years [16]. According to [10] enrolment rose from 6,314,726 to 7,614,326 by the year 2003. 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 [13]). Pupils' KCPE examinations performance in the study area (Kemera Division) averaged 230 marks between 2003 and 2012 [7]. 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 [21]. By 2011, enrolment had shot up to

9.6million pupils representing a 63% increase in nine years [16]. 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 . 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. The average national mean standard score in the KCPE examinations performance was 245.5 marks out of 500 marks between 2005 and 2007[16]. Out of 77,614 who sat for KCPE Examination in 2011 only 48.28% attained 250 marks and 5,806 scored over 400 marks. 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 [7]. 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. Determine the effect of enrolment trends on KCPE examinations performance in public primary schools of Kemera Division, Nyamira County.
- ii. Determine the effect of pupil to teacher ratio on KCPE examinations performance in public primary schools of Kemera Division, Nyamira County.

Research questions:

- (i) What is the effect of enrolment trends on performance of pupils in public primary schools of Kemera Division, Nyamira County?
- (ii) What is the pupil to teacher ratio in public primary schools of Kemera Division Nyamira County?

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

Conceptual framework:

[17] 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.

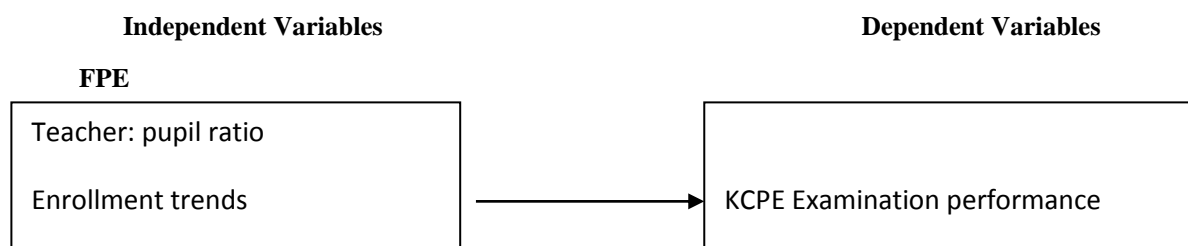


Fig. 1 Conceptual Framework

2. LITERATURE REVIEW

The Effects of Enrolment Trend and Pupil to Teacher Ratio on KCPE Examinations Performance:

Despite the fact that free primary education was introduced, parents still contribute funds towards the study of their children in public primary schools in form of activity and examination fee respectively [19]. A study by [22] in a selected number of developing countries for instance Nigeria and India showed that there was a wide range in pupil teacher ratio of between 1:30 to 1:80 in public primary schools. This is sharp contrast to a pupil teacher ratio of 1:25 commonly observed in developed countries. In under developed and developing countries, high enrolment rates have made it difficult to achieve a similar ratio as that observed in developed countries. The high enrolment rates have led to poor examination performance. This could be due to the fact that the high number of pupils has strained educational resources which were meant for a lower enrolment rate. This is due to changes in staffing and also by the introduction of free primary education [22].

A study by [2] in Malawi showed that one teacher was assigned 240 pupils while another one was assigned 150 pupils with teaching under a tree respectively. Similar study by [1] in Nigeria indicated that high enrolment in public primary schools brought about challenges in management of classes in order to surmount challenges; some teachers have developed methods of addressing them. For instance in Uganda, Margo (2006) showed that several Ugandan teachers adopted effective practices despite large number of learners between, 70 – 100, in a class. A study in Nigeria on free primary education showed similar effects of free primary education on enrolment and teacher pupil ratio. Study carried out by [23] in Nigeria showed that school's enrolment increased from 5.0% to 24.9% after the introduction of free primary education. However, in some schools the ratio was high than the national average. Further this ratio and enrolment rate varies from region to region. Information on this variation in enrolment and teacher to pupil ratio on a continual basis is scanty. In Kenya enrolment shot up from 5.9 million pupils to 7.6 million pupils representing 29% enrolment increase between 2002 and 2003 [21]. By 2011, enrolment had shot up to 9.6 million pupils representing a 63% increase in nine years [16]. According to [10] enrolment rose from 6,314,726 to 7,614,326 by the year 2003 There is therefore need to carry region specific studies to monitor changes in teacher to pupil ratio and enrolment trends so as to obtain information that can be used in providing appropriate teacher to pupil ratios in public primary schools.

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 [19]. It is observed 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 [8] 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 [6]. 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 [10].

[4] 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 [11].

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 [6]. For instance Secondary school placement and to some extent admissions depend on performance of Kenya certificate of primary education (KCPE) in standard eight [13]. 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 [13].

Nationally the mean standard score in the KCPE examinations ranged from 245.5 marks out of 500 marks between 2005 and 2007[9]. Out of 77,614 who sat for KCPE Examination in 2011, only 48.28% attained 250 marks and 5,806 scored over 400 marks. 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 [7].

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 Latitude of (0°, 1°S and 34°E, 1°S) in Nyanza region of Western Kenya. It borders 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°C and a maximum mean temperature of 29.6°C. 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. 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 Kibera 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 III) .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.

4. RESULTS AND DISCUSSION**Enrollment trends from 1995-2012:**

This study sought to establish the enrolment of pupils for class1-8 for the period 1995-2012.The results were presented using tables and graphs. The enrolment in Kemera Division during the period 1995-2012 is shown in Table 4.6. Data for the period 1995-2012 has been included in the table to form a basis of compulsion for the period when there was no free primary education and In some of the schools, enrolment did not show any significant change in the number of pupils enrolled with introduction of free primary education for example school B, Table4.6. Generally the enrolment seems to be

decreasing in standard 7 could be due to those who did not make it to class 8 after sitting standard seven end year examinations. Some schools had low enrolment like school B even after the introduction of FPE (2003-2012) and this could be due to many schools surrounding it which were preferred by parents. There was screening of pupils to class 8 but some schools did not, this means that schools promote only bright children to class eight, the average pupils were made to repeat standard seven.

Two extreme scenarios in enrolment, one in which enrolment increased after the introduction of free primary education and the other in which it decreased are compared with compared with the mean enrolment of all sampled public primary schools in Kemera Division figure 4.5to 4.8. In some primary schools like A figure 4.5., there was an increase in the number of pupils enrolled after introduction of free primary education.



Fig 4.5 Total Enrolment of Pupils in School A Primary

The changes in enrollment of pupils in school A exhibited the same trend as that of Kemera Division Fig 4.5. High registration was realized because it is a town school. It had 400 pupils in 1995 to 456 pupils in 2002, in 2003 it had 515 pupils and in 2012 it had 450 pupils. In school B Fig 4.6 an opposite trend to that observed in school A was observed, there was a decline in pupils' enrolment after the introduction of free primary education. During 1995 it had 224 pupils, 2002 was 197 pupils, in 2003 had 251 and 450 in 2012. In 2011-2012 the enrolment increased, this is because bright children from private schools enrolled in the school.

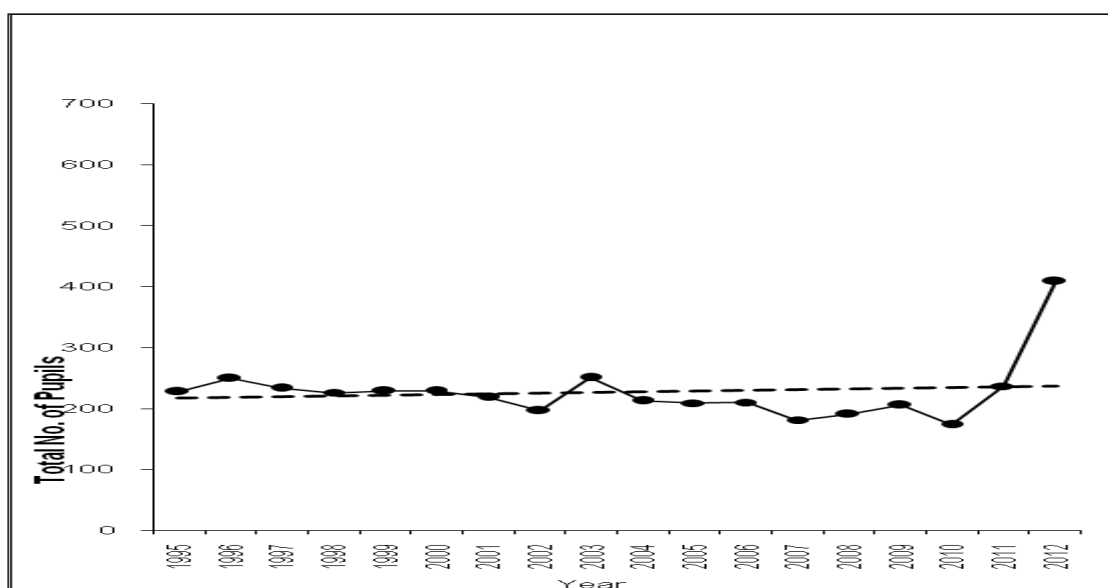


Fig 4.6 Enrolment of pupils in school B primary

The current estimate of pupil enrolment in Kemera Division in 2012 was 6252. The general enrolment of pupils in the Division showed an upward trend from 4658 in 1995 to 4838 pupils in 2002 while it ranged from 5627 2003 to 6252 2012 Fig 4.7. Generally the enrolment in all schools showed an increase in enrolment trend between 1995 to 2012 Table 4.6. However KCPE results in the Division exhibit the same trend since KCPE performance in some of the schools declined Table 4.9. Immediately after the introduction of FPE in 2003 the results of four schools that is school, D, G, I and J against an increase in enrolment. By 2012 the KCPE results of five schools dropped from those realized in 1995 against an increase in enrolment over the same period Table 4.6.

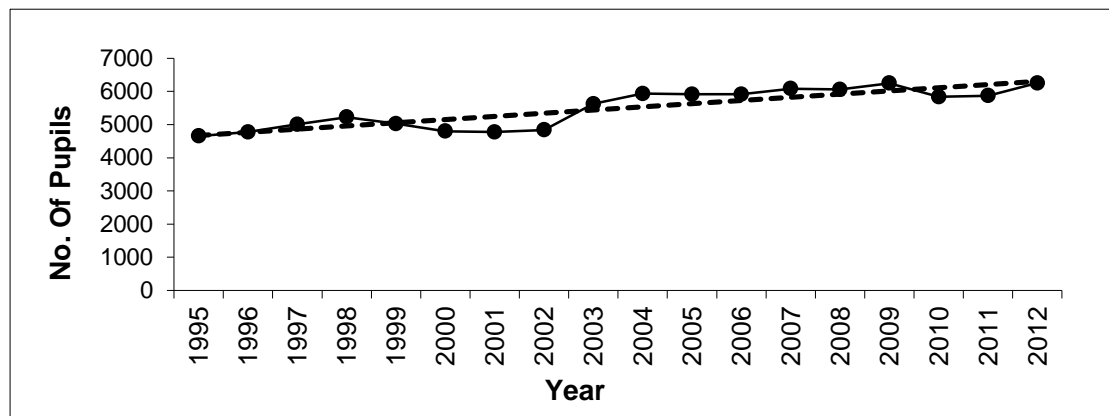


Fig 4.7 Total enrolment of pupils in public primary schools in kemera division manga Sub Count

Teacher to pupil ratio:

This section focuses on the teacher pupil ratio in public primary schools of Kemera Division. The national requirement on pupil to teacher ratio in public primary schools is 1:40. If the number of pupils in classroom is too high it negatively affect the learning process and ultimately examination performance. The Head teachers were asked to indicate the teacher to pupil ratio in classrooms of their schools. Their responses have been calculated into averages for the whole Division and these are presented on Table 4.7.

Before the introduction of free primary education (1995-2002) the average number of pupils per teacher in lower primary in Kemera Division ranged from 37-44. In the post free primary education (2003-2012) it ranged from 39 - 44 .while In upper primary (1995-2002) it ranged from 31 -41 while in the post FPE period (2003-2012) it ranged from 39-47 Table 4.7. However, observations on raw data (Appendix VIII) show that the actual number of pupils per

The changes in the mean number of pupils to teacher ratio in lower public primary school in Kemera Division are presented in (Fig.4.8).

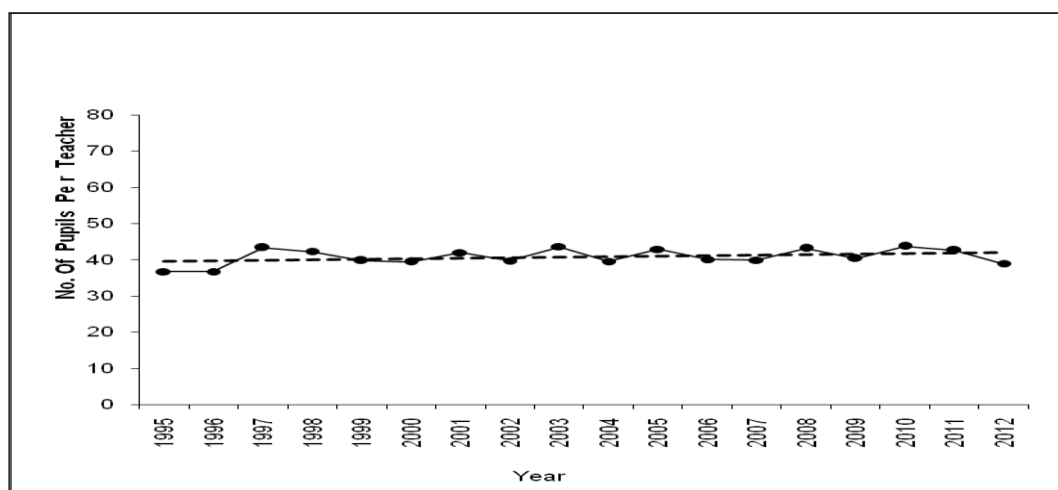


Fig.4.8 changes in no. of pupils per teacher in lower primary of public primary schools in Kemera Division Manga Sub County

The number of classes which were understaffed were calculated as a percentage against the total number of classes in the Division. These were considered as those which had more pupils than those required to be taught by one teacher (>40 pupils). The total number of classes sampled was 339 in 10 public primary schools. The range of the number of pupils per teacher was 14-78. This showed that 36% of the classes were understaffed.

The deficit in the number of teachers per subject per school was considered as the understaffing. The number of teachers who constituted this deficit is an indication of understaffing of that subject. The sum of the number of teachers who constituted this deficit was calculated as a percentage of the total number of teachers required to teach all subjects in the Division. This study established that 50-54% of the subjects had less than 40 pupils per teacher. It showed that more subjects were understaffed during free primary education.

The changes in the mean number of pupils per teacher in upper public primary schools in Kemera Division are presented in (Fig.4.9).

The teacher to pupil ratio per subject was checked by counting the number of pupils per teacher per subject for standard 1-8. The number of classes with high number of pupil per teacher was counted and divided by the total number of classes and then multiplied by 100 to obtain the percentage number of classes in which pupil teacher ratio was less than 40:1 that is recommended by TSC. The percentage of classes with a high number of pupils to a teacher is 44%. This showed almost a half of classes in Kemera Division had a high number of pupils than that required by ministry of education. In the Division 56 classes had over 50 pupils per teacher meaning that the teacher was teaching up to 2 classes in one class. Eighteen classes in the Division had less than 20 pupils that are less the number of pupils required by the Ministry of education. The distribution of the number of pupils to the teacher is shown in (Fig 4.9).

This indicated that the teacher pupil ratio was uneven throughout the Kemera Division. The number of pupils a teacher teaches in a class (no. being taught) is considered as pupil to teacher ratio. For the public primary schools sampled in Kemera Division, this is presented in Table4.7. In the lower primary 68% of the subjects had less than 40 pupils per teacher while 32% of the subjects had more than 40 pupils per teacher (Table 4.7). The average number of pupils per teacher was computed for lower primary class 1-3 and upper primary class 4-8. The actual raw data showed high number of pupils per teacher in some of the primary schools (Appendix VIII).

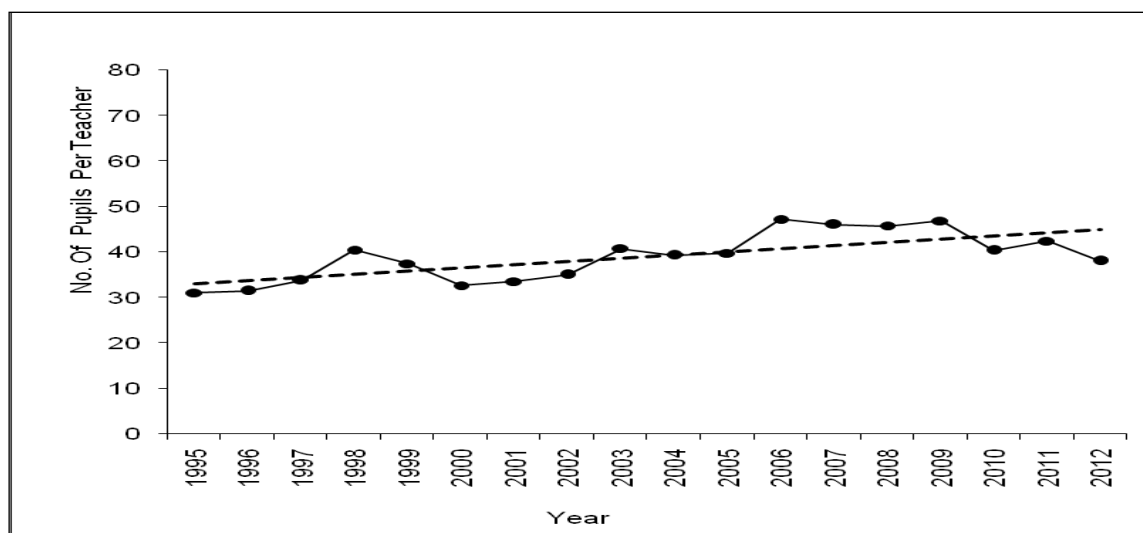


Fig. 4.9 changes in the no. of pupils per teacher in the upper classes in public primary schools of Kemera Division Manga Sub County

The changes in the mean number of pupils to teacher in Lower and upper combined in public primary schools of Kemera Division is presented in (Fig.4.10). The average number of pupils per teacher ranged between 38 and 40 during free primary education (2003-2012) (Fig 4.10). This is the required number accepted by the Ministry of Education. However it was not evenly distributed as some of the schools for instance A, had a high number of pupils per teacher. During the free primary education period (2003-2012) the number of sampled schools with a mean of more than 40 pupils per teacher in Kemera Division were 6 out of 10. Generally there were more pupils to a teacher during post FPE.

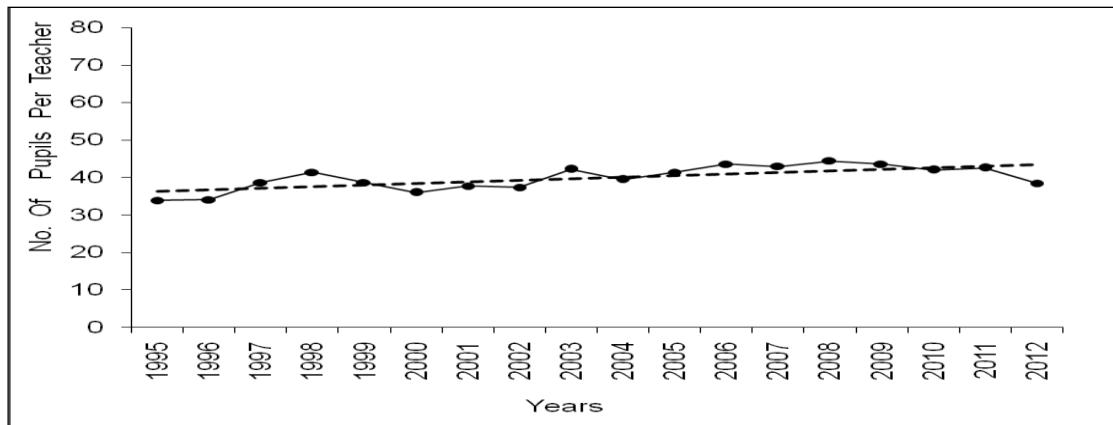


Fig 4.10 Average no. of pupils per teacher combined for lower and upper primary classes in Kemera Division Manga Sub County

From the interview schedule of the key informants, generally there has been some minimal improvement because the staffing situation dictated as most schools were understaffed. In most schools the classrooms were so much congested and attending individual pupil was not easy. Teachers noted that they could teach up to 70 pupils in a class. The focus group also noted that there were no enough teachers in their schools because they were not taught some subjects. School committee members said that their schools lacked enough teachers.

Generally in the Division lower primary had a teacher to pupil ratio of 1:37 to 1:44 whereas upper primary was 1:31 to 1:47. Lower and upper the ratio was 1:34 to 1:44. This shows that schools were understaffed (Table 4.7).

The result on teacher to pupil ratio show that those schools with a better teacher to pupil ratio for instance school B had a better KCPE performance than those whose pupils to teacher ratio is poor for instance school C. Similarly school E has a better pupil to teacher ratio in upper primary and had better KCPE result 245 than school F with 224 (Appendix VIII). There are other factors that contributed to the poor KCPE performance of schools for example pupil textbook ratio, tuition facilities and a well stocked library. Thus in some cases a school may have a poor teacher to pupil ratio but enough of the other facilities in which it can perform better in the final examinations compared to the one which has got a better teacher to pupil ratio but poor in other tuition facilities. Further research is needed to establish which of these factors has the greatest effect on KCPE performance in the Division and the region as well.

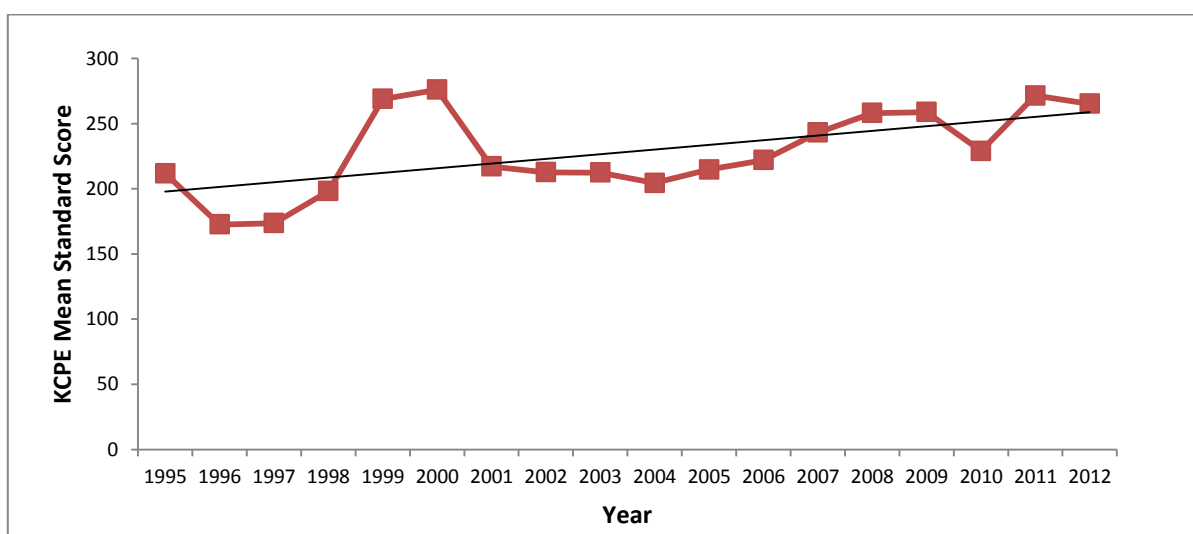


Fig 4.11 KCPE examination performance for school A during period 1995-2012

School A Fig (4.11) in 1995, the mean KCPE standard score for school A was 212 marks. 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).

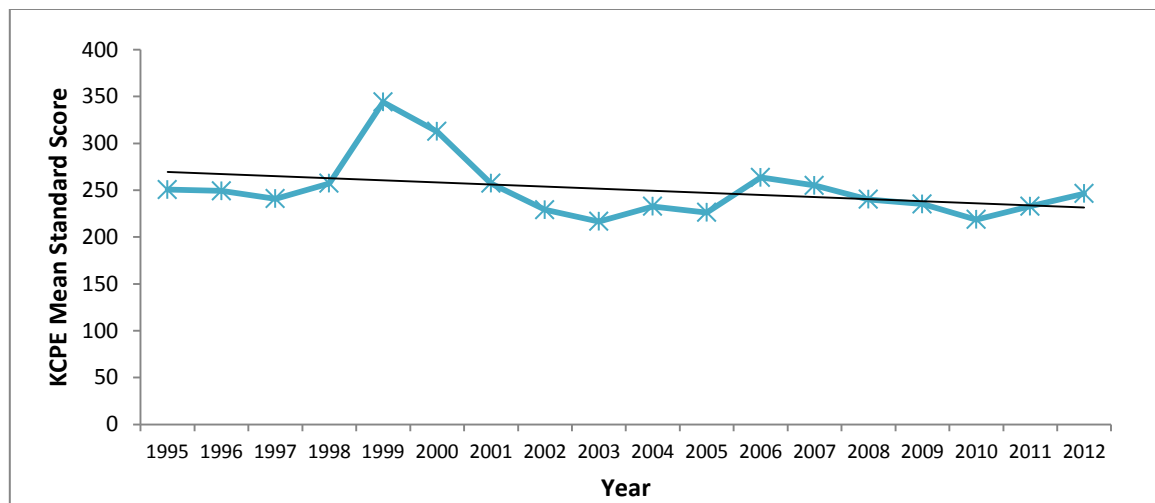


Fig 4.12 KCPE examination performance for school D primary period 1995-2012

In 1995 the mean KCPE standard score for school D was 251; it dropped to 217 marks and increased to 246 in 2012 (Fig 4.12). The KCPE mean standard score for Kemera Division in 1995 to 2012 (Fig 4.13).

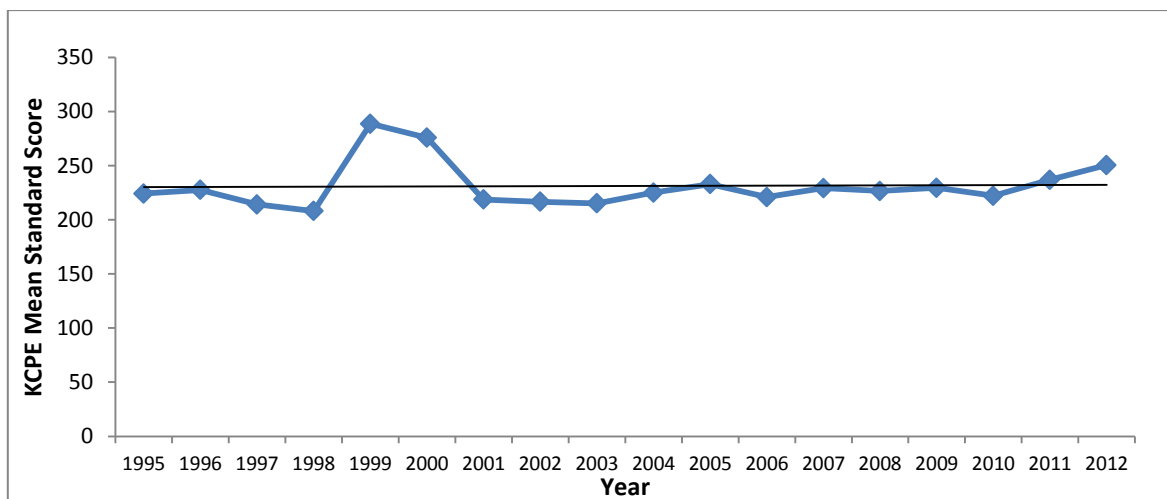


Fig 4.13 Examination performance for Kemera Division during 1995-2012

The KCPE mean standard scores for Kemera Division did not show any changes (Figs,4.13). 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.

5. CONCLUSION

The first objective showed that the introduction of free primary education has increased the accessibility of pupils to public primary schools from 4658 in 1995 to 5627 to 6252 pupils in 2003 to 2012 respectively.

The second objective was the effect of free primary education on pupil to teacher ratio. The number of teaching force has not increased proportionally to the enrolment of pupils whereby in upper and lower combined was 39:1 to 44:1.

The third objective was the effect of free primary education on pupil to textbook ratio whereby books were inadequate because the study found out how textbooks are shared among pupils and this could be a reason of poor KCPE examinations.

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