EFFICIENCY IMPLICATIONS ON QUALITY OF PUBLIC DAY PRIMARY SCHOOLS IN KYENI DIVISION, EMBU COUNTY, KENYA

BY

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E55/CE/15105/2008

A RESEARCH PROJECT SUBMITTED TO THE SCHOOL OF EDUCATION IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF DEGREE OF MASTER OF EDUCATION (ECONOMICS) OF KENYATTA UNIVERSITY.

JUNE, 2012
DECLARATION

This project is my original work and has not been presented for a degree or any other award in any other university. All work is my own and any help has been duly acknowledged and source referenced.

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DEDICATION

First, this project is dedicated to the almighty God for my care and sustenance. To my beloved daughter Lynn Prudence for her sacrifice and tolerance over my tight study schedules, my loving parents Joseph and Elizabeth, my siblings Pexy, Lucyline, Newton, Renson and Rogers for their prayers, moral and material support, my lecturers, friends and colleagues for their major contribution to this endeavour.
ACKNOWLEDGEMENT

This study would not have been successfully accomplished without the contribution of a number of people and institutions to which I am greatly indebted.

Kenyatta University is hereby accorded thanks for admitting me into this inspiring programme. Similar thanks are accorded to Kenya Methodist University Management for allowing me time for my studies.

Special thanks go to my supervisors, Dr. Mary Otieno and Dr. Jackline Nyerere for equipping me with valuable skills on research project writing and for being my supervisors.

I cannot forget to register my sincere appreciation to the parents, teachers and the pupils of the schools in the study and also the education officers Kyeni division, Embu County for their great contribution.

Profound gratitude goes to my friends Sarah Mungai, Esther Thuba, Mercy Thuranira, Becky Wachira, Terry Mwaniki, Rebecca Wambua, Josphine Khaemba, James Kathuri, Steve Kamau, Sammy Gakero and Zakary Njagi for their useful insights, comments and guidance during the writing of the project.

Lastly, my heartiest thanks go to my beloved daughter Lynn Prudence for the long sacrifice, co-operation and patience, my parents Mr Joseph Munyi and Mrs Elizabeth Munyi and my dear sisters and brothers for the moral and material support.

For all those who in one way or another were instrumental in providing information for this project and have not been mentioned by name, feel greatly recognized.
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<tr>
<th>Acronym</th>
<th>Description</th>
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<tbody>
<tr>
<td>AAGR</td>
<td>Average Annual Growth Rate</td>
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<tr>
<td>AEO</td>
<td>Area Educational Officer</td>
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<tr>
<td>BEFA</td>
<td>Basic Education For All</td>
</tr>
<tr>
<td>CREATE</td>
<td>Consortium for Research on Educational Access, Transition and Equity</td>
</tr>
<tr>
<td>CAR</td>
<td>Crude Admission Rate</td>
</tr>
<tr>
<td>CSAE</td>
<td>Centre for the Study of African Economies</td>
</tr>
<tr>
<td>EFA</td>
<td>Education For All</td>
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<td>ESDP</td>
<td>Education Sector Development Programme</td>
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<td>FGD</td>
<td>Focus Group Discussion</td>
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<td>FPE</td>
<td>Free Primary Education</td>
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<td>GDP</td>
<td>Gross Domestic Product</td>
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<td>GER</td>
<td>Gross Enrolment Rate</td>
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<td>GoK</td>
<td>Government of Kenya</td>
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<tr>
<td>HIV / AIDS</td>
<td>Human Immune Virus / Acquired Immune Deficiency Syndrome</td>
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<tr>
<td>IEC</td>
<td>Internal Efficiency Coefficient</td>
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<td>IIEP</td>
<td>International Institute of Educational Planning</td>
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<td>Acronym</td>
<td>Full Form</td>
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<tr>
<td>IPAR</td>
<td>Institute for Policy Analysis and Research</td>
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<tr>
<td>KCPE</td>
<td>Kenya Certificate of Primary Education</td>
</tr>
<tr>
<td>KESSSP</td>
<td>Kenya Education Sector Support Programme</td>
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<tr>
<td>KIE</td>
<td>Kenya Institute of Education</td>
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<tr>
<td>KIPPRA</td>
<td>Kenya Institute for Public Policy Research and Analysis</td>
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<td>KNUT</td>
<td>Kenya National Union of Teachers</td>
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<td>MDGs</td>
<td>Millennium Development Goals</td>
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<td>MoE</td>
<td>Ministry of Education</td>
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<td>MoES&amp;T</td>
<td>Ministry of Education Science and Technology</td>
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<td>NER</td>
<td>Net Enrolment Rate</td>
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<tr>
<td>NGOs</td>
<td>Non-governmental Organizations</td>
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<tr>
<td>OECD</td>
<td>Organization for Economic Cooperation and Development</td>
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<td>OXFAM</td>
<td>Oxford Committee for Famine relief</td>
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<td>PTR</td>
<td>Pupil-Teacher Ratio</td>
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<td>SAGA</td>
<td>Semi-Autonomous Government Agencies</td>
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<td>SMC</td>
<td>School Management Committee</td>
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<td>SPSS</td>
<td>Statistical Package for Social Science</td>
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<tr>
<td>Acronym</td>
<td>Full Form</td>
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<tr>
<td>SSA</td>
<td>Sub-Saharan Africa</td>
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<tr>
<td>TIQET</td>
<td>Total Integrated Quality Education and Training</td>
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<td>TPR</td>
<td>Textbook Pupil Ratio</td>
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<tr>
<td>UNESCO</td>
<td>United Nations Educational, Scientific and Cultural Organizations</td>
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<td>UNICEF</td>
<td>United Nations Children Fund</td>
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<td>UPE</td>
<td>Universal Primary Education</td>
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<td>USAID</td>
<td>United States Agency for International Development</td>
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<td>USA</td>
<td>United States of America</td>
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ABSTRACT

Although major strides have been made in education in Kenya, the system exhibit high levels of inefficiency, particularly at the lower levels. This is evidenced by high national pupil-teacher ratio, poor performance in national examinations and high wastage as a result of drop-out rates and low transition to secondary level. Efficiency of primary education has been camouflaged by the desire to promote access to education by increasing education opportunities to school-age population, in a bid to achieve Universal Primary Education (UPE). The country is now faced with the problem of a trade-off between enhancing efficiency of the education sector and increasing primary education.

This study was intended to find out the efficiency implications on quality of public day primary schools in Kyeni Division, Embu County. The study was descriptive in nature. The researcher used research instruments such as; Questionnaires, Interview Schedules, Focus Group Discussions and Observation Checklists. The target population was 26,250 pupils and 560 teachers in public day primary schools in Kyeni division. Purposive sampling technique was used to select ten (10) public day primary schools out of thirty five (35) schools in the division. The selection of the respondents was done using stratified random sampling technique. Five hundred and twenty (521) individuals were respondents. They included 10 head teachers, 10 School Management Committee (SMC) chairpersons, four hundred (400) students, hundred (100) teachers and 1 (one) Area Educational Officer (AEO). Data was processed and analyzed using descriptive and inferential statistics with the aid of Statistical Package for Social Sciences (SPSS). Percentages, frequencies, means, and standard deviations were used in data analysis. To present data, tables, graphs and figures were used. The findings of the study established that schools lacked enough resources which affected the quality of teaching-learning thus low achievement of learners. There was also increased dropout, repetition as well as low completion and transition rates. Therefore, the recommendations of the study are; increasing budgetary allocations to the schools in order to improve the quality and quantity of inputs, recruiting more teachers, regular in-servicing of teachers to improve their pedagogical skills, economic empowerment of parents so that they are able to meet both direct and hidden costs of education, initiating school feeding programmes to boost school attendance and ensure retention; and making primary school curriculum more attractive; as well as revamping youth polytechnics to strengthen and create centres for vocational and skills training.
CHAPTER ONE

1.0 INTRODUCTION

Education is viewed as the prime mover of the development process in a nation. It is one of the principal sources of increased economic growth, development and enhanced welfare of an individual and a household in the process of economic transformation (Chiuri and Kiumi, 2005). The importance of primary education cannot be overstated. In most developing countries it is considered to be more important than higher education in terms of its impact on poverty alleviation, social progress and economic development (Mukudi, 2004). Primary education has been made universal and compulsory, and there is a large-scale national campaign for enrolling all school-age children to primary educational institutions. However, the cost of its provision has risen as a result of rising enrolments due to increased social demands and high expenditure (Chiuri and Kiumi, 2005). In 2003, Kenya introduced the Free Primary Education (FPE) policy with a view to meeting the goal of Universal Primary Education (UPE). Having successfully initiated the implementation of this policy, the country is now gearing to widening access to and improving the quality of primary education. However, the country faces constraints in mobilizing additional public and private resources to meet the high cost of expanding access to quality public primary education (KIPPRA, 2006).
1.1 Background to the study

Education is now universally recognized as a form of investment in human beings, which yields both economic and non-economic benefits and contributes to a country’s future wealth by increasing the productive capacity of its people (Chiuri and Kiumi, 2005). The private and social benefits together with other visible gains for individuals have led to increased importance of education at primary, secondary, tertiary and university levels, and consequently the demand for education (World Bank, 2003). It is argued that, “education is assigned a priority role for its ability to effect the transformation of the people as individuals and groups, to promote social equality, and to strengthen national identity, thereby fostering the nation's political development and historical maturation.”

Primary education forms an important cycle as it links secondary level to strengthen the general intellectual skills that are more relevant to many occupations and subsequent education (GoK, 1988). The government and the people of Kenya have been committed to expanding the education system since independence, to enable greater participation by all in development spheres. Sifuna (1990) noted that, in its manifesto of 1969, the government was committed to providing a minimum of seven years of FPE to all school-going age children. The main principle behind this was the need to give priority in educational programmes to those areas in the country that were marginalized during the colonial rule. This would enable them to be at par with other areas and share fully in nation building and development. The government pledged to build primary and secondary schools so that every child in every district would get an opportunity to attend school.
Kenya has given primary education a very high social priority as a vehicle of national development to combat ignorance, disease and poverty; and the belief that every Kenyan child has the right of access to basic welfare provisions (World Bank, 2005). Social benefits associated with lower levels of education for instance, primary and secondary are higher than those accruing from tertiary institutions. For example, studies done in 16 African countries show that the social rates of return to investment in education are 26% for primary, 17% of secondary, and 13% of higher education (World Bank, 2003). For this reason, there has been enormous progress in primary education in terms of increased number of schools and pupils enrolment. MoEST (2005) reports indicate that a gross enrolment in primary schools has increased from 5.8 million in 2002 to 7 million in 2003 and 7.1 million in 2004.

According to Deolalikar (1998), Kenya appears to be spending significantly more on education compared with other African countries. Kenya’s expenditure on education was 6.7 percent of GNP in 1995 compared to 5.1, 4.7, 4.0 and 2.6 percent for Burundi, Egypt, Ethiopia and Uganda, respectively. At its level of expenditure on education, Kenya should have a gross primary school enrolment rate of about 110 percent and gross secondary school enrolment of about 45 percent.

Although about 1.5 million children have joined primary school, many school-going age children are still out of school (Wamukuru, Kamau and Ochola, 2006). Gross primary school enrolment rate was 104 percent in 2003 but the net primary school enrolment rate was estimated at 77 percent. The 1999 population projections show that the primary school-going age populations were 7.02 million in 2004 and 7.09 in 2005. Therefore a
national net enrolment rate of 77 percent translates to 1.6 million children out of school (GoK, 2005). A recent survey by Oxfam revealed that 37.3 percent of children in Kibera, in Nairobi, are still out of school and the majority of those in school (70%) are attending non-formal primary schools. According to Oxfam (2003), Kenya needs an additional US$137 million between now and the year 2015 to make education for all a reality.

Despite the government’s effort of making UPE a reality, primary education continues to experience many challenges related to access, equity and quality (MoEST, 2005). The high rate of failure is largely attributed to overstretched facilities; overcrowding in schools; high Pupil-Teacher Ratios (PTR), over-age children, insufficient textbooks, lack of finances and socio-cultural impediments such as early marriages, diminished community support following their misconstrued role vis-à-vis that of the government in the implementation of the FPE initiative; gender and regional disparities; increased number of orphans in and out of school as a result of HIV/AIDS; and other reasons such as internal inefficiencies (MoEST, 2005). Mbatia (2004) concur with MoEST that FPE has encouraged more enrolment at lower primary levels and variables such as class size, pupil-desk ratio, pupil-textbook ratio, school schedules, and class control have changed.

Textbooks, as inputs in education, play a crucial role in the determination of educational outputs and outcomes. According to the World Bank (2005), availability of textbooks has been found to be the most consistently positive determinant of academic achievement. Survey data indicate that on average, 4 primary school pupils in public schools in Kenya share one textbook (pupil-textbook ratio of 4:1) in every subject offered (UNESCO, 2005).
Although studies have been done on the challenges of FPE, they have not paid specific attention to the possible influence of FPE challenges on classroom interaction (MoEST, 2003). World Bank (2004) reports have shown that there is a wide disparity in the relationship between pupils and teachers in primary schools due to high pupil-teacher ratio. Krueger (2002) study on teaching large classes in the International Electronic Journal of Mathematics Education in Melbourne noted that it is easy to ignore the importance of human interaction when instructing in a large class. The shortcomings are evident in the declining access and enrolment rates, the ever decreasing completion and transition rates as well as the declining performance in national examinations.

As FPE has provided children from the poorer strata of society with hope, it has at the same time created a myriad of hurdles. The massive increase in enrolments is already putting pressure on the available resources, demand for and access to primary education as the primary school expansion does not correspond with the population increase for the children aged 6-13+ years (table 2: Appendix 10). Similarly, as a result of high enrolment, there has been a tendency to over enroll classes mostly in lower levels up to an estimated pupil-teacher ratio of 80:1 way beyond the recommended ratio of 40:1 per class. This overstretches the available physical facilities and increases the number of pupils to each teacher declining the quality of education as teachers are not able to give attention to individual learner differences (Sifuna, 2007). Furthermore, grade repetition has increased thus affecting the inflow of pupils and lowering school’s capacity to admit new students, while completion rates have remained very low (less than 50 percent) (Lockheed, 1991).
Available studies suggest that low completion rates, high pupil-teacher ratios, poor infrastructure, low transition rates and underutilization of teaching and learning time in primary schools also cause wastage of resources and deteriorate quality and efficiency of education (Abagi and Odipo, 1997). More than 50% of enrolled pupils fail to complete the education cycle, yet education consumes about 55% of the government’s recurrent expenditure. There has been a noticeable decline in enrolment at secondary school level accruing to the low transition rate from primary to secondary school level (Kimalu et al., 2001).

Wastage in primary schools is about Kshs.10 billion per year. This is a huge amount of money which could revamp this level of education (World Bank, 2005). Dropouts, repetition, overflowing classes, low Textbook-Pupil Ratio (TPR) (table 1: Appendix 10), and an acute teacher shortage have emerged as the stumbling block to good examination performance, an indication that Kenya is yet to reap the full benefits of its heavy investment in primary education (MoE, 2006). Statistics released for the 2009 Kenya Certificate of Primary Education (KCPE) show that performance in the examination has been improving at a slower rate since 2003, a sign that increasingly high investments in the sector are not yielding corresponding increases in mean scores. This is despite the billions of shillings being pumped into the FPE plan to improve access and boost learning in schools. The overall mean score based on subjects in 2010 stood at 53.84 per cent compared to 51 per cent in 2009, which saw it almost stagnate compared to the previous year when it was at 50.9 per cent, said Education Minister Sam Ongeri, who released the results at the Kenya Institute of Education (KIE), Nairobi. Total candidature in KCPE has almost doubled since 2003, having risen from 481,111 to 727,045 in 2011, in tandem
with a galloping enrolment in primary schools. Concerns over performance in public primary schools come at a time when Kenya is grappling with a skills shortage, which could hinder the smooth implementation of Vision 2030 or force the government to engage workers for longer than the retirement period. This laxity in boosting performance, educationists say, has the potential of watering down the FPE, which uses up at least Sh8 billion annually and has so far cost taxpayers over Sh50 billion since inception.

The quality of education is indispensable if the students are to complete primary education with literacy, numeracy and essential life skills (MoE, 2006). Article 42 of the Expanded Commentary on the Dakar Framework of Action elaborates that a quality education is one that satisfies basic learning needs, and enriches the lives of learners and their overall experience of living (Dakar Framework for Action, 2000). Poor quality education is eating away Kenya’s skills base, adding a new layer of challenge to the country’s quest for high rate of economic growth and the realization of a newly industrialized status by 2030 (Republic of Kenya, 2005). A new survey of the country’s education system has found that millions of Kenya’s primary school children are graduating without attaining basic numeracy and literacy skills, denying the economy quality human capital it needs to grow as there is a mismatch between the skills level of graduates and the market needs. This means that heavy investments that the government has recently made in education have not borne fruit. This lack of competence at the bottom of the learning ladder is also hurting the performance and credibility of students at higher levels, ultimately diluting the quality of Kenya’s human resource base and competitiveness in a globalised economy (Sifuna, 2007).
A survey by a group of researchers from local universities under the auspices of Uwezo Kenya, sampled 102,666 students aged between three and 16 in 2,030 schools countrywide. It found out that only 33 per cent of children in class two can read a paragraph of their level. A third cannot even read a word. Of every 1000 pupils completing class eight, 50 cannot read a class two story and 25 percent of class five pupils can hardly read a class two paragraph. “Our schools are producing people who find it very hard to survive in an increasingly competitive labour market if they are lucky enough to get jobs,” said Musau Ndunda, the secretary-general of the Kenya National Association of Parents. Dr. Ruto, who coordinated the Uwezo Kenya survey added that; “Celebrating new buildings and higher enrolments is a dangerous folly if it masks the reality that some children complete primary school without the ability to read and write.”

Progression of learners from one level to another is a measure of a system’s internal efficiency as well as its physical capacity. Transition rates are normally affected by pass rates, availability of places in the next cycle of education as well as affordability. In Kenya, the problem of low transition rates (table 3: appendix 10) has been occasioned more by the system’s low absorptive capacity in primary leaving examinations (MoE, 2006).

Theoretically, UPE policy sounds commendable as a means of cushioning children from poor socio-economic backgrounds from failing to participate in education as it reduces the private cost of education. Practically, the policy sacrifices the quality of education diluting the overall productivity of the educated person and subsequently reducing the rate of return to education (MoEST, 2005).
The worrying scenario despite the government’s high expenditure on education is that the allocation of resources within the sector seems to be ineffective. The increasing expenditure on education goes to recurrent expenditure; to pay teachers salaries and very small proportions are allocated to quality related inputs like textbooks and classroom consumables (Sifuna, 2007). There is a serious blow to free primary education, which is already threatened by deteriorating quality of education due to high pupil-teacher ratio; an acute shortage of infrastructure like classrooms, toilets, and offices; and inadequate teaching and learning resources to cater for the high number of enrolment (UNESCO, 2008). The government tends to focus on the quantitative expansion of education, paying less attention to the qualitative growth of individuals for the community (Mukudi, 2004). Educationists are now questioning the effectiveness of the heavy investment in the FPE plan in improving the quality of learning and performance. Based on past experience and the futurology of policy analysis and research, the future of education in Kenya looks gloomy (Kerre and Obura, 1992). If one takes known facts and trends in macro-economics and in education and projects them over a period of 15 years, to the year 2015, the outcome is not reassuring. If the government and other partners in the development of education merely carry on as in the past and at present - rhetoric, good plans in paper without implementation programmes, good enhancing projects (textbooks, bursaries) without accountability and efficiency - the impact will be devastating by 2015 (Kerre and Obura, 1992). Failure to expand primary education resources will compromise human capital accumulation and therefore jeopardize economic recovery and development. Economic recovery and growth will prove elusive with small proportions of the labour force completing primary education, and this will undermine the financial sustainability
of Education for All (EFA) as envisaged in the national development goals (Koech, 1999). If nothing is done soon to resolve the issue, the progress Kenya has made over the past decade in improving primary education could be at risk of coming undone (World Bank, 2005).

It is against this background that the study intended to find out the efficiency implications on quality of public day primary schools in Kyeni Division, Embu County.

1.2 Statement of the problem
According to the background to the study it is evident that, although major strides have been made to provide education in Kenya, the system exhibit high levels of inefficiency, particularly at the lower levels. This is evidenced by high national pupil-teacher ratio, poor performance in national examinations and high wastage as a result of dropout rates and low transition to secondary level (Abagi and Odipo, 1997). Efficiency of primary education has been camouflaged by the desire to promote access to education by increasing education opportunities to school-age population, in a bid to achieve Universal Primary Education (UPE). The country is now faced with the problem of a trade-off between enhancing efficiency of the education sector and increasing primary education (Abagi and Odipo, 1997).

Following the statistics obtained from the education office in Embu County, about 30% of pupils who enter the school system at primary level do not complete the cycle. This means that the resources already invested in them go into drain. It also increases the opportunity costs to the individuals and their families for it implies many years of
foregone income since the affected learners enter the labour market belatedly or they do not enter the market at all. The situation is grave and worsening in Kyeni division where pupils drop out at various stages especially in standards 6, 7 and 8; a trend which contradicts the national goal of promoting UPE. The current status of primary education in Kenya suggests that the scenario is likely to remain the same, if not worsen, unless urgent interventions are put in place. This study therefore sought to establish the efficiency implications on quality of public day primary schools in Kyeni division, Embu County.

1.3 Purpose of the study
The purpose of this study was to examine public day primary schools’ efficiency and its effects on the quality of education in Kyeni division; and to explore innovative and viable strategies for improving it.

1.4 Objectives of the study
The study was guided by the following objectives:-
1. To assess the level of achievement of pupils in public day primary schools in Kyeni Division, Embu County.
2. To determine the dropout rate in public day primary schools in Kyeni division, Embu County.
3. To examine the completion and transition rate in public day primary schools in Kyeni division, Embu County.
4. To find out the efficiency implications on quality of public day primary schools in Kyeni division, Embu County.

5. To suggest effective and viable measures for improving efficiency of public day primary schools in Kyeni division, Embu County.

1.5 Research questions

The study was guided by the following research questions:

1. What is the level of achievement of pupils in public day primary schools in Kyeni Division, Embu County?

2. What is the dropout rate in public day primary schools in Kyeni division, Embu County?

3. What is the completion and transition rate in public day primary schools in Kyeni division, Embu County?

4. What are the efficiency implications on quality of public day primary schools in Kyeni division, Embu County?

5. What measures can be put in place to improve efficiency of public day primary schools in Kyeni division, Embu County?

1.6 Significance of the study

This study sought to analyze the factors affecting efficient utilization of public day primary schools resources in Kyeni division, Embu County. It is significant for several reasons; first, it provides an understanding of the relationships that exist between education inputs and achievements levels. Secondly, the study gives a clear picture of the
minimum levels of resources required by different school settings in order to bring about significant gains in achievement levels. Thirdly, through the in-depth interviews, the study uncovered salient features of schooling that matter in improving completion rates and reducing dropout rates in schools. The study also provides thick descriptions of how resources should be managed in relation to the improvement of quality of education. Thus, the study helps in understanding of the usage of school inputs which can be linked to quality improvements with respect to achievement. The findings and recommendations of the study will therefore have both theoretical and practical significance to educational planners and policy makers in making decisions for planning and allocation of primary education resources. The study will also help future researchers in developing their studies.

1.7 Assumptions of the study

In the study, the following assumptions were made:

1. Public day primary schools in Kyeni Division, Embu County have adequate resources to support the teaching learning processes.

2. Parents, teachers and pupils support efficient utilization of the school resources.

1.8 Limitations of the study

This study was carried out in only ten (10) public day primary schools out of the thirty five (35) schools in Kyeni Division, Embu County. This is about thirty percent (30%) of the total population. This number is within the acceptable representative sample according to Orodho (2008). The results may however, not be representative to the whole
country. Kyeni Division was specifically selected for the study because it is among the divisions with high public primary school enrolments, high dropout rates and low transition rates in the County.

1.9 Delimitations of the study

This study confined itself to pupils and teachers in public day primary schools who are the direct beneficiaries of educational provision in Kyeni Division, Embu County. The public boarding and private primary schools were precluded because public boarding schools are not directly affected by the FPE policy due to the element of boarding fee payment, while the private primary schools do not enjoy direct government support in the provision of educational resources. The pupils and teachers included in the sample were only those in session by the time of the study; those absent were not included even though they would have interesting input.

1.10 Theoretical framework

This study was based on the Systems Theory of Management in an attempt to justify efficiency in operations of an organization as a system. The theory views an organization as a social system consisting of individuals who cooperate within a formal framework, drawing resources, people, finance from their environment and putting back into that environment. The systems theory maintains that an organization (school) does not only depend on its environment but it is also part of a larger system such as the society or the economic system to which it belongs. Educational system is a complex system comprising of subsystems at different levels. These are; macro (state), meso (school) and
micro (classroom and the student) levels. At each of these levels, educational decisions are influenced by different actors, for example, at the school level the school committee, the head teacher, teachers, and parents make certain decisions and give opinions on the management of the school. Schools are open systems hence they respond to the external influences as they attempt to achieve objectives. The implementation of the free primary education is an example of a change from the outer environment.

The theory also puts forward the concept that a system is a collection of parts unified to accomplish an overall goal. A school system can be looked at as having inputs, processes, outputs and outcomes, which in the long run produce feedback. Inputs include resources such as textbooks, teachers, pupils, money and physical resources. These inputs go through a process where they are planned, organized, motivated and controlled, ultimately to meet the organization’s goals. Outputs are results obtained after inputs are processed. Outcomes are enhanced quality of life or productivity. Feedback would be information from human resources carrying out the process or from the larger environment of the organization, e.g., influences from government, society, economies, and technologies. If there is a mismatch between inputs, processes and outputs in an educational system, then it is said to be inefficient.

In studying a system consisting of inputs, educational processes, and outputs, one of the most desirable outputs is students' achievement. Thus, students' achievement is one of the major indices reflecting the degree of efficiency of the primary education system. A major problem in primary schools in developing countries is educational wastage, resulting from failure to manage the educational system in a manner that enables students to complete their education within the time frame prescribed by the syllabus.
is the driving force of any nation and like any other organization or enterprise, efficiency; effectiveness and quality ought to be the cornerstones.

1.11 Conceptual frame work

The study was based on the conceptualization that education should take an input, process and output perspective and gives feedback. School efficiency has to be pegged on how education as a system operates to meet its goals and objectives; that is a ‘holistic operation’ (Figure 1.1.) This was looked at in terms of resource allocation, pupil-teacher ratios, classroom management, teaching-learning contact hours, utilization of school physical facilities, transparency and accountability on school management and resource utilization and performance in national examinations. Since efficiency implies maximizing inputs in an endeavour to produce optimum outputs, the processes for which the available inputs are allocated and used are crucial (Abagi and Odipo, 1997). Inputs are the resources used in the production of the education experience, process is the means by which education inputs are transformed into education outputs; outputs are the direct and immediate effects of the education process and feedback are the long-term impact of the education process which emerge from the interaction of education outputs with the larger social environment e.g., success in employment, lifetime earnings and good citizenship.
Figure 1.1: Conceptual framework

Inputs

- Textbooks
- Teachers
- Money
- Physical resources

Process

- Educational policy
- School administration
- Classroom dynamics
- Pupil-teacher ratio
- Contact hours

Outputs

- Drop-out rates
- Repetition Rates
- Completion rates
- Transition rates
- Students’ achievement

Feedback

Source: Abagi and Odipo (1997), with researcher’s modifications.
1.12 Operational definition of terms

Class size - The actual number of pupils taught by a teacher at a particular time.

Cohort - A group of pupils in the same grade.

Educational costs - These are the costs of input (resources) which are allocated to education. For example, costs of building materials, desks, books, teachers and equipment.

Educational efficiency - A measure of how resources/inputs allocated to the educational system (funds, expertise, human resources, time, etc.) are converted into outputs for individuals (e.g. educational achievements, employability, earnings) as well as for the economy and society.

Efficiency – The extent to which an activity achieves its goal whilst minimizing resource usage.

Gross Enrollment Ratio - The number of pupils enrolled in a given level of education, regardless of age, as a percentage of the total population of the corresponding school age (6-13+) years.

Human capital - The available stock of knowledge and skills in a country.

Internal efficiency - The amount of learning achieved during school age attendance, compared to the resources provided as revealed by promotion, repetition and dropout rates.

Net Enrolment Ratio - The number of pupils of official school-age enrolled in a given level of education, as a percentage of the total population in that age-group.

Opportunity cost - This is the opportunity foregone by an individual while investing in education; for example, working in the farm.
Private costs - These are the costs incurred by an individual and / or family in purchasing education.

Pupil-Teacher Ratio - The average number of full time study pupils per full time working teacher.

Quality of education - Recognized and measurable learning outcomes especially in literacy, numeracy and essential life skills.

Rates of return to education - The net benefits accruing to an individual (private rate of return) or society as a whole (social rate of return) upon successful completion of education.

Recurrent expenditure - This is the expenditure which is incurred in education and which covers one financial year only; for example; consumables such as exercise books, teacher salaries and chalk for the year in question.

Social costs - These are the costs incurred by the government or society in providing a pupil with education.

Transition rate - The percentage of pupils who complete one level of education and proceed to the next in a given year; for example, from class eight to form one.

Universal Primary Education - The provision by a country of sufficient primary school places to enroll all of its eligible primary school-age population.
CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Introduction

The chapter reviews literature related to efficiency of public primary schools in developed and developing countries of the world. The literature was drawn from, books, journals, discussion paper series, government publications, documents, reports, newspaper articles and works of other researchers. The study investigated the efficiency implications on quality of public day primary schools, to suggest effective and viable measures of resource allocation and use.

2.2 Global overview of the status of primary education

Education is the cornerstone of economic growth and social development. It creates greater social cohesion and a strengthened foundation for democracy. At the aggregate level, a better-educated workforce enhances a nation’s stock of human capital, which is crucial for increased productivity and economic development (Hanuscheck and Kim, 1996). Economic planners often place great emphasis on investment in education because of its direct relationship with increase in the productive capacity of a nation through the inculcation of salable skills which are required for economic transformation. Quality education acts as a springboard for youth to get a start in productive and satisfactory life so as to make tangible contribution to the country’s economic growth and development (Rakotomalala, 2003).

Among the different levels of education, primary education has been found to yield the highest social rates of return, especially in developing countries (Psacharopoulos and
UNESCO (2001) found out that primary education can help in alleviating poverty by increasing income, improving health and nutrition and reducing fertility. This explains why primary education is the largest sub-sector of any education system.

Strengthening the quality of education has become a global agenda at all educational levels and more so at the primary level. It is expected that after the successful completion of the primary level of education, a pupil should be able to read, write, and solve simple arithmetic problems. Thousands of students may be completing a given level of education in a given year and passing national examinations, but the reality may be that they are barely functionally literate, or not at a standard where they can enter the labour market and find appropriate jobs (UNESCO, 2000). An efficient educational system therefore, should enable students to develop both cognitive and non-cognitive skills and knowledge as required by the curriculum, ensure that primary education is readily accessible to all children and permit targets to be reached within the regular time frame.

Globally, 570 million children are enrolled in school. The number of children of primary school age who were out of school fell from 103 million in 1999 to 73 million in 2006. In that year, primary school enrolment in developing countries reached 88 per cent on average, up from 83 percent in 2000. In Sub-Saharan Africa, the net primary school enrolment ratio has only recently reached 71 per cent, even after a significant jump in enrolment that began in 2000. Around 38 million children of primary school age in this region are still out of school. The analysis of global statistics in terms of enrollment in primary education shows that most of the children that are not attending primary school are mainly located in Sub-Saharan Africa and in few Asian and Middle East countries.
On average about a dozen countries in sub-Saharan Africa appear to really lag behind by enrolling less than 60% of their school-aged children in primary school (World Bank, 2004).

Qualitative education has become a political variable in the developing nations in determining which political party wins or loses political elections and in determining the supply of educational facilities. In the past two and a half decades, education systems all over the world have expanded rapidly, as reflected in large increases in enrollments and public educational expenditures. However, the quality and efficiency of primary education has not kept abreast of the expansion in enrolment (UNESCO, 2006). Universal primary completion is crucial for national economic and social advancement. It is a goal that all developing countries are committed to achieving by 2015, but one that will not be reached without a significant acceleration of current progress, as there are many over-school age children without access to education (UNESCO, 2005).

2.3 Literature from Countries outside Africa

The returns to education remain a central concern for development policy in countries around the world. Indeed, meaningful literacy in a globalized world can only be achieved through provision of good education. The quality of basic education is important not only for preparing individuals for the subsequent educational levels but to equip them with the requisite basic life skills. It also ensures increased access and equality and it is mainly due to these reasons that various international Forums and Declarations have pledged improvements in quality of education (Kerre and Obura, 1992). Quality and relevant
education and training is important in any country because it contributes directly to the development of quality human resource, which is central to the attainment of national goals. A study in Bangladesh reveals that households without any formal education have about six times higher poverty incidence than those who have access to education.

Over the past decade many developing countries have expanded primary school access, energized by initiatives such as the United Nations Millennium Development Goals, which call for achieving universal primary education by 2015. But increased quantity has not always been matched with improved quality, and only 60% of appropriately aged children gain the skills necessary to attend secondary school worldwide. Education in developing countries is often hindered by large class sizes and low teaching quality. Lewin and Caillolids (1999) notes that due to the success of efforts to increase primary school enrolment, thousands of adolescents are now knocking on the door of the limited secondary schools and putting education systems under constant pressure to meet their demands for further education.

Bangladesh has received international recognition for its strong national commitment to education and the impressive gains it has made towards achieving primary Education For All over the past two decades. The country sustains one of the largest and most complex primary education systems in the world. Nonetheless, substantial numbers of primary school-age children remain out of school (World Bank, 2003). The Government of Bangladesh estimate of the net enrollment rate (86.6 %) indicates that approximately 2.5 million children aged 6-10 were not enrolled in primary school in 2001; other estimates suggest that at any one time the number of out-of-school children is closer to 4 million. Nearly 2 million of the pupils attending primary school fell outside the official age range,
primarily due to over-age enrollment. Repetition and dropout (33 %) rates remain high, resulting in an inefficient cycle time of 6.6 years. Over 30% of the children who entered primary school did not complete all five grades. Pupil assessments have found that those who do complete the primary cycle perform on average at a third grade achievement level and lack essential problem solving skills. Further, attendance rates for primary school are uniformly low, averaging 58 percent (World Bank, 2008). In 2007, the drop out rate increased piercingly to 17.15%. The Primary education budget has been meager over the years with respect to its requirement particularly in improving quality of education. Therefore the target of achieving 100% completion rate within 2015 is very much questionable (World Bank, 2008).

In Bangladesh, public primary schools are characterized by; inaccessible and insufficient facilities, short contact hours, lack of instructional materials, untrained and unmotivated teachers, inefficient and highly centralized management structures, poor institutional capacity and inadequate financing, which hinder quality in education. Too few schools exist to allow for universal enrollment; those that do exist are rapidly deteriorating. Small government grants for school maintenance and repair are distributed in a non-transparent manner, rarely based on analysis and prioritization of needs. In general, enrollment has risen, but resources allocated to education remain unchanged, leading to the deterioration of overall quality of provisions for primary education (UNESCO, 2006). The average primary school teacher-pupil ratio is 1:61, and in some areas the ratio is as high as 1:90. Achievement and competency levels of most children are very low. Overcrowded classes negatively influence the efficiency of the education process. Such classes provide little chance for the teacher to follow up student’s educational achievements and weaknesses.
There is also little chance for students to participate actively in the teaching-learning process. Teacher’s poor academic quality and low competency is a serious problem for student’s educational attainment as teachers with poor pedagogical training cannot teach children with confidence. Rahman attempted to establish a profile of the primary school teachers in Bangladesh by interviewing some 500 of them. He found that most of the teachers do not receive proper training, do not understand competency-based curriculum, and may not even understand the material they teach. Additionally, many head teachers in Bangladeshi schools do not assume their leadership roles, due to insufficient resources, training, and time (World Bank, 2005). Government corruption harms school performance, with estimates of impact ranging from marginal to critical. These factors prevent parents from sending children to school. The South Asian scenario is similar to that of Bangladesh (Lewin and Cailloids, 1999).

In 1970s, most Latin American countries began to focus on the goals of universal access to basic education and literacy. By 1997, the gross enrollment rate had increased to 113.6 percent of primary school-aged children (Schiefelbein, 1994). Though the statistics showed improvement, 15 percent still repeated the first grade, and 23 percent dropped out before the fifth grade. Schiefelbein (1994) charged that Latin American countries do significantly worse in terms of achievement than the developed world in public primary schools. Repetition rates rank among the highest in the world, with the average student spending nearly seven years in primary school but completing just five grades. Nearly one out of every two students repeats the first year of school. The cost of teaching these repeaters has been estimated at US $ 2.5 billion, nearly one third of total public expenditure on primary education in the region (OECD, 1999).
China formally committed itself to universalizing access to basic education with the announcement of the nine year compulsory education law in 1986. Since then, there has been a rapid expansion in the development of primary schools, both in terms of students’ enrolment and government funding. The number of students studying in primary schools is more than double from about 23 million to over 43 million which puts pressure on the existing resources (OECD, 1999).

In India, there are roughly 200 million children in the 6-14 age group, of which only 120 million are in schools and net attendance in the primary level is estimated to be merely 66 percent of enrolment. A study conducted by the Teamlease Services has revealed a very disappointing scenario of primary education in India. The study was conducted in primary schools in all the states of India to measure the learning achievement (quality) of students in language and mathematics. The study found that after completion of primary level education, 11 percent students were not able to recognize anything, 14.1 per cent could recognize only letters, 14.9 per cent can read a word, 17 percent can read a paragraph of a story and only 42.8 percent can read a complete story. In India, there appears to have been a greater emphasis on the provision of more schools (‘quantity’), than on activities that actually take place inside classrooms and the educational outcomes (‘quality’). Despite this general increase in the availability of schooling, the educational system in India is nonetheless characterized by inadequacy of school facilities. More importantly, the low quality of education provided in these schools remains a critical issue. Even those children who have completed five years of primary schooling may not be functionally literate and numerate - or may not retain the acquired skills for long. Further, low quality of the school system contributes to parental apathy towards actually
sending their children to school - even if the parents recognize the importance of education as a means to social and economic mobility for their children. The low learning achievement problem in India is mostly because, most of the primary schools are shelterless, there is high pupil-teacher ratio, resource materials are never provided in time and in adequate quantity, and many lack basic facilities such as running water and toilets. Lack of access to toilets and running water reduce overall student attendance and disrupt learning processes, as students have to go home to use these facilities. A study of Uttar Pradesh found that 54% of schools did not have running water and as much as 80% of schools did not have latrines. Another gaping hole in the education system is teacher qualification. Absenteeism and low accountability of teachers is also a pervasive phenomenon across the country (Mukhopadhyay, 2001). The school system is rife with ‘corruption’ resulting to misuse of school funds. Even in states that are better off in terms of physical infrastructure and other teaching/learning inputs, weak accountability plagues the system. India’s educational achievement has had mixed success. On the downside, India has 46 per cent of the world’s illiterates, and is home to a high proportion of the world’s out-of-school children and youth (Boissiere, 2004).

The UNESCO (2001) in one of its reports on elementary education in Pakistan has also laid emphasis on the expansion of access and quality to make going to school or staying in school a more attractive option from the perspective of parents as well as children. Moreover, effort to improve quality will tend to increase the efficiency of the public expenditure on education. An increase in primary enrollment has always been a priority for Pakistan government. Although the government of Pakistan also has taken some bold steps in this regard such as; teachers’ training programmes, development of new
curricula, improvements in examination and assessment system, incentives for teaching staff as well as for students and introduction of good administration and management, the quality of primary education is still a far cry. Level of physical facilities available at most public educational institutions in Pakistan is dismally poor and teachers also have low quality pedagogical skills. The school participation rate needs to be maximized, dropout is to be minimized, the curriculum is to be made more functional and of everyday use, the quality of education is to be improved, training programmes need special match with the current coming up changes, the equity in terms of quality; and provision of resources has also been a matter of concern, the financial allocations and their proper utilization needs special care and attention (UNICEF, 2000).

Haiti has the lowest enrollment rate for primary education in the Western Hemisphere (63%). Almost half of the primary school age population (1.3 million children) is still out of school. Naturally, the non-schooling gap is more acute in the rural areas where the enrollment rate is only 23 percent. At the secondary level, the gross enrollment rate is 22 percent. As far as the quality of learning is concerned, the situation is alarming throughout the education system. The quality of education is below international standards and the majority of students are enrolled in facilities which do not provide a suitable learning environment. According to the diagnosis document of the National Education Plan, only 43 percent of students entering first grade ever reach the fifth grade, and only 29 percent make it to grade six. Only 38 out of 1,000 children who enter the first year of the primary cycle finish secondary school. Repetition rates are around 12% per grade and dropout rate between 10 and 15% per grade. Half of the primary school students are overage; the proportion is as high as 89 percent in Grade 5, with an average
age of 15. The quality of instruction is deficient in most public schools because of unqualified and unmotivated teachers, lack of textbooks, uncoordinated development of curriculum and instructional materials, and poor facilities (Boissiere, 2004). The results of a test administered in March 1996 to a representative sample of 1,200 public school teachers are dismal. The French language test, designed by a team of the Ministry of Education experts assisted by a small group of French specialists, revealed that one-third of the primary school teachers did not know how to rank words alphabetically. Eighty percent of the teachers could not use the passive form in French. Only 41 of the 1,200 teachers (3.5%) were able to perform basic arithmetic operations from the fourth grade program. Two-thirds of these schools do not have the basic pedagogical materials (World Bank, 1997).

In Sweden, public primary schools are now a joint responsibility of the state and municipalities. Each school and municipality, in the same way as the State, formulate goals for their area of responsibility, evaluate results and make the changes required to maintain quality. However the follow-up on how the school system uses resources, its conditions and qualitative results need to be developed and made more efficient (OECD, 1999).

In Guatemala, Netherlands and Colombia many cohorts at various grades leave the primary course without completing the cycle. Others complete the course in a period more than the minimum prescribed for the course due to stagnation or complete the course but are unable to utilize subsequently the training in the course which causes wastage in education (World Bank, 2003).
In Chile, virtually all children start primary education at some point, but they do not necessarily remain in, or complete, the 8 grades of the level. The drop-out rate, which concentrates in grades 6 and 7, hovered around 4% in 1997. The state distributed textbooks only in language and maths, and in a focalized form, only reach 50% of enrolments (World Bank, 2004).

In Benin, the Gross Enrolment Ratio (GER) is 89 percent but only 6 out of 10 children complete primary education because many children drop out before they reach grade 6. National EFA Assessment report (2000) of Nepal has pointed out that internal efficiency is a critical issue of primary education in Nepal. There are high dropouts, low completion and transition rates in the country despite the public investment efforts.

Croatia’s total spending on education as a share of GDP is high but its educational output and outcome levels are lower due to low school enrollment and completion rates (World Bank, 2005). Croatia’s pupil-teacher ratio in primary school has been falling. School infrastructure is used intensively, but teaching hours are short. Wages and salaries constitute a very large share of primary education spending in Croatia (about 90 %) of recurrent spending, compared with about 82 percent in other countries. Less is spent on the teaching facilities (UNESCO, 2008).

Lebanon has made major progress in achieving the millennium goals, but still falls short from fully achieving them. There is a general consensus by Lebanese officials that enrollment in primary education is 100%. According to the 2007 educational report, 8.4% drop out at the primary school and illiteracy rate, is 13.6% overall. Only 40% of students are enrolled in public schools. The problem lies mostly in the quality of education and the
high drop out rate. In addition, there is a shortage of infrastructural facilities and the existing structures are in need of rehabilitation and upgrading (World Bank, 2003).

According to the Education for all: National Progress Report 2007/08), for every 100 children who started Grade 1 in Cambodia, only 15 were expected to graduate from Grade 4 four years later, and only two were likely to finish Grade 8 in eight years. Of every 100 children who survived the first eight grades and enrolled in Grade 9, only 23 could expect to complete Grade 11 three years later. Overall, only five in 1,000 would finish Grade 11 in 11 years. This is a problem of instruction, teacher assessment of student abilities, and management.

The government of Thailand recognizes the importance of primary schooling. This is reflected in the large public expenditures allocated for this level of education (55%) of the education budget, which amounts to approximately 10% of the national budget. On the contrary, very few pupils complete the system (UNESCO, 2008).

In Italy, despite a considerable increase in primary enrolment in the last years, the number of children out of school rose to 7.7 million in 1998/99. So the figures continue to be high as a result of economic, social and cultural factors such as population growth, rural and urban poverty, and traditional pastoral systems of production. In the emerging Regions of Afar, for example, a great percentage of population is nomadic, making difficult regular school attendance of children (USAID, 1998). Instructional materials are an important component of the teaching-learning process with a student-centered approach; however there is a general strong deficiency in preparation, provision and utilization of these materials (UNICEF, 2000).
In Yemen, the government is devoting sizeable resources to the education sector. While GDP and total public expenditure on education have increased simultaneously, the share of education expenditure as a percentage of GDP has increased from 5 percent in 2002 to nearly 7 percent in 2006. The share of GDP and public expenditure allocated to education in Yemen is high compared to most developing countries. Efficiency, however, is low as enrollment and completion rates are lower than incomparable countries. Analysis of grades 4 to 6 student achievement done in Yemen public primary schools in four subject areas - life skills, science, math, and, Arabic language - shows that the majority of pupils have difficulty: relating what they have learnt in the classroom to what they observe in their environment; explaining and interpreting the meaning of phenomena due to the lack of experimentation in school; in mental calculation to estimate the resolution of problems; and reading and interpreting tables and graphs. Since most students have limited reading and writing skills, they could not solve problems or answer questions on many of the tests (UNESCO, 2000).

In Iraq, dropout rates are very high despite the government’s high spending on education. Between 40-50% of children drop out of primary school between grades 1 and 6 and 30-40% drop out between grades 7 and 9 (UNESCO, 2006).

2.4 Literature from African Countries

Besides training the workforce for increasingly complex tasks, education is important for nation building, health, and governance, to mention a few. Rapid technological progress in a broad range of areas has made education a necessity for all citizens (Wamukuru et
al., 2006). This necessity, combined with rapid population growth in Africa, has greatly increased the demand for education. Unfortunately, as the demand for education increases, Africa’s ability to supply education to its citizens seems to be in relative decline. The United Nations Development Programme report, 2002 indicates that Africa has the lowest index of educational development in the world. For example, Sub-Saharan Africa has an education index of 0.55, adult literacy rate of 60 per cent, and a combined gross primary and secondary enrolment rate of 42 per cent. The comparable figures for developing world averages are 0.69, 73.7 per cent, and 61 per cent, respectively. Education, as a fundamental human right is routinely being violated. About 50 million children of school going age in Africa are out of school. To achieve universal primary education, 180 million children in Africa will be enrolled in primary school by 2015 and more than 3 million public primary teachers are needed (UNESCO, 2008).

The Universal Primary Education (UPE) policy in the form of fee abolition has become popular in many countries in Sub-Saharan Africa (SSA) for achieving Education for All (EFA) since the mid-1990s. The existing literature indicates that previous attempts to achieve UPE in SSA face problems in its supply-driven policies, unclear mechanisms, and reduced quality of education (Sifuna, 2007). The past experiences in countries such as Nigeria and Kenya also show that UPE policy implementation was prone to be affected by economic crises. In Malawi, fee abolition policy resulted in low levels of material provision and overall low levels of pupil achievement (Chimombo, 2005). Even with a number of existing lessons from the past, the current UPE policy is devoid of analytical studies on its impact and challenges beyond school enrollment (Nishimura and Ogawa, 2008).
The FPE policy in African countries has led to a surge in enrolment in primary schools. In Ghana, public school enrolment nationwide soared from 4.2 million to 5.4 million between 2004 and 2005. In Kenya, enrolment of primary school children increased dramatically, with 1.2 million additional pupils in 2003 alone; by 2004, the number had climbed to 7.2 million, of which 84 per cent were of primary school age. This has brought huge challenges in providing sufficient school buildings and teachers. Enrolment ratios for primary schools in African countries are averaging at about 80 per cent, are about 25 per cent for secondary schools and less than 5 per cent for tertiary institutions. The access rate varies between 20 percent to 100 percent in countries like Algeria, Botswana, Cape Verde, Gabon, Mauritius, South Africa, Namibia and Tunisia. On the other hand, in countries like Burkina Faso, Central African Republic, Djibouti, Eritrea, Ethiopia, Guinea-Bissau, Mali and Niger less than 40 percent of the children in school age have access to grade 6 (UNESCO, 2008).

For children to reach their full potential and countries to develop, the gains made in universal primary education must be replicated at the secondary level. At present, less than 55 per cent of children of the appropriate age in developing countries attend secondary school. In Oceania, for instance, almost two thirds of children of secondary school age are out of school. In Sub-Saharan Africa, only a quarter of children of secondary school age are in secondary school. Although aid directed to basic education for low-income countries increased from $1.6 billion in 1999 to $5 billion in 2006, it is still well below the estimated $11 billion in aid required annually to reach universal primary education by 2015 (World Bank, 2005).
In Lesotho, it has been estimated that about a quarter of those entering the first level of education complete primary school. In Togo, the drop-out rate at primary level is 10.2 percent. In Botswana, Algeria, Mauritius, Morocco, Niger, and Tunisia primary school boys have a higher repetition rate than girls (UNESCO, 2000). In many Sub-Saharan African countries, there is a primary school leaving examination that determines whether a pupil can complete a primary cycle and become eligible for entry into a secondary school. Thus, even if the FPE program enables pupils to stay in primary school, a pupil may not obtain a primary education certificate unless he or she passes the exam (Omari, 1987).

As the level of poverty rises in Africa, child labour has become crucial for family survival. The high opportunity cost of attending school by children from low-income groups excludes most households from accessing primary education. Poor households, and in some cases children themselves, have to carefully analyse the opportunity costs of education. As a result, parents have continued to send their children, particularly daughters, into the labour market - mainly as domestic workers in urban centres (Nzomo et al., 2001). In a situation where parents and children have negative attitudes towards education or do not see its immediate benefits, the consequence is a high drop-out rate. Social-cultural and religious factors, such as initiation ceremonies and gender socialization, are additional factors responsible for pupils’ failure to complete primary education. In areas where traditional circumcision is still practiced, some pupils are pulled out of school to meet traditional expectations (World Bank, 2003).

The massive increases in enrolments have seen a marked deterioration in the primary education system. Efficiency appears to have declined and the supply of educational
inputs has not been able to keep pace. Efficiency requires that resources be allocated to activities in which the marginal benefit to cost ratio is the highest. Given that the social rate of return to primary education in African countries is higher than the social rate of return to higher education (Psacharopoulos and Patrinos, 2002). It stands to reason that African countries will have to increase their support for primary education even, if they cannot increase resources allocated to the provision of education, yet the reverse is what is happening. For example, African governments spend forty-four times as much on each university student as they do on each primary school student (World Bank, 2003).

In many systems throughout Africa, repeaters constitute more than 20% of enrolment (UNESCO, 2001), while in some countries the official figures are even higher — Togo was reported to have a repetition rate of over 46% in 1995 (Eisemon, 1997). In Malawi, access in primary education is almost universal but the dropout rate is still very high. The retention rate within the primary cycle improved from 23 percent in 2004 to 32 percent in 2007, but remains largely insufficient. The poor retention rate in primary education comes from a lack of school demand in particular among the poorest, economic difficulties and behaviours such as early marriage, pregnancy and family responsibilities. Generally, the internal efficiency coefficient (IEC) at the primary level is particularly low (35%) which implies that 65% of the public resources are wasted in paying for repeated grades or schooling for students who dropout before cycle completion (Lewin and Caillods, 1999). The introduction of FPE in 1994 resulted in a chronic shortage of basic relevant physical and human resources. The consequence of this situation is that the quality of education provided by the system has deteriorated to a disturbing level.

Emerging evidence suggests that an additional and worrying challenge is that even where
educational resources are made available and accessible, education of the youth is not fully valued by some communities. This is demonstrated by low attendance in schools, which are relatively well resourced (Chimombo, 2005).

An effective management and planning system is a pre-requisite for both improved quality as well as better use of available resources. In Malawi primary schools, there is also inefficient use of the available resources. One manifestation of this is the skewed nature of the allocation of government funds in favor of higher education. In 1997/98 for example, the government spent 208 times as much money on a university student as it did on a primary school student. During the same year, it cost the government Malawi Kwacha (MK) 75,230 (US$2,916) to educate one university student compared to MK 2,934 (US$114) for a convention school student, and a meager MK362 (US$14) for a primary school student. Another inefficiency in resource allocation is the skewed distribution across inputs. Firstly, teachers' emoluments have always accounted for the largest proportion of the education recurrent expenditure. In the 1997/98 fiscal year for example, of the total recurrent expenditure available to primary education sub-sector 87% went to staff emoluments with a mere 4% being allocated to learning/teaching inputs (Chimombo, 2005). A substantial number of Malawi's education institutions are characterized by fewer than 5 hours of teaching in a day, long and frequent breaks and by relatively poor utilization of the existing physical facilities. The efficiency of the financing mechanism leaves much to be desired. Currently, there is a large discrepancy between the approved and the actual budget. In 1997/98 primary education received 22% more resources than was approved. Finally, the lack of transparency and accountability in the system means that it is probable that service providers don't always receive the
budgets they are entitled to. Hence, the budget has an inherent constraint in that it pays more to the people than spending on what they are supposed to do. Currently there are gross prevailing inadequacies of materials, equipment, classrooms and other items that are negatively impacting on the scope and quality of primary education and services offered. This is reinforced by inability among managers to mobilize and distribute resources on time. In Malawi, the issue of quality in public education is being addressed in a piecemeal way, in trickles and in an uncoordinated manner (Nishimura and Ogawa, 2008).

Uganda has done an admirable job of increasing access to primary education over the past decade but the country needs very serious effort to improve quality at all levels (World Bank, 2003). The allocation and spending on education in general and on primary education in particular, are important factors for the pupil’s learning. In some instances, the allocated money does not always reach its destination due to corruption and mismanagement. As an example, findings in a case study, tracking public expenditures in primary education, indicates that less than 30 percent of the allocated money actually reached the schools (Bategeka, 2005). The implementation of the Universal Primary Education Policy in Uganda has faced many challenges. They range from inadequate infrastructure, high pupil textbook ratio and irresponsible attitudes of some key stakeholders, misallocation and misappropriation of funds and materials, and misconceptions about the policy. Although the Ministry of Education has embarked on a drive to build more schools and provide instructional materials, there is still congestion (Bogonko, 1992). In some areas, classes are conducted under mango trees. Though a number of trained teachers have been added to the system, the enormous increase in
primary school enrolments far outstrips these efforts. With massive numbers of pupils enrolled without commensurate expansion of facilities, increased number of teachers, and adequate teaching and learning materials, the quality of education has been compromised (Bogonko, 1992). For instance in tests administered to national random samples of primary three pupils, the number of pupils who achieved a satisfactory score declined from 48% from 1996 to 31% in 1999 on the mathematics test, and from 92% to 56% on the English oral test. The UPE program has been criticized for being short-sighted. There is no explanation as to what will happen to the ten thousands of children after primary level. For instance, in 2001, 360,000 pupils sat the Primary Leaving Examinations and only 250,000 qualified for Post Primary Education. However, only 150,000 children were admitted into 734 government – aided secondary schools, 29 technical and farm schools. Therefore 100,000 pupils were not placed in any of the government schools. The program has become too expensive to run (Bategeka, 2005).

Ghana has made considerable progress in enrolling more boys and girls in school. The progress made is sufficient to achieve universal primary education (UPE) by 2015. However, reaching this goal will not be easy because nearly one in five pupils completing primary schooling is illiterate, for example Boissiere (2004) found that of the approximately 42,000 students who sat the senior secondary school examination, about 1,000 passed. Furthermore, the World Bank (1997), citing a 1994 USAID study of a class six students, also found that “only three percent of pupils tested attained satisfactory scores for English, and merely 1.5 percent for mathematics. This decline in quality ultimately led to a decline in demand for schooling as basic skills of school leavers declined.
Tanzania government has made significant progress towards the expansion of primary education. With the implementation of Primary Education Development Program (PEDP), in 2002, the number of children enrolled in primary school increased from about 4.8 million in 2001 to more than 7 million children in 2004 (Bogonko, 1992). These figures also show that the GER and NER reached 106.3% and 90.5% respectively in 2004. Over 50,000 new classrooms were constructed between 2002 and 2004/5, meaning that the total number of classrooms increased by 83%. By 2004, the number of teachers had increased from 103,731 in 2001 to 119,773 in 2004 giving a teacher-pupil ratio of 1:80. The implementation of a double-shift system has served as a stop-gap measure to reduce classroom congestion, to enable more access of available textbooks, and to reduce the pupil-teacher ratio especially within the lower standards (World Bank, 2005). While there has been considerable success in increasing access to primary education, there has been little focus on the quality of learning taking place in the schools in Tanzania. Over the years, there is growing concern that many pupils are not achieving adequate levels of learning and unfortunately, the quality enhancement policies and interventions have largely been broad with emphasis on systemic analyses and the resultant blanket policy recommendations that mainly focus on quantitative rather than qualitative achievements (EFA, 2000). Increasing access was seen as a necessary prerequisite for improving quality. Government reviews indicate that Tanzania has made significant strides towards the access goal, boosting primary school enrollment rates dramatically. However, Tanzania’s success masks some pernicious consequences of hasty efforts to boost enrollment and calls into question the longer-term impact of these reforms. An immediate consequence of increased enrollment has been overcrowded classrooms with a desk pupil.
ratio of 1:4 and high pupil textbook ratio. The impact of quickly expanding enrollment has been particularly hard on the secondary school system with net enrollment jumping from 6 percent to 26 percent in just four years (2004 to 2008). There has been a scramble to accommodate the new primary school graduates, resulting in the recruitment of vast numbers of poorly qualified teachers who are providing instruction of questionable quality. The zeal to expand access to basic education in Tanzania is clear, but there is incontrovertible evidence that the quality of primary education has declined. The drive towards UPE has been hampered by high wastage rates (EFA, 2000).

Quality education has become the pivot of government policy in Nigeria and a sizeable percentage of public resources are being devoted to the expansion and improvement of the existing facilities to facilitate qualitative education. However, the quality of primary education in Nigeria is in the process of deterioration as a result of inadequate physical facilities, relevant teaching aids and ill prepared teaching force (Mbakwem and Asiabaka, 2007). Consequently, there are low educational standards, poor professional performances, inefficiency and low productivity. Of the current primary school age population of 1.5 million children, less than 300,000 are enrolled in primary schools. This represents a Gross Enrolment Ratio (GER) of 20%. Since many learners are actually over-age, the situation denies more than 80% of children the right to education. Writing about the physical conditions, equipment and facilities in schools, Mbakwem and Asiabaka, (2007) lamented the unhealthy nature of the buildings: uncompleted, old and antiquated, sometimes dilapidated buildings, overcrowded and un-conducive classrooms; and unsightly and unhygienic toilets. The pupils start learning in already deprived and disadvantaged school environment. Presently, there is the challenge of professionally
qualified teachers. According to Egwu, there are alarming differences between teachers certified qualifications, their actual teaching competence and performance on the job. Based on statistics from Teachers Registration Council of Nigeria, the short fall in competent, certified and qualified teachers are 338,147 for primary education.

Unlike many Sub-Saharan countries, Botswana has allocated substantial resources to education. Since UPE was adopted, education expenditure as a percentage of Gross Domestic Product (GDP) has risen from 6.8 to 10.9 percent and from 19.1 to 24.5 percent as a percentage of total government expenditure. Studies suggest that increased spending on primary education may have led to higher enrolment rates and improved pupil to teacher and pupil to classroom ratios, but has not had the impact on quality or outcomes that was hoped for (EFA, 2002). Botswana has one of the highest Net Primary Enrolment Ratios in the region. Although Batswana children have ready access to free primary education, big percentage of students still remain out of school. Mass education policies have raised difficult questions about how to accommodate additional students within schooling systems that are already strained to capacity (UNESCO 2008). To achieve UPE, policy-makers in Botswana need to: tackle urban bias and recognise that efforts to increase school enrolments must be accompanied by efforts to reduce poverty in marginalised rural districts, ensure that those who enrol in the first year are not allowed to quit until they have completed seven years of primary education, improve the quality of primary school teaching and the skills and morale of teachers, address the negative attitudes of parents to education in those areas with high drop-out and repetition rates.
In Guinea, despite the country’s low average income, step-by-step efforts are being made to educate all school-age children. Repeated euphoric announcements regarding rising crude enrollment rates have caused certain players to forget that what is actually happening in schools is tragic. The crude enrolment rate rose from 29% in 1989 to 54% in 1999, an increase of nearly 85% over 10 years. This has created an imbalance between educational supply and demand in terms of classrooms, schools, teachers and students. However, the increase in the crude enrolment rate does not necessarily reflect a keen interest in education in Guinea (UNESCO, 2000). Although, at first glance, the Crude Admission Rate for Grade 1 (CAR=51%) suggests that most parents send their children to school, the net rates reveal a different reality: Only 42% of children aged 7 to 12 attend school and only one 7-year-old in five is enrolled in Grade 1. Once Guinean children reach 12 years of age (and, theoretically, Grade 6) only a minority (barely 40%) are still in school, all grades combined. Moreover, many of these pupils leave school before completion (World Bank, 2003).

According to Namibia’s Constitution, everyone should be in school until they complete Grade 7 or reach the age of 16. However, this aim is not completely reached as dropout is a problem in all grades. About 4% drop out before they reach upper primary. The highest numbers in fact drop out during grade 1. There are children who never enroll in school, and low quality of the education is given. There is also low transition rate from primary to secondary education. This transition rate was 77% between 2001 and 2002 (Lockheed, 1991).

Access to good quality education has top priority in the Education Policy in Namibia. Figures for increase in number of schools, number of qualified teachers and number of
pupils are impressive. However, there are several problems and a long way to fulfill the political aim which is good quality education for all Namibian children.

In Ethiopia, improving the quality of primary education has been a cornerstone of the implementation of the Education Sector Development Programme (ESDP). In the last decade the Ethiopian Government has shown a strong commitment towards the education sector: the proportion of the national budget allocated to it rose gradually in the period 1991-1998 while education spending as a share of GDP reached the 4%. As a result, primary education data show substantial progress: school enrolment has grown from about 3 million in 1992/93 to 5.2 million in 1998/99 and the GER from 24.1% in 1994/95 to 45.8% in 1998/99. Recent data estimate 6.4 million children enrolled (GER of 51%) in both cycles of the primary education (1-8 grades) in 1999/2000 and the GER at national level by sex is 40.7% girls and 60.9% boys. So the Average Annual Growth Rate (AAGR) for the last five years is an encouraging 14.3%. In the secondary education, where the GER is still at 10.3%, the AAGR shows a rate of 9.2%. However, according to the statistics above mentioned, the 49% of 12.6 million primary school age population - children between the ages of seven and fourteen - is out of the school (EFA, 2002). Thus, in spite of some recent gains in enrolment and numbers of schools and teachers, the Ethiopian education system, particularly at the primary level, is still suffering from acute problems of accessibility, quality, equity and relevance at all levels. The country’s education system has long been characterized by low enrolment, high drop-out rates and low achievement, particularly among girls. Unattractive classrooms, old-fashioned teaching/learning methods, continuing increase in class sizes, underfunding, inadequate physical facilities, lack of teaching/learning materials (textbooks to student ratio is 1:5),
inadequate teacher training and the absence of a teacher support system have served to exacerbate the situation. Other causes for the deteriorating quality of education include a curriculum that does not take into account the regional, cultural and linguistic differences, and the lack of appropriate schemes to motivate teachers to improve the quality of the teaching/learning process. Curricula, in general, tends to be too theoretical, lacking emphasis on the practical knowledge and skills required for preparing students to lead productive lives in their communities (World Bank, 2004).

In South Africa, most children do not attend school largely because of teachers’ absenteeism, teachers’ attitudes and the school environment. Children enrolled in Grades 1 to 4 dropped out from the system before completing the primary grades as against 10.64 percent during intermediary years 2003-04 and 2004-05, and 11.27 percent during 2002-03 and 2003-04. Access to education in South Africa is particularly unequal; Rich people benefit from good quality education, but the vast majority of children from poor quintiles receive low quality education (World Bank, 2003).

In Zimbabwe, completion rates at the primary-school level have averaged 72 percent of a grade cohort since 1992. Thus, 28 percent of children initially enrolled in Grade 1 did not complete all seven grades of primary school. Repetition rates are especially high at Grades 5 and 6. The transition from primary school to secondary education is low (MoE, 2006).

World Bank, (2003) report notes that although the Free Primary Education programme has enabled nearly all children to attend primary school in Lesotho, poor quality of education is a matter of concern that is associated with severe shortages of teachers and
facilities. Poor pedagogical skills among teachers also inhibit learning. There are high repetition rates, especially in the lower primary standards.

The Francophone countries have to increase their number of teachers the most, from today’s 825,000 public primary teachers to 1.5 million by 2015 to achieve quality in education (World Bank, 2005).

There is evidence that governments are prioritizing education spending—for instance, the median share of total government spending that goes towards education for Sub-Saharan African countries is 18 percent. Unfortunately, it appears that in some cases additional spending to achieve the education MDG has been channeled disproportionately towards quantity, possibly at the expense of quality (Vos et al., 2004). Education for All has led to a significant increase in the number of students enrolling in primary education in Sub-Saharan Africa (SSA) creating pressure to secondary education. On an average only 56 percent of the schooling age children in the African countries have access to grade 6, which leaves half of the children without the prospect of completing primary education. Even where all, or most, children are enrolled, levels of repetition, completion and student achievement appear to be critical between countries. The UNESCO estimated the cost of repetition in these regions to be over US$5 billion (World Bank, 1997). African students have performed below the mean on international assessment tests, dropout rates continue to increase, and students are not able to perform at the grade level. Learning emphasis is on memorization to pass common matriculation examinations rather than on the development of analytical and problem-solving skills. Yet, with the exception of matriculation examinations, there are no serious policy attempts to improve educational quality. The country reports from some of the countries with the largest shortage of
teachers, like Ethiopia, Burkina Faso, Chad, Djibouti and Niger states that the meaning of education for most people is to proceed in the educational hierarchy, and therefore the focus is teaching/learning for the national examinations, which is the gateway to a higher grade (EFA, 2000). In general terms, while it seems that SSA have been quite successful in enlarging the coverage of primary schools; however, it is the quality of teaching in schools that is in need of the most attention. Low enrolment rates, high dropout rates, unequal access, teacher absenteeism, low and declining performance by international standards mark the education systems. Despite the evidence that school inputs, books, and equipment have marginal efficiency ratios, often more than ten times that of teacher salaries, almost all expenditures on education at primary schools in Africa is for teacher salaries (Hanuscheck and Kim, 1996).

2.5 Literature from Kenya

The main purpose of primary education is to prepare students to participate in the social, political and economic well being of the country, and prepare them to be global citizens. A major goal of primary education is to develop self-expression, self-discipline, and self-reliance, while at the same time providing a rounded educational experience. The Kenyan government recognizes that education enhances human resource development, which is necessary for facilitating high and sustained economic growth and development (Abagi and Odipo, 1997). The combination of the availability of primary education and the genuine desire of Kenyans to equip their children with the tools to pursue a better way of life led to a phenomenal expansion of the primary system of education in the first two decades of independence (Abagi, 1999). Since 2003, an estimated 1.5 million children,
who were previously out-of-school, have turned up to attend classes. The minister for education who himself is a professor and an educationist has been quoted saying “We will not be content until every child of primary school age is enrolled; by educating the children we are investing in the future of this country. In the long term, educating children is one way to eradicate poverty”. Parents and children alike have greeted the move with euphoria. Immediately the program was initiated, intake rose from 0.969 million in 2002 to 1.312 million, which was an increase of 35%. However, implementation of free primary education, found school managers off guard; they had not been prepared for the change and so they found it challenging. Many schools had an overwhelming increase in enrollment while others witnessed mass exodus. Average class sizes rose from 40 to 80 while the facilities remained the same. For instance, there are three schools close to slum areas of the capital city of Nairobi which had registered increases of 1,400 pupils, with one teacher per classroom while facilities remained the same (Kimalu et al., 2001).

Deolalikar, (1998) noted that in Kenya today, approximately 50% of all the country’s primary schools are housed in temporary and/or semi-permanent buildings; others are on split sites. These required changes in the managerial skills of school managers. Most schools were not equipped to handle the large numbers of students in terms of the number of teachers, physical classroom space, and learning resources. Increased primary school enrolment affects the transition to secondary education. Even when completing primary school with excellent performance, enrolment rates for secondary education are directly related to family income; that is, only high quintile families can afford to send their children to secondary schools (MoES&T, 2005).
In Kenya, like most African countries, the significant increase in primary school enrolment puts pressure on the existing school resources, leading to poor performance (MOE, 2006). Statistics released for the 2009 Kenya Certificate of Primary Education (KCPE) showed that performance in the examination has been improving at a slower rate since 2003, a sign that increasingly, the high investment in the sector is not yielding quality results. Rapid expansion in enrolment also exacerbate problems of teaching and learning facilities, overflowing classrooms, high pupil-teacher ratios, shortage of text books and other learning materials and affects inflow of pupils (Mukudi, 2004). These conditions are un-conducive to good learning environment which deteriorates the quality of education in public primary schools. Following the envisaged enrollment increase and current curriculum-based teacher establishment policy, the resources required under the baseline scenario is 90,779 teachers and 54,467 classrooms by the end of 2010. The total cost is estimated at US$ 651 million and US$ 793 million in 2009 and 2010, respectively. Coupled with the envisaged expansion, and the government commitment towards implementation of the Children’s Act (Cap 586 of 2001), which emphasizes on making basic education compulsory and universally accessible, substantial resources will be required (GoK, 2005).

Measuring the quality of learning is a challenge the government has admitted facing but no action has yet been taken to arrest the situation. While the impact of the free learning programme might not be reflected on the actual numeracy and literacy tests, concern is rising over the continued decline in the quality of education. “There are serious discrepancies between expectations and reality in the education system,” said Lawrence Majali, the secretary general of the Kenya National Union of Teachers (KNUT) in a
meeting. “Gaps in skills levels among pupils is a warning signal that all may not be well even despite the big investments we are making,” he said.

2007 report, compiled by CREATE (Consortium for Research on Educational Access, Transitions and Equity), states that while the Kenyan government raised its Free Primary Education budget in 2003-04 by 17.4 percent, the cost of providing education is beyond the scope of the ordinary education budget. It was not adequately planned and resourced and thus has the consequences of increased drop-out and falling educational efficiency and quality.

UNESCO, in a study in 2005 in five provinces; Coast, Eastern, Nairobi, Rift valley and Nyanza covering nine sampled districts; Embu, Gucha, Kisumu, Kajiando, Kericho, Nairobi, Mwingi, Kwale and Taita taveta, established that, while enrolment rose to 92974 in the 162 sampled schools in 2003, up from 74,410 in 2002, the number dropped to 88356 in 2004, representing a 5 percent drop. A number of factors explain this situation, including unfriendly learning environments, child labour, poverty and HIV/ AIDS. Only a quarter of the pupils are actually in a grade that is suitable for their age, while 44 percent are over-age for their grade by two or more years. The results indicate that the majority of the pupils are above the age expected for their grade. This has a negative impact on the learning achievement. This also impacts on the survival rates especially for girls, who due to cultural practices are considered marriageable once they reach teenage even though they may still be in primary school. Repetition was noted as a common feature in most schools, an indication that the education system is wasteful. In the sample, 7.7 percent of the enrolled pupils had repeated their classes. The proportion
of repeaters is high- and this contradicts the official ministry of education policy that outlaws repetition.

Due to a large pupil influx, schools were facing a serious teacher shortage. Most classes were too large to be handled by a single teacher which has a lot of implications on teaching and learning. The teachers were not able to give individual attention to the learners especially the slow ones, and this made it difficult for schools to offer quality education.

Provision of instructional materials including textbooks was identified as one of the major achievements of the FPE programme, particularly through reducing the cost burden of education on parents and thus leading to an influx of pupils to school. However, it was noted that FPE grants disbursements were not done on time in most schools and therefore limited access to textbooks for some students. Most schools do not have adequate classrooms and teachers to accommodate the large number of pupils.

The education system in Kenya is dominated by examination-oriented teaching, where passing examinations is the only benchmark for performance. In addition, performance in KCPE has been low over the years. This is manifested in the low transition rates to secondary and university market (Vos et al., 2004). At the end of the eighth year, the Kenya Certificate of Primary Examination (K.C.P.E.) is taken and the results are used to determine placement at secondary school on a merit basis. According to the state-owned think-tank, Kenya Institute for Public Policy Research and Analysis (KIPPPRA), the country has very few secondary schools and cannot cater for the rising population. On average, there is one secondary school per 139 km² compared to one primary school every 30 km². In 2003, there were 18,081 primary schools compared to 3,661 and 641
public and private secondary schools respectively. Granted that the GER for the secondary sub-sector declined from 29.4 per cent to 22.2 per cent between 1990 and 2000, the current situation undermines the country’s efforts towards the realization of the EFA goal.

With the high number of pupils in classrooms, teachers are overstretched and are thus unable to give each student adequate attention. Further, analyses indicate that for the last five years, completion rates at primary school level have remained below 50 per cent, with the rate for girls being worse than that for boys (Abagi, 1999). Given the high rate of population growth rate of 3.4% per annum leading to 50% of the population being less than 15 years of age; and increased incidence of poverty, completion rates at primary school level will have dropped drastically to about 35 to 40% by the year 2015. The quality of education, including its relevance to the country’s needs has also been questioned. The overloaded curricula, lack of teaching materials, poor teaching approaches, poor or lack of adequate supervision and low morale of teachers greatly contribute to poor quality of education.

Despite the high enrolment rate in schools, about 1.6 million children are still not in school. A combination of factors including poverty, social problems, child labour, displacement, and lack of schools and teachers, have conspired to keep Kenya's children out of classrooms (Vos et al., 2004). As Kenya's economy has crumbled over the last few years, many families, forced to live on incomes of about kshs.3, 000 per month, simply cannot manage the costs. Faced with limited resources, and reduced returns from education, parents are not only unable but also unmotivated to educate their children. In the end, these factors have negative effects on children’s school participation. Lack of
textbooks hinders many children from attending school regularly; in the end, these children give up education. The frustrations these pupils go through affect their academic performance: they lose interest in education and, eventually, drop out of school (UNESCO, 2008). The pressure under which pupils in primary schools work is a lot. They are taught in congested classes and have short holidays. These burdens have reduced children’s playing time, and affected their motivation for learning. The consequences are that their performance deteriorates and in the long run, drop out of school (Sifuna, 1990).

Teachers’ attitudes towards their work and pupils, their classroom management and their interaction with pupils have great impacts on the academic achievement and the retention in school of their pupils. Few classroom observations in Kenya indicate that there are cases where teachers’ negative attitudes push pupils, especially girls, out of school. These pupils are sometimes neglected, abused, mis-handled, and sent out of class during teaching learning periods. This atmosphere is not conducive to learning and makes some children hate school. An obvious result of all this are absenteeism, poor performance, and non-completion of the education cycle (UNESCO, 2008).

Since the introduction of FPE, there has been expansion in terms of enrolments without revitalization. At the moment, the government seems to be more concerned with numbers than with the type of education being offered in schools. Parents’ aspirations have been to send their children to school with the expectation that they would come out literate with employable skills. However, their expectations have been dashed. After investing heavily in education, schools are churning out large numbers (2/3) of either illiterate or semi-literate primary school leavers.
Implementation of education policies is another major variable in the provision of quality education. Lack of proper implementation of the policies has been found to play a negative role as ignorance or non-adherence to policy statements has acted as a hindrance to attainment of expected competences. For example, learners reach grade 4 when they are expected to learn in English as the Language of Instruction, having not attained the desirable competences that would enable them to cope with the challenges of learning in English. Other languages taught and used at grades 1 – 3 namely, Kiswahili and mother tongue are also not well developed (Muthwii, 2002). There has been promotion of female quantitative access where much emphasis has been put on enrolling more girls to school. The need to increase girls’ enrolments has not taken into account their growing up needs in order to retain them in school. This has resulted in persistent drop out rates.

Provision of quality education would ensure that those dropping out of school have the necessary academic and life skills to function as useful members of the society. One key variable that has been regularly identified as an important factor that impacts educational quality and relevance is the ability to read. It is predicated that in addition to being an important learning competence, reading is an essential tool in accessing content and skills in other school subjects. Recognition of the importance of reading mastery notwithstanding, there is evidence that the reality in the school system is far below the ideal. For instance, the results of a 1998 criterion-referenced reading test administered to a representative national sample, indicated that 77% of Kenyan grade 6 pupils had not attained the reading mastery level deemed desirable for successful learning in grade seven (UNESCO, 2000). The academic qualifications of the teacher as well as professional training given have been found to be wanting. The teacher lacks the
expected English language competences s/he is expected to use to teach other subjects. Without proper grounding in the proper teaching methods, teachers will continue to be ill equipped to handle the curricula. At school, there is no emphasis and support to teach literacy skills, especially in the basic years of schooling, thereby resulting in under-teaching at grades 1, 2 and 3. Primary school teachers in Kenya face specific challenges in trying to provide quality education. For example, there are no clear set practical guidelines on how to interpret and teach the content in the syllabi, and consolidate and assess the mastery of knowledge and skills learnt at different grade levels. The curriculum has been found lacking in some of the information needed for proper implementation. For example, the concept of mastery of literacy is not clearly articulated beyond the general and specific objectives of the syllabus. There is also an assumption by teachers that all children have gone through pre-school that is erroneous. Many learners, especially those in rural areas, do not attend pre-school before joining grade one. This assumption has created a misconception among teachers that children enter school having acquired reading skills from pre-school. They, therefore, ignore starting with the basic reading skills like the phonics, which is disadvantageous to those who have not acquired such skills. Most syllabuses are also too opaque, bundled and expert-oriented. For example, the English language syllabus does not enable teachers to teach in a balanced manner various language skills. It also does not provide sufficient guidance on what specific competences pupils have to develop in each of the language skills Literacy and how a teacher can continuously assess pupils’ acquisition and mastery of such competences (Muthwii, 2002). Teaching in Kenya, and indeed in other developing countries is greatly influenced by examinations that have caused negative backwash
effects. What is not tested is not taught and therefore the aim is to cram content from textbooks, not to get life-long education. After all, ability to read fluently is not one of the skills examined in the public national examinations (EFA, 2002).

Evidently from 2002, at least 48 per cent of those who sat the KCPE had access to secondary education. There were 3,200 schools which absorbed 287,248 pupils out of the 514,350 who sat the KCPE. This translated into 55.5 per cent missing Form One places. Simply put these are wasted pupils and opportunities. Again, out of the 650,000 candidates who sat the KCPE examination in 2004 only 300,000 secured Form One placement. The poor transition from primary to secondary school remains a major concern in Kenya. Investing resources in poor quality education is like not investing at all. Based on various factors that may influence examination performance and the varied background of pupils who take examinations in any given year, predictions of the quality of education and/or performance in national examinations would not be realistic (Bogonko, 1992).

Although abolition of fees in FPE was a laudable goal, research carried out in 2008 by the Centre for the Study of African Economies (CSAE) at Oxford University and the Kenyan government shows that since 2003: more of the poorest children in Kenya go to primary school, the number of children in private primary education has nearly tripled, school results and overall enrolment rates in some public primary schools have fallen (EFA, 2002). There is strong evidence that the Jomtien objectives of Education for All (EFA) are not being met in Kenya. Instead, more and more school-going age children have limited access to quality education. Enrolments have not risen with population and
are highly sensitive to the financial demands placed on parents. Schools still lack essential materials and facilities despite households’ contributions. The major worrying issue is that despite investment in education by the government, households, private individuals, NGOs and the donors, crises facing the education sector still persist.

National primary school completion rates have remained below 50 percent. This means that, for the pupils who enrol in Standard 1 less than 50 percent complete Standard 8. A study by Deolalikar (1998) revealed that Kenya’s pupil/teacher ratio was significantly below the levels that would be expected for a country at its level of per capita GDP. Although the importance of quality of education in the policy is often acknowledged, rapid quantitative expansion is given priority as opposed to meeting the urgent need of providing quality education (Mukudi, 2004). In view of these challenges, the attainment of sustained free primary education might be an illusion in the context of Kenya and the future of its student could be dire. The situation is likely to worsen if drastic measures are not taken.

2.6 Summary
The post-Jomtein awareness and commitment to democratization of access and opportunities in education brings with it irreversible student population explosions and resultant inadequacies in public primary schools in countries around the world. For instance students cannot find places in schools; those who are admitted are overcrowded in classrooms, have no materials for work and are forced or fail or drop-out because parents cannot provide the requisite materials and teachers cannot meet all their
individual differences. Indeed, the experience across many countries indicates that progress towards the education MDG has not translated into progress in terms of actual learning. Analysis of the results of internationally comparable student assessments has shown that even in countries with universal primary completion, the majority of youths are not reaching even minimal competency levels (UNESCO, 2005).

It is clear that whereas the FPE program has expanded public school choice in developing countries since 1960, less attention has been paid to the quality assurance and efficiency of the education system (Hanushek and Kim, 1996). In theory, one would expect educational expenditures to be associated with better educational outcomes such as higher enrollment rates and increased school completion and spending more on teachers, buildings, textbooks, and other such materials might provide students with better quality facilities and learning opportunities. However, empirical research has vigorously debated the question of whether education expenditures do in fact improve educational outcomes. Although there are many procedures towards improving the quality of education, primary education still faces serious difficulties; that cause the low quality of educational outputs (Abagi, 1999). The Uwezo, 2010 findings of learning assessment paint a grim picture on the levels of learning in public primary schools in Kenya; leaving consistent dominance by the private schools in KCPE. It is for this reason that the study intended to find out the efficiency implications on quality of public day primary schools in Kyeni division, Embu County.
CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 Introduction

This study was designed to investigate the efficiency implications on quality of public day primary schools in Kyeni Division, Embu County. This chapter includes research design, variables, locale of the study, target population, sampling techniques and sample size, research instruments, data collection techniques and data analysis and presentation.

3.2 Research Design

This study employed descriptive survey research design to examine the efficiency of public day primary schools and its effects on the quality of education in Kyeni division; thus explore innovative and viable strategies for improving it. Kombo and Delno (2006) assert that descriptive survey research designs are used to describe the state of affairs as they exist. The study therefore collected information from respondents on their attitudes and opinions towards school resource availability, adequacy and utilization.

3.3 Variables

The study was guided by dependent and independent variables. The dependent variables are; Inputs and process. Inputs, are the resources used in the production of the education experience while process, is the means by which education inputs are transformed into education outputs. Dependent variables were; Outputs, which are the direct and immediate effects of the education process, for example; pupil achievement, dropout rates, repetition rates, transition rates and completion rates.
3.4 Locale of the Study

The study was carried out in Kyeni Division, Embu County. This division was selected because it is one of the areas with high enrolment, high dropout, low transition and low completion rates in public day primary schools in Embu County. The researcher is also very well conversant with the area and is also concerned with the current education status in public day primary schools. The division covers about 3000 square kilometers. It is located 20 kilometers from Embu town and lies along Embu-Meru road. It boarders Kyeni North division, Kyeni South division, Kyeni East division, Kagaari North division and Kagaari South division.

3.5 Target Population

Kyeni division comprises of thirty five (35) public day primary schools. This study targeted the Area Education Officer (AEO) as the government representative in the schools. Head teachers, teachers, pupils, and SMC chairpersons were also targeted to represent the users of information and educational services. The division has five hundred and sixty (560) teachers versus twenty six thousand, two hundred and fifty (26,250) pupils.

3.6 Sampling techniques and Sample size

3.6.1 Sampling techniques

Purposive sampling technique was used to select ten (10) public day primary schools out of thirty five (35) schools in the division. This was according to the criteria of the highest and the lowest primary schools in wastage in education. The selection of the respondents
was done using stratified random sampling technique. Schools were stratified on the basis of their academic performance as measured by the schools mean scores for the KCPE 2011 results. The target here was to capture the schools with good versus poor academic performance. Stratification was based on the drop out, repetition and completion rates in the schools.

In selecting the pupils, their gender, class and age were considered and for teachers, gender and their duration of stay in their respective schools were considered. The AEO was included in the sample because he is closest to the MOE hence government representative who is in a better position to provide information on government resource allocation in public primary schools. The head teachers are the financial managers and resource controllers in the schools, the SMC chair persons assist the head teachers to manage the school resources and to mobilize the parents to discuss issues concerning the school resources. The pupils were included in the study because the levels of resource allocation in the schools influence their school accessibility and learning.

3.6.2 Sample Size

Ten (10) head teachers and ten (10) SMC chairpersons; one from each of the selected schools, a hundred (100) teachers, 10 from each school and four hundred (400) pupils, 40 per school were a representative sample. The AEO was also included in the sample. This means that, five hundred and twenty one (521) individuals were the respondents. This formed about 30% of the public day primary schools in the division.
3.7 Research instruments

The study used a variety of instruments such as; Questionnaires, Focus Group Discussions (FGD) guidelines, Interview Schedules and Observation Checklists to collect both quantitative and qualitative data. These instruments were developed and validated by the researcher. The researcher used different instruments to cater for individual differences of the respondents.

3.7.1 Questionnaires

Questionnaires were administered to the head teachers and the AEO to solicit information on their views concerning the efficiency in allocation and utilization of resources in public day primary schools. According to Kombo and Delno (2006) questionnaires are appropriate research instruments for gathering data over a large sample. The questionnaires contained unstructured open-ended questions. Questionnaires are easy to construct and save on time during use. They are also less costly, easy to quantify and more appropriate in summarizing the results.

AEO is the senior most implementer of educational policies at the division level. From this source, the researcher obtained valuable data on bureaucratic constraints that hamper the flow of information and finances which are critical for implementing the new policy. In every school, the head teacher was given a questionnaire that he or she was requested to fill. Through this technique, the study collected useful quantitative data pertaining to enrolment, transition rates, class size, attendance and distribution of pupils by class and sex; and stock of school facilities.
3.7.2 Interview schedules

In-depth interviews based on semi-structured interview schedules were used to obtain information from the School Management Committee chairpersons to enrich information provided in the questionnaires and to collect details on problems experienced in resource allocation and suggestions for improvement. Questions were semi-structured with open ended prompts, for respondents to be able to raise other relevant issues. Interviews were conducted face to face and responses recorded and transcribed by the researcher. According to Kombo and Delno (2006), interviews provide reliable, valid and theoretically satisfactory results and that they get better co-operation and better answers. They also provide in-depth information as respondents feel part of the team.

3.7.3 Focus Group Discussion (FGD) guidelines

FGDs were used extensively to collect qualitative data from pupils and teachers. An FGD entails collection of data from a group of between 6 and 12 persons who are facilitated by a researcher or moderator to reflect and discuss specific issues of interest to the study. FGD guidelines were used in enlisting the views and perceptions of teachers and students. The findings were recorded manually by the research assistants. FGDs produce a lot of information quickly and are good for identifying and exploring ideas or opinions in a community (Kombo and Delno, 2006). This gave the researcher in-depth information about the efficiency implications on quality of public day primary schools in Kyeni Division, Embu County.
3.7.4 Observation checklists

Observation as a research instrument offers an investigator the opportunity to gather ‘live’ data from naturally occurring social situations rather than relying on second-hand accounts (Louis, 2007). Observation checklist was developed to gather observational data concerning facilities available in schools. When the researcher was visiting schools to administer questionnaires and FGD guidelines, some observations were made on the key teaching learning facilities such as classrooms, laboratories, workshops, teaching materials and equipment available in the schools. The researcher also physically visited designated classes (two lower classes and two upper classes) and made observations regarding, congestion, pupils present and sharing of desks and textbooks. Through this tool, the study collected massive data to enrich qualitative and quantitative data that enabled the researcher to draw conclusions on the adequacy of the teaching-learning resources in the schools.

3.8 Piloting research instruments

To test the reliability and validity of the research instruments, the researcher randomly selected five (5) public day primary schools other than those sampled for study in Kyeni Division, for trial testing of the instruments. The FGD guidelines were administered to the teachers and pupils of the selected schools. Fifty pupils cutting across all the levels were selected. Only those who were met in their classes at the time of the visit were given the instruments. This was with cooperation of the teachers. The questionnaires were administered to five head teachers and one officer from the AEO’s office. Interviews with the SMC chairpersons were done at the agreed convenient time and the observations were
made by the researcher on the process. Feedback from the pilot study initiated changes in the instruments. As a result some questions were rephrased hence refining the instruments for effectiveness in the actual study. According to Orodho (2008) piloting should reveal if the anticipated analytical techniques are appropriate.

3.8.1 Validity of research instruments

Validity refers to the quality of a data gathering instrument or procedure that enables it measure what it is intended to measure (Kothari, 1990). Content validity of the instruments was ensured at the design stage while internal validity was determined through piloting. Following the pilot study, clarity of the instruments items was enhanced. Blank spaces, inaccurate responses or inconsistencies indicated weaknesses that called for review of the instruments. The researcher also improved validity of the instruments by use of expert judgments; for instance comments and suggestions from the supervisors and other research experts.

3.8.2 Reliability of research instruments

Mugenda and Mugenda (2004) defines reliability as a measure of the degree to which a research instrument yields consistent, stable and uniform results after repeated trials with the same subjects under the same conditions each time. Reliability of the instruments was established by use of test-retest method. The researcher gave ten head teachers questionnaires to fill, then after two weeks she re-administered a similar instrument after which a correlation coefficient for the two scores was calculated using Pearson product
moment correlation co-efficient (r). A correlation co-efficient of 0.7 and above is deemed reliable.

\[
\sum XY
r = \frac{\sum XY}{\sqrt{(\sum X)^2 (\sum Y)^2}}
\]

3.9 Data collection techniques

The researcher obtained a research permit from the National Council for Science and Technology (NCST) before administering questionnaires, interview schedules, FGD guidelines and observation checklists in the field. The researcher distributed the questionnaires to the head teachers, and the AEO. The questionnaires were considered ideal for these groups of people as they are able to individually read, interpret and record information. The researcher arranged to collect the questionnaires at the convenient time to both the respondents and the researcher. The FGDs with the pupils and teachers were held during school days and at a convenient time in each school in the sample so as not to interfere with the normal running of the schools programmes. FGDs help to provide information that might not be easily obtained through face-to-face interviews or questionnaires. Observations were made when the researcher was administering the questionnaires and the FGD guidelines to the schools. The interviews were conducted outside the schools with the SMC chairpersons at a convenient time.

The actual data collection was done by three (3) undergraduate students as research assistants, attached to each of the sampled schools. The researcher supervised the field work during data collection.
3.10 Data analysis and presentation

According to Kombo and Delno (2006), effective data analysis involves scrutinizing the acquired information and making quality inferences. The researcher guided the research assistants through the process of data editing, entry and initial analysis. Items from the questionnaires, interviews, observations and FGDs were arranged for easy compilation. Responses received from the above instruments were organized and tabulated for easy analysis. Descriptive data from Focus Group Discussions (FGDs) and from informal interviews was also analyzed descriptively. Content coding and analysis was done to generate a list of ideas on responses for each question. The responses were then grouped according to questions. The instruments were checked thoroughly and edited for some internal inconsistency. Care was taken by the researcher to note the number of times views were expressed and the respondents that expressed the views.

Data was triangulated, then coded, computer formatted and analysed using Statistical Package for Social Science (SPSS) and MS Excel. To respond to all the five objectives, descriptive and inferential statistics; percentages, frequencies, means, and standard deviations were used. This formed the basis for drawing conclusions. To present data, tables, graphs, figures and charts were used.

3.11 Logistical and ethical considerations

3.11.1. Logistical considerations

Before embarking on data collection exercise in the field, the researcher ensured that the research instruments were well laid out, obtained a research permit and trained the research assistants. This ensured efficiency in data collection.
3.11.2 Ethical considerations

Before data collection, the researcher gave clear explanations about the objectives of the study to the respondents to ensure their co-operation. Lack of co-operation may lead to non-response, incompletely filled up questionnaires and unreliable results (Orodho, 2009)
CHAPTER FOUR

4.0 DATA ANALYSIS, PRESENTATION AND DISCUSSION

4.1 Introduction

The study sought to examine public day primary schools’ efficiency and its effects on the quality of education in Kyeni division; and to explore innovative and viable strategies for improving it. This chapter interprets and explains the findings of the study with regard to the stated research questions.

4.2 The level of achievement of pupils in public day primary schools

The level of learner achievement in the schools sampled was noted to be influenced by school attendance, teacher performance, learner ability and motivation, availability of sufficient and relevant resources, school environment and parental support.

4.2.1 The level of school attendance by pupils

Research demonstrates that to achieve academically, children must attend school consistently. A child’s exposure to curriculum significantly influences achievement, and exposure to curriculum comes from being in school (Fuller et al., 1999). The findings of the study indicated that the rate of school attendance by pupils was good for 6(60%) of the schools sampled, 3(30%) indicated satisfactory attendance while 1(10%) indicated poor attendance as presented in table 4.1.
Table 4.1: Level of school attendance by pupils

<table>
<thead>
<tr>
<th>School attendance</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid percent</th>
<th>Cumulative percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good</td>
<td>6</td>
<td>60.0</td>
<td>60.0</td>
<td>60.0</td>
</tr>
<tr>
<td>Satisfactory</td>
<td>3</td>
<td>30.0</td>
<td>30.0</td>
<td>90.0</td>
</tr>
<tr>
<td>Poor</td>
<td>1</td>
<td>10.0</td>
<td>10.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>10</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

A discussion with some respondents revealed that irregular school attendance was caused by lack of levies such as PTA money, exam and tuition fees, lack of proper school uniform, lack of food, sickness, peer influence and unfriendly school conditions such as intimidation by other pupils and fear of harsh teachers. This contributed to low achievement in schools as most pupils were not able to follow and understand the content taught in their absence. Some pupils were also not putting any effort because no one would follow them closely.

4.2.2 Level of teacher performance in class

Teacher preparedness and proficiency in content delivery in a class by and large influences learner achievement. The study findings showed that teachers in 4(40%) of the schools had good class performance, 3(30%) was satisfactory and 3(30%) poor as presented in figure 4.1
The study also found out that the pupil-teacher interaction in classes was minimal and teachers could only move with the brighter pupils leaving out the slow learners. In such cases, pupils hardly got the attention they deserved; hence many were not learning much. Without personalized attention, the weak learners did not perform well. Teachers admitted that they could not give individualized attention to the pupils. They said that this was caused by limited contact hours, tough content for the learners, heavy workloads and high PTR. Pupils complained that some teachers were too harsh on them therefore unapproachable. This demotivated learners hindering performance.

### 4.2.3 Availability of text books and other revision materials

Most of the sampled schools had acquired instructional materials; which was identified as one of the major achievements of FPE, particularly through reducing the cost burden on parents; figure 4.2. The textbook- pupil ratio was found to range between 1:2 to a ratio of 1:3 for upper classes and 1:3 to a ratio of 1:4-5 for lower classes implying that most
pupils had limited access to textbooks. Priority was mostly given to Mathematics, English and Kiswahili books. It was also apparent that among all the subjects, social studies had the least number of textbooks in schools resulting to very poor performance in the subject in the division. The recommended TPR per subject is 1:2 which has not been achieved for most of the books in schools. Respondents therefore appealed for an improvement in number of textbooks to a ratio of 1:2 or 1:1 for all subjects and grades to boost learner access to books and revision.

Figure 4.2: Textbook availability

The respondents felt that the ratio was inadequate to ensuring effective teaching and learning as it was problematic sharing text books particularly in doing homework. This caused the pupils and teachers to look for alternative ways of managing the shortfall of which some were not effective. For instance, teachers sometimes turned to lecture methods of teaching, giving few assignments or did not give home works at all. On the other hand, pupils maneuvered their ways of doing assignments, thus turning to crude methods such as copying from others so as to avoid punishments for incomplete work.
Other pupils hurriedly shared books early in the morning before lessons began resulting to shoddy work. The revision materials were limited in schools since the schools prioritized purchase of stipulated textbooks while most parents could not afford to purchase extra materials for their children. The pupils and teachers suggested that the government should target provision of more revision materials and at least one textbook per child in the core subjects if not all to boost learner achievement. Some teachers also suggested the supply of textbooks to schools by the government instead of sending money since the amount received was not enough to enable schools acquire good quality books. Teachers also noted they were spending a lot of teaching hours attending meetings on textbooks selection. Similarly, head teachers spent a lot of time travelling to buy books at the expense of teaching or running the schools. Teachers unanimously suggested the return of the Kenya School Equipment Scheme.

4.2.4 Learner evaluation and monitoring

Tests and assignments serve the purpose of assessing pupils’ achievement in different subjects. The study findings indicated that 8(80%) of the teachers evaluated their learners after every lesson, 1(10%) on weekly basis and 1(10%) on monthly basis as indicated in figure 4.3.
Figure 4.3: Frequency of learner evaluation and monitoring in schools

However, only 1(10%) of teachers in the schools studied reported good results by learners in the tests administered while 8(80%) indicated satisfactory results and 1(10%) poor performance as shown in table 4.2.

Table 4.2: Pupil performance

<table>
<thead>
<tr>
<th>Pupil’s Performance</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid percent</th>
<th>Cumulative percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good</td>
<td>1</td>
<td>10.0</td>
<td>10.0</td>
<td>10.0</td>
</tr>
<tr>
<td>Satisfactory</td>
<td>8</td>
<td>80.0</td>
<td>80.0</td>
<td>90.0</td>
</tr>
<tr>
<td>Poor</td>
<td>1</td>
<td>10.0</td>
<td>10.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>10</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Teachers admitted that they had reduced the number of assignments given to pupils because they could not cope with the overwhelming workloads. Pupils also concurred that teachers had reduced the number of assignments given to them. For the few assignments given, it was reported that some teachers were asking pupils to exchange books and mark for each other in class. This affected teachers’ ability to identify pupils’
weaknesses, gauge their progress and assist them thus affecting the quality of learning. In addition, the overall pupil achievement was relatively low especially in literacy. The findings of the one on one reading tests conducted by the researcher indicated that 8(80%) of pupils in class one could not read even one word in a sentence while in class two 6(60%) of the pupils were unable to read even one word in the provided passage. An assessment of the skills learnt by learners in different subjects indicated that 6(60%) had not learnt any new skill yet, only 3(30 %) had learnt a new skill while 1(10%) were not sure of what they had learnt.

4.2.5 Family support for learning
In the schools visited, some parents were reported to play remarkable role towards improving quality of education such as; providing pupils with food and uniform, paying tuition and exam fees, employing PTA teachers and buying books and revision materials. Others were noted to be involved in dirty politics and negative attitude towards the schools. Conflicts between parents and teachers; and the administration of some schools also affected learning. The findings of the study further revealed that only 1(10%) of the parents monitored their children learning and checked their homework at least occasionally while 9(90%) did not bother checking the learner achievement. Most parents believed that their role was only to provide uniform and food for the children to attend school and relinquished all other roles to the teachers. Teachers complained that most parents had become irresponsible about their children education. Out of the children motivated by their parents to attend school, only 5(50%) were retained across all grades. However not all joined secondary schools on completion of eighth grade causing wastage
in education. The SMC chairpersons felt that while poverty in the area limited some parents’ ability to support learning and participate in school-related activities, most parents were ignorant.

4.3 The dropout rate in public day primary schools

The study established that the school dropouts were alarmingly increasing in the division. 8(80%) of the schools sampled indicated increased dropout rate while only 2(20%) showed decreased dropout as shown in figure 4.4.

According to the responses obtained from the AEO, head teachers and the SMC chairpersons, the dropout cases were common due to brick making influence in the area to earn daily bread, miraa harvesting, illicit brew taking by parents, children and some teachers, peer influence, indiscipline cases such as truancy and rudeness, family breakages, health problems, early marriages, overage children, ignorant parents thus lack of pupil motivation to attend schools, poverty, harsh school conditions and poor performance in KCPE in the schools. The SMC chairpersons also revealed that some parents and teachers had negative attitudes towards the public day primary schools in the area thus discouraging school attendance by children. Some parents were also reluctant in supporting education due to increased levels of educated unemployment in the area. A parent in one of the sampled schools challenged their SMC chairperson that he was well educated but he had not secured any job yet. The parent argued that school attendance was a waste of time since there were no jobs. Some parents also did not bother following up the discipline of their children causing expulsion from schools.
4.4 Completion and transition rate in public day primary schools

The completion rate in the schools under study was found to be increasing in fall out with a large number of pupils enrolling in grade one but not reaching grade eight. The transition rate was also noted to be low as majority of the learners who managed to complete the primary level of schooling did not join secondary schools as presented in figure 4.5.

Figure 4.5: Completion and transition rate
Most SMC chairpersons felt that households burden in financing secondary education was high thus; cost was the key barrier to transitioning to secondary school for the poor, who formed the majority in the division. Some parents were also uninformed and therefore did not value secondary education. Early marriages and teenage pregnancies hindered some girls from completing schools or transitioning to secondary level. It was also noted that there was a lot of peer influence in the area to join child labour. Some parents and children were also increasingly engaged in illicit brew businesses and timber sales in order to acquire immediate income. Some children especially the special needs ones were also noted to have low esteem and therefore avoided secondary schools while others failed to secure secondary school places as they scored extremely low marks in KCPE. The findings of the study also indicated that the majority of pupils who joined secondary schools were admitted in low level schools as shown in figure 4.6.

**Figure 4.6: Levels of secondary schools joined**

![Figure 4.6: Levels of secondary schools joined](image)

The respondents were concerned that there was a lot of wastage in primary education in the division due to low completion and transition rates.
4.5 Efficiency implications on quality of public day primary schools

The rate of students flow in a system determines whether those entering the school system are able to graduate within the stipulated period. If the rate of progression from the entry point to the point of departure is low, the system is said to be internally inefficient since the affected students are disproportionately using the resources allocated to the sector. A system is termed efficient by enrolling 100%, retain 100% and graduate 100%.

4.5.1 Enrolment rate

The information obtained from the AEO indicated that there were numerous pupils of the school age population who were still not enrolled in schools. The enrolment rate in the schools under study depicted a picture of low efficiency as 7(70%) of the schools experienced a decrease in enrolment while only 3(30%) had an increase despite the amount of resources pumped into the schools especially with the coming of FPE.

Figure 4.7: School enrolment
The respondents reported that decreased enrolment was caused by poor performance in public day primary schools, increasing number of public boarding and private schools in the division, peer influence for instance due to child labour, miraa harvesting and sales, local brews and brick making in the area, poor attitudes and lack of school ownership by the parents and teachers, lack of parents motivation and support due to ignorance and lack of information; and a tag of war between some schools and the church community. The declining enrolment resulted to underutilization and wastage of resources already provided by the government into the schools.

4.5.2 Repetition rate

2(20%) of the schools studied indicated increased repetition in both lower and upper grades while in 8(80%) of the schools there was decreased repetition rate as indicated in figure 4.8. Teachers reported that learners were required to repeat a grade in order to catch up with the particular level since with the coming of FPE; some learners were admitted and pushed into levels even without evidence of the previous level or ability. Other learners opted to repeat especially in class 8 in order to score higher marks and secure better secondary school places. Poverty at the household levels also forced some learners to repeat especially due to lack of secondary school fees hoping to get sponsorship from well-wishers with time.
4.5.3 School conditions

The school environment plays a crucial role in attracting and retaining learners in the school. Majority of the schools under study lacked special facilities for children with special needs. Only 1(10%) of the schools had proper facilities as indicated in table 4.3. Unfriendly school conditions discouraged learners from joining and attending schools resulting to underutilization of resources meant for them. The findings also indicated that only 1(10%) of the schools had well maintained safety and security standards, 4(40%) was fair, 4(40%) poor and 1(10%) had not taken any measure. On the other hand, 4(40%) of the schools did not have water supply at all while 6(60%) had a supply although not regular. This meant that learners wasted time everyday on the way to far streams to fetch drinking and cleaning water. This time would be spent in reading or completing assignments. Again when pupils had to leave schools and walk significant distances to fetch water some did not always return to class.
The study also found out that 4(40%) of the schools lacked playgrounds while 6(60%) had playgrounds that were inadequate. Most schools also lacked games equipment such as balls and nets which limited pupils’ participation in extra curricula activities. Majority of the schools were also noted to have untidy compounds.

### Table 4.3: Summary of school conditions

<table>
<thead>
<tr>
<th>Special facilities</th>
<th>%</th>
<th>Safety and security</th>
<th>%</th>
<th>Water</th>
<th>%</th>
<th>Playgrounds</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Available</td>
<td>10</td>
<td>Good</td>
<td>10</td>
<td>Available</td>
<td>60</td>
<td>Available</td>
<td>60</td>
</tr>
<tr>
<td>Not available</td>
<td>90</td>
<td>Fair</td>
<td>40</td>
<td>Not available</td>
<td>40</td>
<td>Not available</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Poor</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Not available</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### 4.5.4 Classrooms conditions

The observations made on classrooms revealed that most schools had permanent classrooms, but were dilapidated. From the classroom walls observations, it was evident that only 2(20%) of the schools classes had walls in good conditions. 7(70%) had unstable walls, and 1(10%) in crumbling states. The researcher also observed that 7(70%) of the schools had classrooms with broken windows while only 3(30%) were in place. Again, 5(50%) of the classes had old roofs which were also open in places, 4(40%) of the roofs were leaking while only 1(10%) had well covered roofs. Further observations indicated that 9(90%) of the floors in classes were uneven, potted, dusty and in some cases muddy. Only 1(10%) was flat, smooth and clean.

In terms of lighting, 6(60%) of the classes had good visibility while 4(40%) had a poor visibility. The situation was worse in lower primary where most classes were dark and
especially in the morning hours. The ventilation in 4(40%) of the classes was poor and uncomfortable while only in 6(60%) of the classes was stable and pleasant. Majority of the classes; 8(80%) had poor acoustics and were found to be very noisy and with interferences from outdoors. Only 2(20%) of the classes had good acoustics.

The schools visited showed noticeable variation in learning space. In virtually all schools, the lower classes were congested while the upper classes had fairly adequate space. 7(70%) of the classes had ample spaces for pupils to work while 3(30%) indicated overcrowded classes hindering movements by the teachers and also learners thus affecting learning. In terms of classroom mood, pupils were found to be cheerful in 8(80%) of the schools while 2(20%) were dull and drab.

Wall charts and visual aids were not available in 7(70%) of the classes in the schools visited while only 3(30%) of the classes had charts. Only 1(10%) of the charts available were of good quality while 2(20%) were of poor quality. 8(80%) of the schools had very old and rough chalkboards with poor visibility from some segments of the classroom which hindered learning. Only 2(20%) of the classes had chalkboards visible from all segments of the classroom.

Insufficient, old and broken furniture was also observed in 8(80%) of the schools studied with pupils seated uncomfortably while only 2(20%) of the classes had good furniture. A large variation existed in the distribution of furniture with the condition being worse in lower grades in the majority of the schools. The shortage of desks forced two or sometimes three pupils to squeeze on to a small bench.
Table 4.4: Summary of classroom conditions

<table>
<thead>
<tr>
<th>Walls</th>
<th>%</th>
<th>Roofing</th>
<th>%</th>
<th>Windows</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good condition</td>
<td>20</td>
<td>Good covering</td>
<td>50</td>
<td>Windows in place</td>
<td>70</td>
</tr>
<tr>
<td>Unstable</td>
<td>70</td>
<td>Open in places</td>
<td>40</td>
<td>Broken windows</td>
<td>30</td>
</tr>
<tr>
<td>Crumbling</td>
<td>10</td>
<td>Leaking</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lighting</td>
<td>%</td>
<td>Ventilation</td>
<td>%</td>
<td>Floor</td>
<td>%</td>
</tr>
<tr>
<td>Good visibility</td>
<td>40</td>
<td>Stable and pleasant</td>
<td>60</td>
<td>Flat and smooth</td>
<td>10</td>
</tr>
<tr>
<td>Poor visibility</td>
<td>60</td>
<td>Uncomfortable</td>
<td>40</td>
<td>Uneven and potted</td>
<td>90</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Clean</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Dusty and muddy</td>
<td>90</td>
</tr>
<tr>
<td>Furniture</td>
<td>%</td>
<td>Chalkboard</td>
<td>%</td>
<td>Wall charts</td>
<td>%</td>
</tr>
<tr>
<td>Adequate</td>
<td>20</td>
<td>Visible from all areas</td>
<td>20</td>
<td>Available</td>
<td>30</td>
</tr>
<tr>
<td>Inadequate</td>
<td>80</td>
<td>Poor Visibility</td>
<td>80</td>
<td>Not available</td>
<td>70</td>
</tr>
<tr>
<td>Suitable</td>
<td>20</td>
<td></td>
<td>80</td>
<td>Good quality</td>
<td>10</td>
</tr>
<tr>
<td>Unsuitable</td>
<td>80</td>
<td></td>
<td></td>
<td>Poor quality</td>
<td>20</td>
</tr>
<tr>
<td>Noise</td>
<td>%</td>
<td>Mood</td>
<td>%</td>
<td>Space</td>
<td>%</td>
</tr>
<tr>
<td>Good acoustics</td>
<td>20</td>
<td>Cheerful</td>
<td>80</td>
<td>Ample space</td>
<td>70</td>
</tr>
<tr>
<td>Poor acoustics</td>
<td>80</td>
<td>Drab and dull</td>
<td>20</td>
<td>Classroom crowded</td>
<td>30</td>
</tr>
</tbody>
</table>

4.5.5 Availability of other structures

Structures such as libraries, workshops and latrines/toilets among other facilities play a pivotal role in enhancing efficiency and quality of education in an institution. The physical counting of latrines in the schools visited indicated that 6(60%) of the schools had enough for both the teachers and pupils. In 3(30%) of the schools there were inadequate latrines while 1(10%) had fairly adequate latrines. However, the available
latrines were found not to be gender sensitive in construction. This put of some teachers and pupils lowering school attendance. Moreover, 9(90%) of the schools did not have workshops while only 1(10%) had a workshop that was even not in use indicating wastage of resources. None of the schools in the study had a library. This indicated that there were no proper storage facilities for books except for some improvised areas in head teachers’ offices or in classrooms which caused loss and distortion of many books. Teachers in all studied schools sat in crowded and poorly conditioned rooms which interfered with their preparation for lessons thus hindering quality in performance.

**Table 4.5: Summary of other school structures**

<table>
<thead>
<tr>
<th>Latrines</th>
<th>%</th>
<th>Workshops</th>
<th>%</th>
<th>Library</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adequate</td>
<td>60</td>
<td>Available</td>
<td>10</td>
<td>Available</td>
<td>0</td>
</tr>
<tr>
<td>Fairly adequate</td>
<td>10</td>
<td>Not available</td>
<td>90</td>
<td>Not available</td>
<td>100</td>
</tr>
<tr>
<td>Inadequate</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4.6 Effective and viable measures to improve efficiency in public day primary schools

4.6.1 Classroom adequacy

The findings on class size showed that pupils ranged from 21 to 55 in the classes visited as shown in table 4.6.
Table 4.6: Class size

<table>
<thead>
<tr>
<th>Class size</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid percent</th>
<th>Cumulative percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>21</td>
<td>1</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>24</td>
<td>1</td>
<td>10</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td>25</td>
<td>1</td>
<td>10</td>
<td>10</td>
<td>30</td>
</tr>
<tr>
<td>26</td>
<td>1</td>
<td>10</td>
<td>10</td>
<td>40</td>
</tr>
<tr>
<td>27</td>
<td>1</td>
<td>10</td>
<td>10</td>
<td>50</td>
</tr>
<tr>
<td>40</td>
<td>1</td>
<td>10</td>
<td>10</td>
<td>60</td>
</tr>
<tr>
<td>46</td>
<td>1</td>
<td>10</td>
<td>10</td>
<td>70</td>
</tr>
<tr>
<td>48</td>
<td>1</td>
<td>10</td>
<td>10</td>
<td>80</td>
</tr>
<tr>
<td>50</td>
<td>1</td>
<td>10</td>
<td>10</td>
<td>90</td>
</tr>
<tr>
<td>55</td>
<td>1</td>
<td>10</td>
<td>10</td>
<td>100</td>
</tr>
<tr>
<td>Total</td>
<td>10</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Overall, upper classes in most schools were noted to have very few pupils. This was reported to be caused by alarming dropout cases, school absenteeism and transfer of pupils to boarding and private schools. Lower classes on the other hand were overcrowded indicating overstretched facilities such as furniture due to congestion caused by over-enrolment and repetition. 7(70%) of the classes visited were adequate in space while 3(30%) were inadequate. Inadequate class space declined the quality of learning as it lowered pupil teacher contact while very few learners in a big room depicted underutilization of space thus wastage.

Figure 4.9: Classroom space
4.6.2 Teacher adequacy

The researcher established that schools suffered a serious teacher shortage across the board as the numbers ranged from 9 to 18 as presented in figure 4.10. On average, there was a shortfall of 2 or 3 teachers in each of the schools visited. The teachers had heavy workload handling many lessons and many pupils. The respondents said that teaching and learning had already been compromised by the shortage. 9(90%) of the head teachers sampled reported that they had made requests for additional teachers. However, the requests made in the past years were still pending. In the light of this, schools had turned to PTA to raise funds for recruitment of teachers which overstretched households resources. The respondents unanimously said that the government needed to recruit more teachers to ease the alarming shortage. Teachers also said that they needed to be allowed to specialize in particular subjects. “Currently we specialize in all subjects which does not augur well for effective and quality teaching as it does not allow time to attend the slow learners and help them catch up”, a teacher commented.

Figure 4.10: Teacher adequacy
4.6.3 Improving school mean scores

Through open discussions with class eight teachers in the sampled schools, it was noted that 9(90%) of the classes had improved mean scores while 1(10%) had dropped as indicated in table 4.7. However, it was noted that these mean scores fluctuated from time to time and were low as 8(80%) of the classes had scored below average in the three consecutive terms.

Table 4.7: Class mean scores across three terms

<table>
<thead>
<tr>
<th>First term</th>
<th>Second term</th>
<th>Third term</th>
<th>Valid percent</th>
<th>Cumulative percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>201.31</td>
<td>207.38</td>
<td>214.72</td>
<td>10.0</td>
<td>10.0</td>
</tr>
<tr>
<td>210.51</td>
<td>213.22</td>
<td>228.41</td>
<td>10.0</td>
<td>20.0</td>
</tr>
<tr>
<td>221.63</td>
<td>229</td>
<td>231.5</td>
<td>10.0</td>
<td>30.0</td>
</tr>
<tr>
<td>222.32</td>
<td>229.50</td>
<td>218.08</td>
<td>10.0</td>
<td>40.0</td>
</tr>
<tr>
<td>224</td>
<td>236</td>
<td>235</td>
<td>10.0</td>
<td>50.0</td>
</tr>
<tr>
<td>227</td>
<td>236.48</td>
<td>241.43</td>
<td>10.0</td>
<td>60.0</td>
</tr>
<tr>
<td>232.16</td>
<td>243.92</td>
<td>220.40</td>
<td>10.0</td>
<td>70.0</td>
</tr>
<tr>
<td>243.64</td>
<td>245.69</td>
<td>246.84</td>
<td>10.0</td>
<td>80.0</td>
</tr>
<tr>
<td>252.82</td>
<td>256.75</td>
<td>247.92</td>
<td>10.0</td>
<td>90.0</td>
</tr>
<tr>
<td>253.63</td>
<td>262.00</td>
<td>266.70</td>
<td>10.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>10.0</td>
<td>10.0</td>
<td>10.0</td>
<td></td>
</tr>
</tbody>
</table>

Both learners and the teachers in the schools visited acknowledged the provision of some instructional materials by the government which was a boon to the education system. However, they unanimously felt that the schools lacked most resources that were pre-liquisite to better performance. The level of provision was found to be poor in 4(40%) of the schools, satisfactory in 5(50%) of the schools, and only 1(10%) was good. This affected the teaching learning processes. Other factors that were noted to deteriorate school mean scores included; lack of teachers commitment, lack of pupils determination, indiscipline, lack of parents support and motivation, politics, unconducive school
environment and pupil and teacher absenteeism. The respondents suggested that more resources were required in terms of teachers, extra work books, textbooks, pens, pencils, rulers, rubbers, encyclopedia, story books, revision books, dictionary, atlases, charts, globes and geometrical sets. They also required regular water supply, electricity and better structures. It was also felt that teachers and pupils needed to be serious and committed to their work as well as owning their schools. Parental support and motivation to children would also enhance performance. The respondents suggested that teachers needed to be motivated through additional allowances and regular promotions. Politicians should also refrain from politicizing schools in the division. Feeding programmes would also be introduced especially in those schools in ASALs in the division in order to deter absenteeism.

Table 4.8: Strategies to improve school mean scores

<table>
<thead>
<tr>
<th>Strategies to improve Mean scores in schools</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improve discipline, work harder, attend school regularly</td>
<td>1</td>
<td>10.0</td>
</tr>
<tr>
<td>Improve discipline, more teachers, more text books</td>
<td>1</td>
<td>10.0</td>
</tr>
<tr>
<td>More textbooks, remedial teaching, extra revision, discipline, regular class discussions</td>
<td>1</td>
<td>10.0</td>
</tr>
<tr>
<td>Provision of story books and encyclopedia, more teachers</td>
<td>1</td>
<td>10.0</td>
</tr>
<tr>
<td>More textbooks, more teachers, pupils to work harder</td>
<td>1</td>
<td>10.0</td>
</tr>
<tr>
<td>Parental support and motivation, more revision materials, discipline</td>
<td>1</td>
<td>10.0</td>
</tr>
<tr>
<td>Doing more revision, more teachers, more text books</td>
<td>1</td>
<td>10.0</td>
</tr>
<tr>
<td>Improving school conditions, more books, more teachers</td>
<td>1</td>
<td>10.0</td>
</tr>
<tr>
<td>Teachers and pupils commitment, using English as a language of instruction, more books, more teachers</td>
<td>1</td>
<td>10.0</td>
</tr>
<tr>
<td>Stop harsh school conditions, more revision, more books, more teachers</td>
<td>1</td>
<td>10.0</td>
</tr>
<tr>
<td>Total</td>
<td>10</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Table 4.9: Additional resources to enhance school quality

<table>
<thead>
<tr>
<th>Additional resources and facilities</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Better toilets, library, water, computers, electricity</td>
<td>1</td>
<td>10.0</td>
</tr>
<tr>
<td>School gate, library, computers, toilets</td>
<td>1</td>
<td>10.0</td>
</tr>
<tr>
<td>Library, spacious classes, water, computers</td>
<td>1</td>
<td>10.0</td>
</tr>
<tr>
<td>Library, computers, electricity, more classes, play ground</td>
<td>1</td>
<td>10.0</td>
</tr>
<tr>
<td>Library, water, proper fencing, computers, library</td>
<td>1</td>
<td>10.0</td>
</tr>
<tr>
<td>Library, computers, boarding facilities, electricity</td>
<td>1</td>
<td>10.0</td>
</tr>
<tr>
<td>Play ground, games equipment, water, library, computers</td>
<td>1</td>
<td>10.0</td>
</tr>
<tr>
<td>Refurbished classes, water reservoir</td>
<td>1</td>
<td>10.0</td>
</tr>
<tr>
<td>Water, electricity, computers, library</td>
<td>1</td>
<td>10.0</td>
</tr>
<tr>
<td>Water, electricity, computers, school feeding programme</td>
<td>1</td>
<td>10.0</td>
</tr>
<tr>
<td>Total</td>
<td>10</td>
<td>100.0</td>
</tr>
</tbody>
</table>

4.6.4 Proper utilization of teaching-learning contact hours

The Ministry of Education stipulates that the implementation of the 8-4-4 primary school curriculum requires that the average teacher-pupil contacts hours per week be 28 hours (comprising 48 periods, each 35 minutes long) for standards 4 to 8 and 20 hours (comprising 40 periods, each 35 minutes long) for standards 1 to 3. The meeting of this requirement would indicate how efficiently the curriculum is being implemented and imply how cost effective teachers’ salaries are. But if pupils do not get the specified contact hours, the implication would be that the system is inefficient. The consequences of this inefficiency are likely to be that: the syllabus may not be completed in time; extra time would have to be created to coach pupils outside the normal classroom hours, and teachers’ services become more costly, both to parents and the government. This is because teachers would be paid for the work which is not fully done, and will be paid
extra money for the extra time they put to complete the work which they could have done during normal learning time (Abagi and Odipo, 1997).

The study findings in the sampled schools indicated that the stipulated teaching-learning time was not utilized efficiently. The schools wasted learning time in a number of ways every day; for instance in prolonged morning assemblies and tea and lunch break. Pupils had also to spend an average of 45 to 60 minutes in the morning cleaning exercise. Teachers’ low morale led to development of negative attitude towards their work thus dragging to classes. It was also established that most schools lost teaching time during the first week of opening to discuss general administration and duty roster, developing the time-table; cleaning the compound by pupils; and absenteeism by some teachers and pupils. Since the time allocated was not utilized to the full, more time had to be created for teaching-learning instructions. The findings indicated that all schools sampled had introduced extra tuition for pupils in classes seven and eight and teachers got extra pay for services they would have rendered in the normal teaching schedule; increasing the cost burden on parents. The learners’ holiday time which is meant for relaxation outside a school setup was also occupied by the tuition. Ironically, learners did not perform any better in national exams even after the extra tuition. The study indicated that if the students’ learning time was used optimally, there would be improved performance, no need for coaching, and the private cost of education would be reduced drastically.

4.6.5 Provision of sufficient funds

It was noted that most schools obtained funds from government and parent’s contributions while a few got additional funds from the community well wishers. These
funds were found to be insufficient to carry out school operations thus declining the
good quality of teaching learning processes. Head teachers argued that the money provided
was not adequate to put up important structures and carryout repair and maintenance and
thus important school projects had been pended. Less and inferior quality books were
purchased whereas the revision materials were insufficient or not available due to
shortage of funds. Parents were required to pay Ksh 50 per pupil every term for exams;
Ksh 30 for extra curricula activities, Ksh 120 to pay PTA employed teachers, Ksh 490 for
extra tuition and Ksh 500 for KCPE registration for grade eight pupils. Parents
complained heavily that they were stretching beyond their limits to provide these levies
leaving some family needs unmet. Some learners especially those from extremely poor
families were not able to participate in school activities since their parents could not
afford the required funds causing dropouts or repetition. The respondents however
suggested that the government should provide more finances to the schools and also
allow schools to raise funds through harambee spirits in order to augment what is
provided. The AEO was worried that the quality of education offered in the division was
deteriorating and therefore required urgent interventions.

4.7 Discussion
An educational institution is likened to a factory which has inputs which are processed to
get the output. The inputs include variables like pupil-textbook ratio, teacher-pupil ratio,
leadership styles, existing libraries and other facilities. An education system is said to be
efficient if learners flow through completing a given level in the expected number of
years, with relevant knowledge and skills; and then thereafter joining the successive
level. When educational resources are supplied to an institution, it is assumed that the learners will utilize them to create a county’s base for future human capital. The findings of the study concerning the level of efficiency and quality of education offered in Kyeni division were disturbing. Dropout cases were noted to be rampant in the schools contradicting the EFA goal. Repetition also indicated wastage of resources invested in the schools in terms of human, material and financial in average years per graduate. Again the repeaters occupied places that would comfortably be occupied by learners form the previous levels causing congestion in classes.

The study also revealed that most schools did not have adequate classroom space to accommodate the large number of pupils in lower grades while in upper grades the space was in excess due to decreased enrolments, dropout cases and transfer of pupils to boarding and private schools. This also caused underutilization of space as some big classrooms ended up with very few pupils. Three quarters of the classrooms observed were unconducive for learning. Pupils complained that their learning environment was uncomfortable and distracted and therefore they did not concentrate during lessons. The poor conditions of the classrooms impacted negatively on the pupils learning outcomes which discouraged school attendance and lowered the quality of learning in the division. The overall observation of the school structures indicated that a thorough improvement of the available facilities was required in order to improve the quality of education offered and boost pupil retention. The respondents suggested that there was need to provide better classes as well as furniture in schools to meet the required standards. According to UNESCO, the minimum student classroom space should be 1.5 square meters per pupil with one-seater desk, which would translate to 67.5 square meters for a room expected to
hold 45 students. The Ministry of Education recommends a 7.5m x 6.0m classroom (Government of Kenya, 2000). This translates to 45 square meters or about 1 square meter per child in a room with 45 children. Teachers also felt that there was need for better staffrooms to boost their morale and thus productivity.

The amount of resources spent on education influences its quality and the amount of learning achieved. The textbook availability in a school enhances achievement of learners as they are exposed to better revision. Paradoxically, there are now more books and learning materials in schools, yet all schools of study revealed that quality has seriously been compromised. Lack of motivated teaching force, large and congested classes, indiscipline cases and low contact hours were noted to contribute greatly to this.

Parental involvement is an important factor in determining learner achievement. It has a multifaceted impact on children’s ability to learn. This was noted to be minimal in the schools of the study. Teachers said that most parents needed to cooperate and assist in their children’s education if quality was to be achieved in the division. They needed to encourage their children to work hard in school and frequently check their homework. Teachers also wanted parents to work hand in hand with them to instill discipline to pupils and not just sitting back expecting the government and others to take care of that.

How well pupils are taught and how much they learn can have a crucial impact on how long they stay in school and how regularly they attend. Further, whether parents send their children to school at all is likely to depend on the judgment they make about the quality of teaching and learning. Based on this perception parents decide whether attending school is worth the time and cost for their children and for themselves. Teachers pointed out that most parents in the division were reluctant about supporting
their children education. They therefore suggested that the local community leaders needed to mobilize parents to take their children to school and also inform the relevant school administration of the children of the school age population who were not enrolled in schools. The study established that the factors affecting achievement of efficiency and quality in public day primary schools in Kyeni division mostly emanated from the FPE policy. Although parents and communities were willing to continue supporting schools by providing additional facilities, their roles and involvement in school activities have not been clearly defined causing conflicts. Indiscipline has become a serious problem in schools resulting to dropout cases, instructional materials and other resources are inadequate compromising the quality of education offered, school environments are unattractive to learners affecting enrolments while poverty and ignorance lower completion and transition rates. The pervasive decline in efficiency and quality of public day primary schools education as revealed by this study requires immediate action.
5.0 SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter summarizes the findings and gives conclusions and recommendations of the study. The implications of the research findings are explained. Additional research areas are also suggested.

5.2 Summary

According to Grisay and Mahlck (1991), the notion of quality of education should go beyond student results and look at the determinants of such results including provision of teachers, buildings, equipment, materials and relevant curriculum among others. Based on the findings of the study, it is evident that the quality of education offered in public day primary schools in Kyeni division is low particularly at the lower levels, causing inefficiency. Schools face teacher shortage and lack enough instructional materials. At the same time, expansion of physical infrastructure has not been in tandem with the increase in enrolment causing serious overcrowding in some schools. This affects learning resulting to poor mean scores and low learner achievement. Most school structures such as classrooms and latrines are in very poor conditions which put off learners increasing dropout cases. Widespread poverty remains a major challenge in the division. Subsequently many children are unable to attend school especially at secondary level as most families cannot afford the fees. Also to supplement family income, children are engaged in child labour hindering them from attending school. Inconsistency in school attendance results to poor performance. In general, the curriculum offered in
primary schools is wanting. An interview with some teachers in the sampled schools indicated that the current curriculum is unattractive since it is too tough for the various levels of learners. It mostly emphasizes theoretical work leaving behind practical exposure. Perceptions of curricula inadequacies and low quality of education has given rise to apathy, school disaffection, and antisocial behaviour on the part of pupils, often leading to low attendance, completion and transition. Parents and learners tend to focus on other forms of economic investments that are likely to give them and their families’ immediate economic returns.

Effective teachers are highly committed and care about their pupils and they need supportive working conditions to maintain these positive attitudes. The condition of infrastructure, availability of textbooks and learning materials and class sizes all influence the teacher’s experience as an educator. In the schools under study, teachers are de-motivated and less able to address the needs of individual pupils, effectively discipline children or create opportunities for interactive learning. They also give fewer assignments and sometimes conduct classes in lecture format, which does not hold the attention of the young primary school pupils. Meeting quality benchmarks in schooling in Kyeni division remains a challenge.

5.3 Conclusions
The study set out to assess the public day primary schools’ efficiency and its effects on the quality of education in Kyeni division; and to explore innovative and viable strategies for improving it. In the schools visited, there was consensus that the government has done a lot towards enhancing access to education. Despite this effort, deep concerns were
expressed over the falling quality of education. FPE was meant to reduce school dropouts, reduce the number of child labourers, increase school enrolment and increase the quality of education. Yet quantitative data collected in this study shows that dropout and repetition are pervasive especially in upper grades. SMC chairpersons complained about teacher shortage and laxity and noted that transfer of teachers was infrequent which meant some teachers overstaying in one school. One SMC chairman said that; “Teachers who stayed long in one station got used to the school and became relaxed affecting performance negatively”. Pupils felt that most teachers were not understanding and supportive to them. Inadequacy of physical facilities and instructional materials in most schools also militates against good teaching-learning. Any age admission criteria means youths who would have been better suited for adult education are now enrolled in primary schools making it difficult for the teachers and also overage learners to fit in the environment with younger children. Teachers are also overwhelmed by indiscipline cases especially among the overage pupils who are transmitting negative influences from the world outside of school like smoking cigarettes or chewing khat to the innocent others. Since canning was banned in schools, teachers can only try counseling which is ineffective as majority lack skills. Teachers’ morale is therefore low causing poor classroom performance. Talking to most teachers, one got the impression that many were just in the job to earn a salary. These factors cannot be ignored if the government has to achieve efficiency and quality in education.
5.4 Implications of the findings

One of the eight Millennium Development Goals is that all children in developing countries should complete primary education. Much progress has been made towards this goal, but completing primary school does not ensure that pupils have attained basic literacy and numeracy skills (Uwezo, 2010). Indeed, there is ample evidence that many children in public day primary schools in Kyeni division are not learning these skills despite years of school attendance. Considering that there is low completion, low transition, increasing repetition, high pupil-teacher ratio, low learner achievement and underutilization of teaching and learning time, schools waste a lot of resources which if saved could enhance efficiency, quality and effectiveness of education.

5.5 Recommendations

In view of the study findings, the following recommendations should be considered if efficiency and quality in education have to be achieved in public day primary schools in Kyeni division.

- Increasing budgetary allocations to the schools to improve the quality and quantity of inputs such as instructional materials and physical infrastructure. This will go a long way in creating attractive school environments thus ensuring retention.

- Recruiting more teachers to ensure adequate numbers in the schools in the division. The government should also improve rewarding systems for teachers in order to motivate them and boost their performance. There should also be regular inspections to inspire teacher performance, provide support, and improve the quality of their teaching. This will improve quality of education offered in schools.
• The government should provide regular in-service training to teachers to improve their pedagogical skills so that they consistently tailor teaching to meet individual learner differences. Counseling skills training will also provide them with alternative ways of dealing with indiscipline cases among pupils especially the over-age learners.

• The government should economically empower households in the division by supporting their farming so that they are able to meet both direct and hidden costs of education and in turn support themselves and the schools. This would also bring pay-off in the education sector in that it would reduce the incidence of parents sending their children to work so as to supplement family income.

• The government should initiate feeding programmes in schools in the division or bring back the school milk programme to attract the poor children to attend schools, ensure retention and help pupils perform better.

• Designing a more attractive primary curriculum in order to attract and retain learners in schools. Youth polytechnics in the division should also be revamped to strengthen and create centres for vocational and skills training. This will change parents and pupils’ attitude towards education thus increasing enrolment, completion and transition rates.

5.6 Suggested areas for further research

• Alternative teaching strategies that may be employed in public day primary schools to improve learner achievement in Kyeni division.

• Efficiency implications on quality of public boarding primary schools in Kyeni division.
References


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Appendices

Appendix 1

Questionnaire for the head teacher

Efficiency implications on quality of public day primary schools in Kyeni Division, Embu County, Kenya

Instructions

My name is Munyi Catherine Muthoni; a student at Kenyatta University in the department of Educational Management, Policy and Curriculum Studies; pursuing a Master of Education (Economics). This questionnaire is meant for collecting research data. Kindly, give information by filling it. You are assured that all the information you provide will be treated with utmost confidentiality and will only be used for the purpose of research.

School Name____________________________________________

Year the school was established____________________________________________

1. For how long have you been the head teacher in this school? _________________

2. How many pupils are currently in your school? ____________________________

3. How many teachers are currently in your school?____________________________

4. (a) State the number of streams (classes) by grade in your school

<table>
<thead>
<tr>
<th>Class 1</th>
<th>Class 2</th>
<th>Class 3</th>
<th>Class 4</th>
<th>Class 5</th>
<th>Class 6</th>
<th>Class 7</th>
<th>Class 8</th>
</tr>
</thead>
<tbody>
<tr>
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</tbody>
</table>
(b) Are these streams sufficient to accommodate all the pupils enrolled in the school?

   Yes ☐  No ☐  (Tick as appropriate)

(c) If No in (b) above, what strategies do the school use to cope with the extra of pupils?

   (i)  
   (ii)  

5.  (a) What is the total average teaching hours per teacher in a week in your school?

<table>
<thead>
<tr>
<th>Grades (Classes)</th>
<th>Total number of hours per week</th>
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<tbody>
<tr>
<td>1-3</td>
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<tr>
<td>4-6</td>
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<tr>
<td>7-8</td>
<td></td>
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</tbody>
</table>

(b) State how these hours are scheduled per subject in a week.

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Number of lessons per week in lower classes</th>
<th>Number of lessons per week in upper classes</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td></td>
<td></td>
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<tr>
<td>Mathematics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kiswahili</td>
<td></td>
<td></td>
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<tr>
<td>Social Studies</td>
<td></td>
<td></td>
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<tr>
<td>Science</td>
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<td></td>
</tr>
</tbody>
</table>

(c) In your opinion, are these hours sufficient to cover the stipulated syllabi?

   Yes ☐  No ☐  (Tick as appropriate)
(d) Does the schedule allow pupils time to be actively involved in co-curricular activities?

Yes ☐ No ☐ (Tick as appropriate)

(e) If no in (c and d) above what strategies does the school use to make up for the deficit?

6. (a) Are there pupils repeating a grade in this school in the last five years?

Yes ☐ No ☐ (Tick as appropriate)

(b) If yes in (a) above state the numbers per grade

<table>
<thead>
<tr>
<th>Class 1</th>
<th>Class 2</th>
<th>Class 3</th>
<th>Class 4</th>
<th>Class 5</th>
<th>Class 6</th>
<th>Class 7</th>
<th>Class 8</th>
</tr>
</thead>
<tbody>
<tr>
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</tr>
</tbody>
</table>

7. Are there drop out cases in your school? Yes ☐ No ☐

Give reasons for your answer.

(i)

(ii)

(iii)

8. (a) What were the total financial requirements in your school during the last year

__________

(b) What were the main sources of these finances?

(i) Government ☐

(ii) Non-Governmental Organizations ☐
(iii) Community

(iv) Churches

(Tick appropriately)

(c) How much did the school get in total? ________________

(d) Were these finances adequate to carry out the operations in your school?

   Yes_______________ No______________  (Tick one)

(e) If No in (d) above, how did you manage with the shortfall?

(f) How did the shortfall impact on school activities?

9. How was the performance trend in KCPE in your school in the last five years?

<table>
<thead>
<tr>
<th>Year</th>
<th>Mean score</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td></td>
</tr>
<tr>
<td>2009</td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td></td>
</tr>
</tbody>
</table>
10. (a) How many pupils joined secondary schools on completion of eighth grade in the last five years in your school?

<table>
<thead>
<tr>
<th>Year</th>
<th>Total number of pupils in class eight</th>
<th>Number of pupils joining secondary schools</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2009</td>
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</tr>
<tr>
<td>2010</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td></td>
<td></td>
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</tbody>
</table>

(b) What level of schools did they join?

<table>
<thead>
<tr>
<th>School level</th>
<th>Number of pupils</th>
</tr>
</thead>
<tbody>
<tr>
<td>National</td>
<td>-</td>
</tr>
<tr>
<td>Provincial</td>
<td>-</td>
</tr>
<tr>
<td>District</td>
<td>-</td>
</tr>
<tr>
<td>Others</td>
<td>-</td>
</tr>
</tbody>
</table>

11. (a) What are some of the challenges you face in ensuring quality education in your school?

(i) 
(ii) 
(iii) 

(b) In your view, how can these challenges be resolved?

Thank you for your support.
Appendix 2

Questionnaire for the AEO

Efficiency implications on quality of public day primary schools in Kyeni Division, Embu County, Kenya

Instruction

My name is Munyi Catherine Muthoni; a student at Kenyatta University in the department of Educational Management, Policy and Curriculum Studies; pursuing a Master of Education (Economics). This questionnaire is meant for collecting research data. Kindly, give information by filling it. You are assured that all the information you provide will be treated with utmost confidentiality and will only be used for the purpose of research.

1. How many pupils are currently in public day primary schools in your division? __________

2. (a) How many teachers are currently in public day primary schools in your division? __________

   (b) Are these teachers sufficiently distributed in all the schools in the division? ________________

   Explain your answer.

3. (a) In your observation, are there children of the school going age not enrolled in schools at all in your division? ________________
(b) What do you think are the main reasons for this; starting with the most common reason to the least common?

(i)

(ii)

(iii)

4. (a) Are there children dropping out of schools in your division? ______________

(b) If yes in (a) above, what do you think can be done to curb the dropout cases?

(i)

(ii)

5. (a) What funding needs are there in public day primary schools in your division?

(i)

(ii)

(iii)

(b) Who funds the public day primary schools in your division?

(i)

(ii)

(c) In your view, are these funds enough to undertake the schools’ activities? ______

   Give a reason for your answer.

6. (a) In your view, are there enough classrooms in schools in the division to accommodate all the pupils enrolled?

   Yes □ No □ (Tick one)

(b) If No, state the strategies taken by the schools to cope with the problem.
(c) Identify other additional structures you think are generally required in the schools.

7. In your opinion, are the teaching-learning resources and materials available in schools in the division optimally utilized? _________________ Explain.

8. Suggest ways in which public day primary schools resource allocation and use may be improved in the division.
   (i)
   (ii)
   (iii)

9. Freely comment on the quality of public day primary schools education in your division.

Thank you for your co-operation.
Appendix 3

Interview schedule for the School Management Committee chairman

Efficiency implications on quality of public day primary schools in Kyeni Division, Embu County, Kenya

Instructions

The purpose to be explained.

Name of the school________________________________________

Name of the person being interviewed_________________________

1. How long have you served as the SMC chairman in this school? ____________

2. (a) Has the enrollment in this school increased or decreased over the last five years?_____________________

   (b) What do you think is the main cause of this?

3. Does the school have enough structures and other resources?

   Yes □ No □

   Explain.

4. (a) What are the main sources of finances in the school?

   (i) 

   (ii) 

   (iii)
(b) In your opinion, are these finances sufficient to support the teaching-learning processes? Yes ☐ No ☐ (tick one)

5. (a) In your view, what is the level of quality of education offered in this school?

   Excellent ☐ Good ☐ Satisfactory ☐ Poor ☐

(b) If the answer is; other than excellent in (a) above, suggest ways in which the quality of education in this school can be improved.

6. (a) Are the parents in this school motivated to take their children to school? ______________________

   (b) If No in (a) above, what is the reason?

   (c) If Yes in (a) above, are these children retained in the school across all the grades?

   Yes ☐ No ☐

   Explain your answer.

   (d) Do all these children join secondary schools on completion of the eighth grade?

   ______________________

   Explain your answer.

7. What role do the parents play towards improving quality of education in the school?

   Thank you for your co-operation.
Appendix 4

FGD Guide for the teachers

Efficiency implications on quality of public day primary schools in Kyeni Division, Embu County, Kenya

Instructions

The purpose to be explained

Name of school__________________________________________

1. (a) What kind of teaching-learning resources does your school own?

Name at least five

(b) Are these resources sufficient to enhance smooth teaching-learning processes?

Yes ☐ No ☐

Explain your answer.

2. (a) What additional facilities do you think the school requires?

(b) Who should provide these facilities? ________________

Give reasons for your answer.

3. How many lessons do you teach per week? ________________________

4. (a) What is the Pupil-Teacher Ratio in your class? ____________________
(b) To what extent are you able to interact with the pupils in your class during lessons?

Very well □
Fairly well □
Poorly □
Not at all □ (tick one)

Give reasons for your answer.

(i)

(ii)

5. What is the level of school attendance by the pupils in your class and the school as a whole?

Excellent □ Good □ Satisfactory □ Poor □

6. (a) What is the Pupil-Textbook Ratio per subject in your class?

<table>
<thead>
<tr>
<th>Subject</th>
<th>PTR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics</td>
<td></td>
</tr>
<tr>
<td>English</td>
<td></td>
</tr>
<tr>
<td>Kiswahili</td>
<td></td>
</tr>
<tr>
<td>Social studies</td>
<td></td>
</tr>
<tr>
<td>Science</td>
<td></td>
</tr>
</tbody>
</table>

(b) Is the ratio satisfactory to ensure effective teaching-learning? ________________

(c) If No, how do you manage the shortfall?
7. (a) How often do you administer tests to your pupils?

- After every lesson
- Weekly
- Monthly
- End of term
- Not at all

Give a reason for your answer

(b) In general, how is the pupils’ performance in end of term examinations in your class?

- Excellent
- Good
- Satisfactory
- Poor

(c) Was there any improvement in mean score in your class across the three terms on last year?

- Yes
- No

(d) If yes in (c) above, what were the mean scores in the terms respectively?

- First term
- Second term
- Third term

(e) Suggest ways in which this mean score can be improved further.

Give at least three suggestions

7. What is the government’s contribution towards quality of education in your school?

Thank you for your co-operation.
Appendix 5

FGD guide for the pupils

Efficiency implications on quality of public day primary schools in Kyeni Division, Embu County, Kenya

Instructions

The purpose to be explained.

Name of school_______________________________________________________

1. (a) How many pupils are there in your class? _____________________________
   (b) Is the classroom space sufficient to accommodate all the pupils? _________

2. Each desk in your class is shared by how many pupils?____________________

3. Name other facilities / structures available in your school?
   (i)
   (ii)
   (iii)
   (iv)
   (v)

4. How many teachers are there in your school? ______________________

5. What stationery items does the school require you to poses for learning?
   Name five of them.

6. (a) Are there text books for all subjects in your school? _________________
(b) Are these text books sufficient for all the pupils in your class? ______________
(c) If No, how do you manage your learning with the shortage?

(d) Who provides text books and other materials that you use in the school?

8. (a) In your view, how is the general teacher performance in teaching in your class and the school at large?

Excellent ☐ Good ☐ Satisfactory ☐ Poor ☐

(b) Is there enough pupil-teacher interaction in the school? ______________

Explain.

(c) What new skill have you learnt in your subjects in the last one week?

Name the subject and the skill.

<table>
<thead>
<tr>
<th>Subject</th>
<th>Skill</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics</td>
<td></td>
</tr>
<tr>
<td>English</td>
<td></td>
</tr>
<tr>
<td>Kiswahili</td>
<td></td>
</tr>
<tr>
<td>Social Studies</td>
<td></td>
</tr>
<tr>
<td>Science</td>
<td></td>
</tr>
</tbody>
</table>

8. (a) Do your parents encourage your being in school?

Yes ☐ No ☐
(b) What do you think is the main reason for this?

(c) How many of you have been absent from school at any one time this term?

____________

Give reasons for your answer

(i)

(ii)

(iii)

9. Suggest ways in which your class mean score can be improved.

Give at least three suggestions

10. Identify more resources that you think the school requires to improve the quality of learning.

(i)

(ii)

(iii)

Thank you for your co-operation
Appendix 6

Observation Checklist

Efficiency implications on quality of public day primary schools in Kyeni Division, Embu County, Kenya.

Name of the school__________________________________________

Observe the school facilities and tick as appropriate.

1. Classrooms
   Permanent □  Temporary □  Open-air teaching areas □

2. Classroom adequacy (Look at typical lower primary classes 1 and 2 and upper primary classes 6 and 8 and describe them).
   Very adequate □  Adequate □  Inadequate □

3. Classroom conditions
   i) Walls
      Good conditions □  Unstable □  Crumbling □
   ii) Windows
      Windows in place □  Broken windows □  No windows □
   iii) Roofing
      Good covering □  Open in places □  Leaking □
   iv) Floor
      a) Flat and smooth □  Uneven and Potted □
      b) Clean □  Dusty / Muddy □
v) Lighting

<table>
<thead>
<tr>
<th>Good visibility</th>
<th>Poor Visibility</th>
</tr>
</thead>
</table>

vi) Ventilation

<table>
<thead>
<tr>
<th>Stable and pleasant</th>
<th>Uncomfortable</th>
</tr>
</thead>
</table>

vii) Noise

<table>
<thead>
<tr>
<th>Good classroom acoustics</th>
<th>Noisy and with interferences from outdoors</th>
</tr>
</thead>
</table>

viii) Space

<table>
<thead>
<tr>
<th>Ample space for pupils to work</th>
<th>Classroom crowded</th>
</tr>
</thead>
</table>

ix) Classroom mood

<table>
<thead>
<tr>
<th>Classroom cheerful</th>
<th>Classroom dull and drab</th>
</tr>
</thead>
</table>

x) Wall Charts / Visual aids

a) Available | Not available
b) Good quality | Poor quality

xi) Chalkboard

<table>
<thead>
<tr>
<th>Visible from all segments of the classroom</th>
<th>Poor legibility from some parts</th>
</tr>
</thead>
</table>

xii) Textbooks

(a) Available | Not available
(b) Shared | Not Shared

(xiii) Furniture

a) Sufficient | Not sufficient
b) Suitable | Unsuitable
c) Furniture in good condition | Broken furniture
d) Pupils seated comfortably | Pupils seated uncomfortably
4. Library
   (i) Available ☐ Not available ☐
   (ii) Well equipped ☐ Not well equipped ☐

5. Toilets / Latrines
   a) Teachers’ toilets / latrines
      (i) Number available none ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐
   b) Pupils’ toilets / latrines
      (i) Number available
         None ☐ 1 ☐ 3 ☐ 6 ☐ 9 ☐ 12 ☐ 15 ☐ 18 ☐ 21 ☐
   c) Are toilets/ latrines gender-sensitive?
      Yes ☐ No ☐

6. Workshops
   (i) Available ☐ Not available ☐
   (ii) Adequately equipped ☐ Not adequately equipped ☐

7. Special facilities for children with special needs
   Available ☐ Not available ☐

8. Playground
   (i) Available ☐ Not available ☐
   (ii) Very adequate ☐ Adequate ☐ Inadequate ☐

9. School safety and security
   Good ☐ Fair ☐ Poor ☐ Not available ☐

10. School water supply
    Water available ☐ Water not available ☐
## Appendix 7

### Time Frame

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<td>Consolidation</td>
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## Appendix 8

### Budget

<table>
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<tr>
<th>Activity</th>
<th>Details</th>
<th>Amount in KES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consolidation of literature</td>
<td>Library search and travelling expenses</td>
<td>5,000</td>
</tr>
<tr>
<td>Designing and developing research instruments</td>
<td>Typing and photocopying of research instruments</td>
<td>3,000</td>
</tr>
<tr>
<td>Research induction and training (7 days)</td>
<td>Transport and lunch for researcher and two research assistants</td>
<td>5,000</td>
</tr>
<tr>
<td>Piloting research instruments</td>
<td>Transport for researcher and research assistants</td>
<td>3,000</td>
</tr>
<tr>
<td>Refining the research instruments</td>
<td>Editing and formatting the instruments</td>
<td>2,000</td>
</tr>
<tr>
<td>Data collection</td>
<td>Travel, accommodation and subsistence</td>
<td>50,000</td>
</tr>
<tr>
<td>Data analysis and presentation</td>
<td>One researcher and two research assistants</td>
<td>10,000</td>
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<tr>
<td>Finalizing the project</td>
<td>Typesetting and Spiral binding</td>
<td>400</td>
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<tr>
<td>Miscellaneous expenses</td>
<td>Arising costs</td>
<td>4,000</td>
</tr>
<tr>
<td><strong>GRAND TOTAL</strong></td>
<td></td>
<td><strong>79,000</strong></td>
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</table>
Appendix 9

Tables

Table 1: Overall Textbook Pupil Ratio (TPR) by subject and county

<table>
<thead>
<tr>
<th>County</th>
<th>Maths</th>
<th>Kiswahili</th>
<th>English</th>
<th>Science</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kajiado</td>
<td>1:3</td>
<td>1:3</td>
<td>1:3</td>
<td>1:4</td>
</tr>
<tr>
<td>Kericho</td>
<td>1:3</td>
<td>1:3</td>
<td>1:3</td>
<td>1:6</td>
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<td>1:3</td>
<td>1:3</td>
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<td>Kwale</td>
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<td>1:3</td>
<td>1:3</td>
<td>1:4</td>
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<tr>
<td>Mwingi</td>
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<td>1:3</td>
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<td>Nairobi</td>
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<tr>
<td>Taita taveta</td>
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<tr>
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<td>Gucha</td>
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<tr>
<td>Total</td>
<td>1:3</td>
<td>1:3</td>
<td>1:3</td>
<td>1:4</td>
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</tbody>
</table>

Table 2: Distribution of primary school pupils by age by grade in sample schools, 2004

Expected age for grade and over-aged for grade

<table>
<thead>
<tr>
<th>Age for grade</th>
<th>Class (grade) percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Expected</td>
<td>29.6</td>
</tr>
<tr>
<td>1+ year</td>
<td>34.2</td>
</tr>
<tr>
<td>2-3+ years</td>
<td>25.0</td>
</tr>
<tr>
<td>&gt;-4 years</td>
<td>11.2</td>
</tr>
<tr>
<td>Column Total</td>
<td>100.0</td>
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</tbody>
</table>

NB. Official entry age at class 1 is 6 years

Source: UNESCO FPE Assessment Report, 2005

Table 3: Transition rates from primary education to secondary education

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>KCPE candidates</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Boys: Girls)</td>
<td>587,961 (303,907:284,054)</td>
<td>657,747 (342,979:314,768)</td>
<td>671,550 (352,826:318,724)</td>
</tr>
<tr>
<td>Form 1 students</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Boys: Girls)</td>
<td>273,702 (146,645:127,057)</td>
<td>263,853 (139,469:129,384)</td>
<td>299,461 (161,588:137,813)</td>
</tr>
<tr>
<td>Transition rate (2 divide by 1)</td>
<td>46.6% (48.3:44.7)</td>
<td>40.1% (940.7:39.5)</td>
<td>44.6% (45.8:43.3)</td>
</tr>
<tr>
<td>(Boys: Girls)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Admission rate</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>-</td>
<td></td>
<td>56.0%</td>
<td>60.0%</td>
</tr>
</tbody>
</table>

NCST/RCD/14/012/14

Catherine Muthoni Munyi
Kenyatta University
P.O BOX 43844,
Nairobi

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on; "Efficiency implications on quality of public day primary schools in Kyeni Division, Embu County Kenya," I am pleased to inform you that you have been authorized to undertake your research in Embu District for a period ending 30th June 2012.

You are advised to report to The District Commissioner and The District Education Officer Embu District before embarking on the research project.

On completion of your research project you are expected to submit one hard copy and one soft copy of your report/thesis to our office.

DR. M.K RUGUTT, PHD, LCD
DEPUTY COUNCIL SSECRETARY

Copy to:
The District Commissioner
Embu District

The District Education Officer
Embu District
THIS IS TO CERTIFY THAT

Prof./Dr./Mr./Mrs./Miss./Institution
Catherine Muthoni Munyi
Of (Address) Kenyatta University
P.O BOX 43844, Nairobi
has been permitted to conduct research in
Location
Embu District
Eastern Province
TOPIC: Efficiency implications on quality of public
day primary schools in Kyeni Division, Embu County,
Kenya
for a period ending 30th June 2012

Applicant’s Signature

Date of issue 19th January, 2012

Fee Receipt

Secretary
National Council for Science & Technology