DIFFERENTIAL SCHOOLS’ PERFORMANCE IN KCPE: CAUSES AND THEIR SIGNIFICANCE IN GITUGI EDUCATION ZONE, MURANG’A COUNTY, KENYA

BY

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E55/CE/14326/2009

A RESEARCH PROJECT SUBMITTED FOR THE AWARD OF THE DEGREE OF MASTER OF EDUCATION IN THE SCHOOL OF EDUCATION OF KENYATTA UNIVERSITY

MAY 2013
DECLARATION

This research project is my original work and has not been presented for award of a degree in any other university.

Signature ___________________________ Date _________________

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DEDICATION

I dedicate this research proposal to my mother who gave so much of herself to make me what I am today and to our sons Maina and Karongo for whom I desire that they may pursue knowledge to its optimum heights and greatest depths.
ACKNOWLEDGEMENTS

Several people have been the pillars that guaranteed the completion of this work. Although all may not be mentioned here, my gratitude for all manner of support from all is sincere.

Without the direction, expertise, guidance and encouragement of my supervisors Dr. N. Ogeta and Mr. D. Wesonga of the Department of Educational Management, Policy and Curriculum studies, Kenyatta University this project would not have been written. I am grateful for their patience as they read through and made sense of material from a novice.

The beginning was possible because of encouragement from my sisters' - Wanjiku and Wambui. My niece Wambui deserves accolades for being a research assistant willing to traverse the hills and valleys to far off schools

The TAC tutor, Gitugi Education zone Mr.B. Macharia gave information, challenges and encouragement without asking for anything in return except that the work might result in better performance in his schools.

Finally, my gratitude to all head teachers, their teachers and learners for their cooperation at filling in long questionnaires without prior notification.

I, however wish to absolve all individuals and institutions mentioned above for any errors of omission or commission for which I am solely responsible.
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LIST OF ABBREVIATIONS

ATS: Approved Teacher Scale
EFA: Education For All
FPE: Free Primary Education
KCPE: Kenya Certificate of Primary Education
KCSE: Kenya Certificate of Secondary Education
KESSP: Kenya Education Sector Support Program
KNEC: Kenya National Examinations Council
MDG: Millennium Development Goals
MOE: Ministry of Education
SMC: School Management Committee
SPRED: Strengthening Primary Education Project
TAC: Teacher Advisory Centre
TSC: Teachers Service Commission
Performance in Kenya Certificate of Primary Education (KCPE) is a major concern for candidates, parents, teachers, schools and the government. In Gitugi Education Zone, Murang’a county, the performance has been poor. Differences among the 15 primary schools in the zone are repeated every year implying either a difference in the schools or in the learners. This study sought to identify the factors that influence the differences in performances. The purpose of this study was to test for any significance between the factors, and the differential performance in KCPE among the schools. The research was guided by five objectives including to determine the degree of variation in KCPE performance among the schools and, to find out the significance of formative evaluation, school characteristics, school orderliness and in-school and out-of-school expectations, on performance in KCPE. The human capital theory proposed by T.W. Schultz in 1961 and applied in education production function by E.A. Hanushek in 1979 provided the thrust for the research. Descriptive survey design was adopted for the study. The target population includes all the fifteen schools in the zone and the community that feeds the schools. A sample size of 10 schools was used from which 226 respondents were involved. Systematic sampling was used to select the 10 schools. Classes 7 and 8 were picked purposively and respondents were picked from the two classes using systematic sampling. Teachers, opinion leaders and two parents from each school were chosen purposively. Data collection instruments included questionnaires for head teachers, teachers and pupils; interview schedules for opinion leaders and parents and a check list for assessing resource availability. Document analysis was done for both formative evaluation and KCPE. Piloting was done in one school from the zone. The data collection instruments were tested for validity through the expert judgments of the supervisors and, for reliability through the split-halves method which gave a value of 0.86. The data collected is presented in tables and graphs and, analyzed using descriptive statistics involving standard deviation and z-scores and, inferential statistics using Spearman’s Rank correlation coefficient. Performance in most schools is positively skewed; expectations through setting of targets, formative evaluation and orderliness of school programs and parents and community involvement were found to have high levels of significance with performance in KCPE. Material and physical resources were mildly significant; while number/qualification of teachers and learners were not. It is recommended that targets be set in all schools, programs be effectively run, resources be better managed and parents become more involved in their children’s learning. More detailed research needs to done to help explain and improve the positively skewed performance in most schools in the zone. This will be the first critical step towards the realization of Millennium Development Goals (MDGs) for this education zone.
CHAPTER ONE

1.0 Introduction

The chapter addresses the background of the study, statement of the problem and the purpose and objectives of the study. Research questions that are derived from the objectives are stated. Hypotheses, limitations, delimitations, theoretical framework, conceptual framework and, logistical and ethical considerations are given.

This study was undertaken with a view to determine the significance of the factors that inform the persistently low performance in KCPE in Gitugi Education Zone, Murang’a County. The reasons behind the variation in KCPE performance in different schools, and their relationship to the performance in KCPE were sought. Possible strategies that may be put in place to help improve the performance are recommended.

1.1 Background to the study

Internationally schools’ performance is deduced most often from performance in national examinations. A study conducted in U.S.A., China, Taiwan and Japan showed that the U.S.A. has the lowest performance despite having the best systems of education (Stevenson, 1992). Private schools in Britain produce consistently better results than public schools (Fox, 1995). In Thailand, provincial schools perform poorer than urban schools, while there are differences in performance in geographic regions (Chantanavich et al, 1995).

In Africa, low performances in national examinations have raised great concern. In Ghana, between 1992 to 1996 more than 50% of candidates failed national criterion-referenced tests. More than 40% in Ethiopia fail grade 8 examinations while in Mozambique, more than half fail national exams. In Guinea, only 5% achieve partial mastery in mathematics (Kellaghan & Greaney, 2003).
In Kenya (like in many other countries in Africa), public national examinations are used to provide a measure of achievement at the end of a cycle. These examinations include the Kenya Certificate of Primary Education (KCPE) at the end of the 8-years primary school cycle, and the Kenya Certificate of Secondary Education (KCSE) at the end of the 4-years secondary school cycle. The two examinations are set, administered, analyzed and results released to the public by the Kenya National Examinations Council (KNEC).

The release of these results is awaited with anxiety across the nation because of the value attached to the examinations and the results attained by each individual. To a great extent, the grade attained determines what the future of the individual is likely to be for various reasons. The KCPE result determines the type of secondary school the individual will join at form one. There are public national, provincial (now referred to as county schools) and district schools and, there are private schools. There are perceived good and bad schools among both the public and private schools; a categorization that is influenced by the outcomes of the schools in KCSE. The outcomes of KCSE cause a grouping of schools as being effective, performing schools or their opposite, which are ineffective, non-performing schools (Onderi & Croll, 2008).

In our current education system, the secondary school an individual joins at form one to a large extent influences their performance in KCSE at the end of the four years. The prospects for further education, employability or training are thereby determined (Kellaghan & Greaney, 2003).

For these reasons, performance in KCPE is critical. The foundation at primary school level needs to be one that will allow the individual to attain maximum points in this examination. A primary school that provides a candidate with an atmosphere for optimal performance would be regarded as an effective school.
A report given by Wasanga and Kyalo of the KNEC in 2007 in conjunction with the National Assessment Initiatives in Kenya and their Impact on Quality of Education, reports that there has been a continued decline in performance in KCPE in most provinces in Kenya. They have drawn attention to the fact that effective learning in classes 6 and 3 has not been going on with regard to acquisition of skills in mathematics and in reading skills in most of the schools studied. They also warn that the quality of education is rapidly declining nationally. They state that there is need to determine the factors that impact negatively on the quality of education.

Mathioya District has posted below average performance in KCPE every consecutive year with a mean score of about 235 marks. Gitugi Education Zone which is the area of study in the same district has a mean performance of 227, below that of both the district and Central Province as shown in Table 1.1. (The mean performance for the province between 2007 and 2010 was 250). There is also lack of consistency in performance in most of the schools whereby an increase or decrease in performance in any consecutive year cannot be predicted from previous performance as shown in Table 1.2. Despite this consistent poor, below average and unpredictable performance in the schools, no detailed study has been done to identify possible causes and develop strategies that may help to reverse this trend.

The exception is shown by three schools which show an upward trend in performance and which are always ranked as the leading schools in KCPE and other examinations in the zone. Another three schools are ranked last in most of the examinations. There is one private school in the zone which is ranked first or second in KCPE and all other joint examinations. All the others are public schools. Being public, the schools are provided with teachers and teaching-learning resources by the government through the Teachers Service Commission (TSC) and the Ministry of Education (MoE) respectively.
The tables below show performance in KCPE of the schools in the zone, and the corresponding performances in Mathioya District and in Central province.

Table 1.1 KCPE mean scores in Gitugi Education Zone, Mathioya District in Central province

<table>
<thead>
<tr>
<th></th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
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<tr>
<td>Gitugi Zone</td>
<td>232.52</td>
<td>212.21</td>
<td>233.44</td>
<td>233.06</td>
<td>233.16</td>
<td>226.85</td>
</tr>
<tr>
<td>Mathioya District</td>
<td>238.35</td>
<td>227.73</td>
<td>233.25</td>
<td>233.24</td>
<td>234.11</td>
<td>235.01</td>
</tr>
<tr>
<td>Central Province</td>
<td>***</td>
<td>244.33</td>
<td>249.24</td>
<td>250.25</td>
<td>250.77</td>
<td>***</td>
</tr>
</tbody>
</table>

*** missing marks

Source: District Education Office, Mathioya District, 2011, Murang’a County.
Table 1.2 Performance in KCPE in Gitugi Education Zone (2004-2011)

<table>
<thead>
<tr>
<th>School</th>
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<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mihuti</td>
<td>188.56</td>
<td>189.82</td>
<td>195.1</td>
<td>223.18</td>
<td>193.45</td>
<td>212.96</td>
<td>237.12</td>
<td>209.40</td>
</tr>
<tr>
<td>Karung'e</td>
<td>208.27</td>
<td>206.76</td>
<td>216.52</td>
<td>210.77</td>
<td>221.03</td>
<td>220.50</td>
<td>204.41</td>
<td>201.15</td>
</tr>
<tr>
<td>Ngutu</td>
<td>217.14</td>
<td>227.18</td>
<td>230.61</td>
<td>220.29</td>
<td>214.67</td>
<td>232.02</td>
<td>234.43</td>
<td>232.71</td>
</tr>
<tr>
<td>Kanjahi</td>
<td>221.84</td>
<td>244.85</td>
<td>207.12</td>
<td>233.14</td>
<td>236.49</td>
<td>249.91</td>
<td>236.07</td>
<td>243.94</td>
</tr>
<tr>
<td>Chui</td>
<td>255.42</td>
<td>270.26</td>
<td>261.56</td>
<td>233.92</td>
<td>244.04</td>
<td>221.47</td>
<td>219.47</td>
<td>212.11</td>
</tr>
<tr>
<td>Githendu</td>
<td>278.24</td>
<td>290.73</td>
<td>267.07</td>
<td>249.35</td>
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<td>287.39</td>
<td>273.91</td>
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<td>Gitugi</td>
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<td>Gakambura</td>
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<td>214.75</td>
<td>201.90</td>
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<tr>
<td>Kambara</td>
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<td>200.96</td>
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<td>256.36</td>
<td>252.72</td>
<td>215.83</td>
<td>216.03</td>
<td>236.97</td>
<td>189.16</td>
</tr>
<tr>
<td>Kiuu</td>
<td>256.70</td>
<td>252.48</td>
<td>269.09</td>
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<td>226.10</td>
<td>226.30</td>
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<tr>
<td>Yakarengo</td>
<td>244.43</td>
<td>238.46</td>
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<td>Ruiru</td>
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<td>Bright star</td>
<td>319.44</td>
<td>295.34</td>
<td>295.40</td>
<td>306.59</td>
<td>275.76</td>
<td>286.62</td>
<td>293.72</td>
<td></td>
</tr>
</tbody>
</table>


Preliminary interviews conducted with the TAC tutor in the zone indicate that analysis of the KCPE results is done every year. Efforts are made to discuss the poor performance with the head teachers in an effort to improve this scenario. Oftentimes head teachers are transferred from one school to another within the same zone. A detailed study of the cause of the performance is not done, with the head teacher and the teachers being blamed by all stakeholders.
1.2 Statement of the problem

The research problem addressed in this study is that despite the introduction of Free Primary Education (FPE) in 2003, and the MDGs whose cornerstone is education, performance in KCPE in the majority of the schools in Gitugi Education Zone has remained poor. One of the objectives of FPE is to improve quality among all learners nationally (Republic of Kenya, 2005) which is measured by performance in national examinations (Ngware et al, 2007). The poor performance in the area of study though in nearly all the schools appears to be predominant in schools like Karung’e, Mihuti and Gitugi which record the lowest mean scores most years as shown in Table 1.2 above. Conversely, some schools like Githendu, Bright Star and Kiuu always top the ranks with marks above average every year. This is despite the fact that all these schools are public schools. Worth noting is that only two schools had an above average mean score in the years 2010 and 2011 while there were three schools with over 250 marks the previous two years 2008 and 2009. The mean performance in the zone has changed from 232.96 in 2009, 233.16 in 2010 to 226.84 in 2011, showing the inconsistency in performance within the zone.

With little or no research done to identify and document the factors that inform this poor, inconsistent and different performance in the different schools in the zone, it becomes difficult to formulate strategies that would improve the performance in the zone. It was therefore the intention of this study to gather information on the factors that inform the observed performance and assess the significance of the same on performance in KCPE.

1.3 Purpose of the study

The purpose of the study was to conduct an in-depth investigation on the factors that influence the observed low performance in KCPE in the schools in the zone under study and, the extent to which the performance varies among the schools. The presence or absence of a
relationship between the influencing factors and KCPE performance was sought in an effort to determine and propose the most effective strategies to employ in order to address and improve schools’ performance. Since most of the public schools in the district perform poorly, the findings of this study are useful in helping to improve performance in the specific district, and other districts in the county and country that operate under similar conditions.

1.4 Objectives of the study

The following are the objectives of the study;

i. To determine the degree of variation in KCPE performance in the schools in the zone.

ii. To find out the significance of formative evaluation within the zone on KCPE performance.

iii. To investigate the influence of school characteristics on performance in KCPE.

iv. To find out the extent to which the level of orderliness in a school influences performance in KCPE.

v. To establish how in-school and out-of-school expectations influence KCPE performance.

1.5 Research questions

i. What and how has been the degree of variation in performance in KCPE in the schools studied in the last five years?

ii. What and how influential has been the performance of the schools in formative evaluation of the pupils, on the final summative KCPE examination?

iii. What is the influence of school characteristics on KCPE performance in the schools?

iv. How does the level of orderliness affect performance in KCPE?

v. What and how critical is in-school and out-of-school/community expectations towards performance in KCPE in the schools?
1.6 Hypotheses

A research hypothesis is a predictive statement, capable of being tested by a scientific method that relates an independent variable to some dependent variable (Orodho, 2009). Four research hypotheses were proposed as predictive statements giving the expected relationship between the dependent variable which is performance in KCPE; and the independent variables which include performance in formative examinations, school characteristics, level of orderliness and, school and community expectations as outlined in the objectives. They are aimed at providing a statistical basis for testing the significance of the independent variables with performance in KCPE. They are expressed as null hypotheses as follows:

**H_0_1:** There is no significant relationship between performance in KCPE and formative evaluation examinations in Gitugi Education zone.

**H_0_2:** There is no significant relationship between performance in KCPE and school characteristics.

**H_0_3:** There is no significant relationship between performance in KCPE and level of orderliness in the schools.

**H_0_4:** There is no significant relationship between performance in KCPE and expectations.

1.7 Assumptions of the study

i. All data on performance in KCPE and formative evaluation examinations would be available.

ii. All respondents would co-operate and give responses that would help in the achievement of the objectives of the study.

iii. There are no major socio-economic differences among the members of the community. This is to reduce the effect of home background on performance in the different schools.
iv. The fact that the formative examinations are not standardized will not negatively affect the validity of testing for correlation with KCPE.

1.8 Limitations of the study

i. Due to limitation of finances and time and a terrain that is difficult to traverse, the study was limited to only one education zone out of the four zones in the district.

ii. From studies in other parts of the country on performance in KCPE, many factors have been identified as causes of poor performance in national examinations. In this study, only four broad categories of the factors were studied as outlined in the objectives and research questions due to time constraints and thus generalizing the findings to other areas may be limited.

iii. The study was limited to analysis of the mean scores only. A study of performance per subject may be more informative. Equally, a study of performance among boys and girls may shed light on how best to address each gender to facilitate improved performance by all.

1.9 Delimitations of the study

The study was carried out in Gitugi Education Zone only in Mathioya District, Murang’a County although the district has a total of four zones. It targeted pupils in classes 7 and 8. The focus was the performance in formative and summative examinations between 2007 and 2011 with data being collected in September, 2012. The teachers involved from each school included the head teacher, the deputy head teacher, one senior teacher and the class teachers for classes 7 and 8. Opinion leaders including members of the provincial administration and political leaders, members of School Management Committees (SMC) and, parents with children in classes 7 and 8 were involved. The formative evaluation examinations included in the study were from classes 7 and 8 only. This limited the study to an evaluation of
learning in the two classes only, while the other lower classes may have an impact on performance in KCPE in class 8.

1.10 **Theoretical framework**

According to Kombo et al (2006), a theoretical framework serves to conceptualize the research in its entirety as an outgrowth of the larger society. It brings order, unity and simplicity to what is being investigated (Orodho, 2008). Osu and Onen (2009), describe a theoretical framework as a set of interrelated variables, definitions and propositions that present a systematic view of a phenomenon.

In applying human capital theory as advanced by T.W. Schultz in 1961, it is postulated that the function of schools is to teach students, provide them with information and skills that will be valuable in later life (Quiggin, 1999). This theory is applied in cost-benefit analysis in education whereby governments and individuals invest heavily in education as long as the marginal gain from the investment in education exceeds the cost. Both developing and developed countries invest heavily in education according to Jimenez et al (2009) and Burkhead et al (1967), with a view to reaping benefits from the investment for both the individual and the government.

It is the basis upon which the education production function is formulated in which quantities of measured inputs to a school and student characteristics are mapped to some measure of school output like test scores of students from the school (Hanushek, 2007; Krueger, 1999).

In Kenya, the yardstick used to measure educational output or achievement is performance in examinations as is the case in many other countries of the world. This output is achieved after various inputs into the educational process undergo what is referred to as educational production process.
The inputs into the educational production process include the student, the teacher and all the teaching/learning, physical and material resources necessary to facilitate learning outcomes. Thus, the educational output in this case denoted by performance in KCPE is a function of how these educational inputs interact. If the interaction is healthy, then the output or performance is good and vice versa.

In this research project, the educational inputs studied include performance in formative evaluation examinations; orderliness of the school; school characteristics which are pupils' numbers, teachers' numbers and qualifications, material and physical resources' availability and maintenance; and school and community expectations; with a view to relating these inputs to performance in KCPE as an indicator of educational outputs.

1.11 Conceptual framework

The conceptual framework increasingly strengthens and keeps the research on track. It provides clear links from the literature reviewed, the research objectives and the research questions (Mugenda, 2008, Kombo et al, 2006). Orodho (2008) explains the conceptual framework as a diagrammatic representation of the interrelationships between the variables in the research. It depicts the major variables and categories, connected by lines and arrows to show relationships and interaction (Mugenda, 2008).

An orderly school (independent variable \( I.V_1 \)) has policies and programs that are clearly outlined. This allows for the maintenance of a clean, healthy and conducive learning atmosphere. The learning is geared towards clearly articulated, understood and accepted targets and expectations (\( I.V_3 \)). There must be adequate human, material and physical resources (\( I.V_2 \)) to facilitate learning. The interactions between these characteristics are reflected in performance in formative evaluation (\( I.V_4 \)) examinations. This performance in formative evaluation, when based on the schools' articulated objectives becomes a vital
driving force towards performance in KCPE. The availability and effective application of these features in a school become sources of motivation producing an intricate web where one factor feeds all others even as it feeds itself. This is shown by the double arrows interconnecting one factor with another all of which ultimately lead back to performance in KCPE. This is illustrated in the figure below.

**Figure 1.1 Interaction of factors that influence performance in KCPE**

![Diagram showing the interaction of factors influencing performance in KCPE](image)

**Source:** Author's conceptualization
1.12 Operational definitions of terms

**Differential school performance:** Difference in performance in KCPE among different schools, measured against national, provincial, district and zonal performance in KCPE.

**Formative evaluation:** This is internal evaluation that serves to indicate the relative status at the time in relation to objective or target set. In this study, joint exams taken before KCPE are used as indicators of relative status in relation to the target set for KCPE.

**Summative evaluation:** This is external, terminal examination that serves to point at the value of learning realized by the evaluand, as well as the extent to which curriculum implementation has been realized. It is used to assess the achievement of national objectives. The KCPE examination is meant for these purposes.

**School characteristics:** Refer to all the features of the school. For this study it is narrowed down to teachers, pupil numbers, physical and material resources and management.

**Orderliness:** Includes presence of clear policies and programs on exams, homework, co-curricular activities, syllabus completion and maintenance of a clean and neat school environment.

**School effectiveness:** Refers to the realization of set objectives or outcomes through the efficient utilization of the resources available. The measure used for assessing school effectiveness is often performance in examinations. In this study, performance in KCPE is regarded as the indicator of school effectiveness.

**School improvement:** Focuses on raising the level of outcomes of school processes. It involves an analysis of what is needed to raise performance examinations, specifically KCPE in this study.
**Expectations:** Includes the targets set by schools, community and pupils themselves with regard to performance in all examinations, with the major focus being performance in KCPE.
CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

The literature reviewed in this chapter is focused on importance of national examinations in the country, the general performance of the exam nationally and the response among the citizenly to the results. It also addresses factors that have been identified through studies as causing poor performance in national examinations in different parts of the country. The means by which schools effectiveness and improvement can be ensured from an international standpoint are enumerated, while the role of evaluation, expectation and orderliness in performance are discussed.

In Kenya, like in many other countries, public examinations provide a means of measuring students' achievement at the end of a cycle. They are also used as a means of selection for educational advancement and employment (Wasanga and Kyallo, 2007, Muola, 2010). At the end of the 8-years primary school cycle, pupils take the Kenya Certificate of Primary Education (K.C.P.E.) examination. This is administered nationally by the Kenya National Examinations Council (K.N.E.C) which is also responsible for setting and regulating the examinations. It is also mandated with the duty of ensuring that the exams are suitable for purposes of achieving national education objectives.

The release of the results is awaited with anxiety by the candidates, parents, schools and the communities. This anxiety is indicative of the value that the results hold for all concerned.
2.1 The importance of national examinations (K.C.P.E. and K.C.S.E.)

The KCPE and KCSE (Kenya Certificate of Secondary Education) results are a key factor in judging both the performance of individuals and the schools. KCPE is done as a summative examination at the completion of the 8-years cycle of primary schooling, while KCSE is done at the completion of the 4-years secondary school cycle. The grades obtained by the candidates and the overall schools’ performance are viewed to be accurate indicators of a pupil's academic ability, and the school's effectiveness (Onderi & Croll, 2008). KCPE results usually determine the type of secondary school the learner will join at form one. In Kenya secondary schools are classified as national, provincial and district schools, in descending order of prestige and resourcing. Performance in the national KCSE examination is also often reflective of the type of school, with the national and provincial schools generally performing better than the District schools. It is the performance at KCSE that again influences whether or not the individual will join institutions of higher learning after form four.

For these reasons, performance in KCPE is very critical explaining why it causes such anxiety in the country. It is for the same reasons that accusations and counter accusations are traded between the Ministry of Education (MoE), teachers and parents when performance is poor (Daily Nation Dec. 29 2010; Nyangosia, 2011; Mworia, 1993; Eshiwani, 1983).

2.2 General performance of KCPE in Kenya

A study conducted by KNEC in 2007 reveals that there has been continued decline in performance in KCPE in most of the 8 provinces in the country year after year. The decline has been associated with lack of monitoring of learning achievement systems that could provide a basis for intervention strategies to address the weaknesses portrayed by candidates, before they take the national examinations (Wasanga & Kyalo, 2007).
According to reports in national media, there has been a progressive decline in the highest mark scored by the top candidate every year. The marks are 460, 438 and 434 in 2008, 2009 and 2010 respectively. Private schools continue to perform better than public schools with the top ten performers nationally being from private schools in 2010. Every year the blame game is repeated at the realization that yet again performance has declined.

The Ministry of Education (MoE) makes statements about what schools and teachers are supposed to do to improve. These statements unfortunately do not alter the fate of the children which to a large extent has been sealed by their results (Daily Nation, Dec. 29 & 30th 2010; The Star, Dec. 29th 2010.)

2.3 Response to performance in national examinations

Concern over performance in national examinations has always been raised every year when results are released. This indicates that the national expectations of the candidates are most often not realized. Different reasons from different perspectives are given.

These reactions however fail to address the root causes of the performance being discussed, whether good or bad. This has generated several studies being carried out in various parts of the country in an attempt to bring to light the factors that do influence the observed poor performance. Studies conducted by Muola (2010), Gitau (2008), Onderi & Croll (2008), Mugo (2003), Mworia (1993), Kibui (1993), Magori (1990), Kariri (1984), and Eshiwani (1983) on factors that influence performance in national examinations have identified a wide range of factors, some of which are common to all regions while others are unique to some regions.

Muola (2010) in studies conducted in Machakos district identifies motivation generated from the encouragement from home as critical to performance in KCPE. Onderi & Croll (2008) reporting from Western Kenya list teacher quality, physical and material resources and type
of school as key factors influencing performance in KCSE. Parental role in demanding higher performance in private schools is quoted by Mugo (2003), reporting from Kirinyaga district. Teacher quality is also emphasized in studies by Ong’uti (1987) and Ochanda (1983) in Kakamega district and, Kisii and Kisumu municipalities respectively. Mworia (1993) from Meru lists a wide range of factors including inadequate resources, teacher transfers, absenteeism among learners and teachers and inadequate parental involvement. Eshiwani (1983) combines all the factors and categorizes them as school resources and processes, teacher characteristics and student traits.

From all these studies, some factors that have been proposed to be responsible for the poor performance in exams include:- insufficiency of teaching/learning resources; poor administration and management styles; teachers’ qualifications, experience, commitment, teaching styles and morale; parents’ level of education and socio-economic status; size of the school including pupil population, number of teachers; discipline, absenteeism, inspection (or lack of it) by QAS Officers and, in-servicing of teachers and head teachers. The factors can be grouped into broad categories as follows:

1. Characteristics of the school inclusive of administration and management, culture of the school, material and physical resources management, size and type of the school.

2. Characteristics of teachers which include qualifications, experience, commitment and teaching styles.

3. Student characteristics which may involve socio-economic background and parents level of education, level of motivation (intrinsic) and career aspirations.

4. School- community relations inclusive of such factors as the community’s attitude and contributions to the schools, and the expectations of the school by the community.
The findings of the studies show that the combination of these factors directly or indirectly influence performance in national examinations.

### 2.4 School effectiveness and school improvement

According to Haris & Bennet (2001), school effectiveness is premised upon measurement of school outcomes which often focus on performance in examinations. It also focuses on quantifying differences in performances of different schools. An effective school is one whose performance in examinations is high, while an ineffective school posts low grades in examinations.

School improvement addresses the different ways that can be used to raise the outcomes i.e to raise the effectiveness of a school. Comparison of performance between different schools in common examinations, and in all other characteristics of the schools would highlight what one school has that is presumed to facilitate better performance. It is presumed that the poorer performing school would improve if it is provided with similar facilities (Eshiwani, 1983; Haris & Bennet, 2001; Onderi & Croll, 2008).

In an effort to provide all schools with adequate teaching and learning resources for effectiveness, the government introduced Free Primary Education (FPE) in 2003. This was meant to ensure equity and thus equality in performance in all public schools. Projects like SPRED (Strengthening Primary Education), KESSP (Kenya Education Sector Support Program), SMASE (Strengthening of Mathematics and Science Education), capacity building for all staff, review of the Education Act and continuous review of the curriculum are some of the efforts made to raise effectiveness and improvement in public schools.

Despite these efforts, performance in KCPE has remained below average for the larger percentage of candidates every year. Public schools’ performance remains persistently below that of private schools. girls’ performance continues to be below the boys’ (except in
languages) and the dissatisfaction among many stakeholders continues an abated (Daily Nation, Dec. 29th & 30th, 2010).

2.5 The role of evaluation in schools' effectiveness and improvement

According to Nevo (1995), the main function of students' evaluation is to provide information for the improvement of learning, or to certify an individual's educational achievements. The results of students' evaluation are used for school accountability, focusing on the school as the driving force behind the students' observed performance in the evaluation.

Summative evaluation at the end of a course of study is used to certify that a student has achieved whatever they were expected to achieve, in preparation for the next stage of education. Formative evaluation provides feedback for improvement. It indicates the student's relative status at the time the evaluation was done. It should be used to provide information to the student, the parent and the teacher so that the student's efforts can be directed more profitably, and that guidance may be more effective (Nervobig & Klausmeier, 1974; Renner et al, 1978).

Regular evaluation gives constant information so that when a terminal examination is administered, the grades are rarely a surprise and therefore not threatening (Chiarelott et al, 1994). This implies that if learners' performances in formative examinations in all classes are carefully analyzed, and their efforts profitably directed, the performance in the summative KCPE examination in class 8 should not be a surprise for it would relate positively with the examinations done previously.

If the marks a pupil gets are lower than the parent expects, the pupil is often put under pressure to perform better, or they become critical of the teacher or the school (Nervobig & Klausmeier, 1994). This is the pressure exerted on schools and teachers every time KCPE
results are released that fail to satisfy all stake holders. According to Haris & Bennet (2001), this pressure upon schools to improve and raise performance is unlikely to recede over the next few years.

2.6 The function of expectation on school effectiveness and improvement

From a study on the relationship between academic achievement motivation and home environment, it was found that a home where a child is encouraged generates greater motivation towards high academic achievement (Muola, 2010). Often the pupil attempts to perform to the parent’s expectations. One basic tenet of learning is that people tend to rise up to or fall down to the level of expectation conveyed on them (Rosenthal & Jacobson, 1968).

According to Sizer (1984), effective schools with high academic performance have expectations that are communicated early and the rewards for high performance clearly articulated. This agrees with Griffin (1994), who explains that boys at Starehe Boys Centre are officially informed of what is expected of them in academic performance immediately they report to form one. From this a culture is established by which all the students abide. According to Sizer (1984), where teachers have reached the point of negotiating students’ behavior so that students have no demands made on them regarding performance, their performance in examinations is poor.

2.7 The role of orderliness in school effectiveness and improvement

The orderliness with which a school is maintained is reflective of the degree of effectiveness in management. Orderliness includes orderly programs and routines that pupils are cultured into. It is inclusive of the neatness with which the entire school compound is maintained. An orderly, well coordinated, programmed school generally creates an effective learning atmosphere and thus good performance in examinations (Chiarellott et al, 1994).
While school buildings have a certain amount of commonality, the décor of a school is unique to each school, and to the classroom indicative of the effort made to create the atmosphere that will produce the desired results by the head teacher and the class/subject teacher in charge respectively.

Orderly programs allow teachers to organize their teaching schedules and follow them effectively without interruptions by extra activities. This allows them to comprehensively complete the syllabus for each class within the scheduled time frame Chiarellot et al, (1994).

Content in primary school is organized in a cycle such that the content for a class is based on the previous years' content, for example class 8 social studies content is wholly based on similar content for class seven (K.I.E, 2004). An orderly school allows completion of class 7 content within its year thus allowing for effective revision in class 8. The performance in examinations done in class 7 should thus relate positively with that in class 8 and eventually in KCPE.

2.8 Summary of literature review

The performance in national examinations is important for the individual candidate, the parent, the school, the community and the nation. Every effort needs to be made to ensure that each candidate performs at their maximum potential. In order to ensure equity, equality in performance, access for all, and most important quality and relevance, all schools should be provided with adequate resources.

From the literature reviewed, identification of the factors that are presumed to influence performance from both international and national perspectives has been done. The gap found is the absence of a determination of the significance of these factors or, the measure of strength by which the factors singly or jointly influence KCPE performance in different schools. This study was thus meant to test for the relationship between and, the significance
the factors with performance in KCPE. This would help to identify what each school needs to address first in order to improve its performance. This is based on the fact that each school and community has its own peculiar characteristics thus the recipe that improves one school may differ from that of another school.
CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter includes the methodology of the study in which the research design, location, target and sample population are given. The sampling technique, data collection and instruments, piloting and data analysis are outlined.

3.1 Design of the study

The study was carried out through descriptive survey design. Descriptive design is appropriate as it allows study of a part of a population representative of the whole population thus is logistically easier to conduct. It provides the foundation upon which correlation studies emerge, allows for the generation of hypotheses instead of testing them and explains events as they are, as they were and as they will be (Osu & Onen, 2009; Mugenda, 2008).

Descriptive survey allows description of the KCPE results in the fifteen schools and the factors that may explain this performance as described by the respondents involved in the study. Descriptive survey design is used in preliminary and exploratory studies to allow a researcher to gather information, summarize, present and interpret for purposes of clarification (Orodho, 2008). It is intended to generate statistical information about aspects of the population that interest policy makers without manipulating any variable (Borg & Gall, 1989).

The relationship between KCPE results and formative examinations which had been done prior to KCPE was investigated. It included a study of school characteristics, orderliness and expectations and their relationship with performance in KCPE (as explained in the hypotheses). Correlation analysis shows the magnitude and direction of the correlation
Descriptive analysis of responses provided insight into possible causes of the current state of performance in KCPE in the schools studied and, tools for prediction of possible future outcomes in KCPE.

3.2 Location of the study

Gitugi education zone is in Gitugi administrative division of Mathioya District. The zone is one of the four education zones in the District which include Gitugi, Kiriti, Kiru and Kamacharia.

The division measures 51.2 square kilometers, with a population of 22,863, with less than half being children of primary school going age. There are fifteen primary schools in the zone, only one of which is private. The terrain is highly ridged, making it difficult to cross from one ridge to another as the road network is very poor. There is one major road which is a dry weather road running across the zone.

The population consists mainly of subsistence farmers with a few doing dairy farming. The main economic mainstay has been coffee and with the dwindling fortunes from coffee, the level of poverty in the area is quite high.

3.3 Target population

The target population was all the 5325 learners, 161 teachers in the fifteen primary schools, 1331 parents and, the community of Gitugi education zone, Mathioya District (Zonal Education office, Gitugi). The learners provided information on what influences their learning and performance in examinations; the teachers gave insight on what the schools need to improve performance while parents highlighted their expectations and contribution towards the schools' performance.
3.4 Sample population

Ten of the 15 schools constituted the sample, which is sixty seven percent (67%) of the total number of primary schools in the zone; out of the total parent population, two with learners in classes 7 and 8 from each school were involved making a total of twenty from the ten schools. The one private school was included among the ten resulting in 100% representation. The sample consisted of 266 respondents which included 204 learners, 29 teachers, 10 head teachers 20 parents and 3 opinion leaders. The learners were selected from an estimated 900 learners in classes 7 and 8 in the 15 schools. Three opinion leaders including the area chief, councilor and a village elder were included of private schools.

The sample size out the 10 schools is about 30% of the total population of pupils in classes 7 and 8 in the schools. A sample size of 30% is regarded as an appropriate representation of a population. Systematic random sampling of the schools allowed for inclusion of all the differences in subgroups thus reducing bias. (Orodho, 2009; Mugenda, 2008; Brown & Saunders, 2008).

3.4.1 Sampling technique

The single private school was selected through purposive sampling technique. The remaining 14 schools were sorted alphabetically and 10 schools were selected using systematic random sampling which allows for the representation of all categories of the schools without bias. The same was used to select respondents from classes 7 and 8, purposively selected, where every k\textsuperscript{th} subject was selected from a random point (k=N/n as given in the sampling matrix Table 3.1 below). The 29 teachers, 10 head teachers, 20 parents and 3 opinion leaders were chosen purposively to provide focused information and save on time and money (Osu & Onen, 2009; Mugenda, 2008).
Table 3.1 Sampling Matrix Table

<table>
<thead>
<tr>
<th>School</th>
<th>Target population (N)</th>
<th>**Sample population (n)</th>
<th>Percentage (%)</th>
<th>Sampling technique</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gitugi</td>
<td>80</td>
<td>20</td>
<td>25</td>
<td>*systematic random sampling for choice of schools</td>
</tr>
<tr>
<td>Githendu</td>
<td>85</td>
<td>22</td>
<td>26</td>
<td>sampling for choice of schools</td>
</tr>
<tr>
<td>Kiuu</td>
<td>55</td>
<td>12</td>
<td>25</td>
<td>**optimal allocation for sample size</td>
</tr>
<tr>
<td>Ruiru</td>
<td>30</td>
<td>10</td>
<td>33</td>
<td></td>
</tr>
<tr>
<td>Bright Star</td>
<td>25</td>
<td>8</td>
<td>32</td>
<td></td>
</tr>
<tr>
<td>Chui</td>
<td>80</td>
<td>20</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>Kambara</td>
<td>80</td>
<td>20</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>Mihuti</td>
<td>140</td>
<td>36</td>
<td>26</td>
<td></td>
</tr>
<tr>
<td>Ngutu</td>
<td>90</td>
<td>26</td>
<td>29</td>
<td></td>
</tr>
<tr>
<td>Nyangiti</td>
<td>76</td>
<td>20</td>
<td>26</td>
<td></td>
</tr>
</tbody>
</table>


3.5 Piloting

One school which was easily accessible within the study area was used for piloting of the research instrument (Mugenda, 2008). Ten pupils from each of classes 7 and 8, the head teacher, senior teacher and two class teachers were involved. Piloting was necessary to determine whether the questionnaire items effectively addressed what the researcher intended, whether the items were clear not ambiguous and whether the language used was appropriate. Some of the questions were rephrased after the piloting. The piloting helped to determine the validity and reliability of the questionnaire items.

3.5.1 Validity of the instruments

Validity is the degree to which a test measures what it purports to measure (Orodho, 2009; Osu & Onen, 2009). The content validity of the research instruments was judged through the
expert judgments of the supervisors whose recommendations were incorporated into the final questionnaire.

3.5.2 Reliability of the instruments

Reliability is a measure of the degree to which a particular measuring procedure gives consistent results over a number of repeated trials (Orodho, 2009). The split-half method was used whereby one scale for each variable is developed which is then split in half. The extent of correspondence between the ‘halves’ is tested using coefficient of equivalence (Mugenda, 2008). The Spearman-Brown prophecy formula is used to test the reliability of the coefficient of equivalence obtained.

The formula is given as

$$r' = \frac{2r}{1+r}$$

Where $r'$ is the corrected reliability coefficient

$r$ is the reliability coefficient from the original calculation.

The calculated coefficient was 0.8626. According to Kathuri & Pals, 1993, a value of 0.70 is acceptable.

3.6 Data collection

Data was collected over a span of one month during which questionnaires for the teachers and learners in each school were administered to the respondents and collected on the same day in most of the schools. There being zonal exams going on over the same period for class 8 forced an extension of the time scheduled. Interview schedules were used for the parents and leaders, while resource inventory schedules or check list were used to record the resources available in each school in collaboration with the deputy head teacher. Performance in examinations was recorded as given from the different schools. All schools
gave the mean scores for performance in 2011 KCPE, mock examination, 2011 and, end of class 7, 2010 except the private school. Five schools gave the raw KCPE scores and the other formative exams (Appendix I).

3.6.1 Logistical considerations

The logistics for data collection include the pre-field work, field work and the post-field work. Pre-field work included obtaining approval and an introductory letter from Graduate School, Kenyatta University which allowed the researcher to obtain a research permit from the Ministry of Education. Approval from the District Education Office to visit the schools was sought. Preparing the research instruments and pre-testing them served to ensure that they addressed all the issues the researcher sought accurately.

Field work involved distribution and collection of instruments to and from respondents in their stations, for both pre-testing and actual collection of data.

Post-field work involved data coding, analysis and interpretation. It involved compiling of the research draft report, presentation of the preliminary findings and submission of final report.

3.6.2 Ethical considerations

The major ethical problem in this study was privacy and confidentiality. The fear of intimidation from the administration for teachers and learners was overcome by the assurance by the researcher that their responses would be held in strict confidence, and that they would be anonymous. Head teachers were assured that they would receive the report once the work was complete. All respondents were free to respond to items they were comfortable with thus worked under informed consent (Scott & Usher, 2011; Mugenda, 2008; Kombo et al, 2006).

3.6.3 Research instruments

Questionnaires were used with head teachers, teachers and learners. According to Orodho (2009), questionnaires are suitable and are commonly used to collect information about a
population, which otherwise cannot be directly observed. They also allow for anonymity thereby allowing respondents to freely give their views. Closed-ended questions were mostly used. Very few open-ended questions were used mainly to add necessary detail to a closed-ended response (Mugenda, 2008).

Interview schedules were used with the local leaders and parents which allowed details to be added that otherwise may not have been realized through the questionnaire. According to Osu & Onen (2009), an interview schedule is suitable on a small population where more detail and variation of responses is sought. The schedule was thus used with 20 parents and 3 opinion leaders.

3.7 Data analysis

Data analysis refers to the computation of certain measures along with searching for patterns of relationships that exist among data groups. It involves a search for relationships or differences supporting or conflicting with original or new hypothesis (Kothari, 2010).

The data collected was both qualitative and quantitative data and appropriate statistical methods of analysis were used for each. It was organized in tables and graphs for easier and comprehensive analysis and interpretation. Descriptive statistics including measures of dispersion and association were used. Z-scores were used to describe the degree of variation in performance in KCPE among the schools. There being no assurance that the population studied is normally distributed, non-parametric statistics were found appropriate (Healey, 1993; Siegel & Castellan, 1988). To this end the data collected was coded, consolidated and ranked.

The significance of the independent variables under study with performance in KCPE, the dependent variable, was tested using the Spearman’s Rank correlation coefficient, $r_s$. This is a
suitable statistic to measure the strength of association between variables when the variables are measured on an ordinal scale (Brown & Saunders, 2008; Grimm, 1993).

Spearman’s Rank correlation coefficient ($r_s$) was computed using the formula below:

$$r_s = 1 - \frac{6 \sum d^2}{n(n^2-1)}$$

Where $r_s =$ Spearman’s correlation coefficient

$d =$ difference between ranks of pairs of two variables

d' = square of the difference ranks of pairs of variables

$n =$ number of pairs of observations

$n^2 =$ square of the number of observations

$\Sigma =$ summation
CHAPTER FOUR
DATA ANALYSIS, RESULTS AND DISCUSSION

4.0 Introduction
This chapter contains the research findings presented in tables, percentages, distribution curves and the Spearman's Rank correlation coefficient, $r_s$. Analysis of the research findings is done in line with the stated research questions, objectives and hypotheses. To this end the analysis is outlined under five sub-headings as guided by the research objectives. Interpretation of the findings is done showing and describing the presence or absence of relationships between the factors studied and performance in KCPE.

1. Variation in KCPE performance
In the ten schools studied, variation in performance in KCPE in the last five years from 2007 to 2011 sought by the first research question is shown on line graphs. The trend in performance across the years is depicted on distribution line graphs. This is accompanied by the range which shows the difference between the highest and lowest scores in various schools.

2. Formative evaluation and KCPE performance
Using the Spearman rank correlation coefficient, the relationship between performances in formative evaluation and KCPE is shown addressing the second research objective. The formative examinations used include the KCPE mock examination and the entry into class 8 examination done at the end of class 7 the previous year (2010)
3. School characteristics and KCPE performance

The same coefficient was used to test for the relation between school characteristics and performance in KCPE. School characteristics as a feature under study includes several characteristics as size of the school, number and qualification of teachers, teachers' workload and, sufficiency and state of resources.

4. Expectations and performance in KCPE

Expectations include setting of targets on KCPE performance at class 8 and, assessment on acceptance and satisfaction with previous performance in KCPE among teachers and head teachers.

5. Orderliness and KCPE performance

Orderliness refers to the presence of clear programs on exams, homework, syllabus completion and a clean and conducive learning environment.

4.1 Variation in KCPE performance among the schools

Performance in KCPE from 2007 to 2011 in the ten schools studied is given in Table 4.1 below. The trend in that performance is shown in Figure 4.1.
Table 4.1: KCPE Mean scores for the ten sample schools

<table>
<thead>
<tr>
<th>Rank</th>
<th>School</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Githendu</td>
<td>249.35</td>
<td>293.33</td>
<td>287.39</td>
<td>273.91</td>
<td>304.38</td>
</tr>
<tr>
<td>2</td>
<td>Bright Star</td>
<td>295.4</td>
<td>306.59</td>
<td>275.76</td>
<td>286.62</td>
<td>293.72</td>
</tr>
<tr>
<td>3</td>
<td>Kiuu</td>
<td>244.94</td>
<td>262.14</td>
<td>252.64</td>
<td>239.9</td>
<td>238.69</td>
</tr>
<tr>
<td>4</td>
<td>Ngutu</td>
<td>220.29</td>
<td>214.67</td>
<td>232.02</td>
<td>234.43</td>
<td>232.71</td>
</tr>
<tr>
<td>5</td>
<td>Nyangiti</td>
<td>213.62</td>
<td>221.07</td>
<td>226.1</td>
<td>226.3</td>
<td>222.19</td>
</tr>
<tr>
<td>6</td>
<td>Chui</td>
<td>233.92</td>
<td>244.04</td>
<td>221.47</td>
<td>219.47</td>
<td>212.11</td>
</tr>
<tr>
<td>7</td>
<td>Mihuti</td>
<td>223.18</td>
<td>193.45</td>
<td>212.96</td>
<td>237.12</td>
<td>209.4</td>
</tr>
<tr>
<td>8</td>
<td>Ruiru</td>
<td>178.18</td>
<td>195.3</td>
<td>235.67</td>
<td>241.94</td>
<td>205.2</td>
</tr>
<tr>
<td>9</td>
<td>Gitugi</td>
<td>202.95</td>
<td>216.79</td>
<td>209.35</td>
<td>206.52</td>
<td>202.42</td>
</tr>
<tr>
<td>10</td>
<td>Kambara</td>
<td>215.82</td>
<td>223.41</td>
<td>226.92</td>
<td>222.19</td>
<td>200.96</td>
</tr>
</tbody>
</table>

i. Source: TAC Tutor office, Gitugi education zone, Murang’a county
The graph shows the inconsistency in performance year after year in all the schools. All the schools marked an improvement in performance in 2008 from 2007. In the following years, eight out of the ten schools recorded on average, a continued decline with the lowest mean average of 226.84 being recorded in 2011 since 2007. The two top performing schools on average show an upward trend in performance from 2008 to 2011.

As shown in table 4.2 below, KCPE performance in 2011 ranged from a mean score of 304.38 to 189.16, producing a range of 115.22 among the fifteen schools. The mean for the schools is 226.84, thus ten (10) of the schools have a performance below the mean.
Table 4.2 Ranking in KCPE performance in 2011

<table>
<thead>
<tr>
<th>Rank</th>
<th>School</th>
<th>Mean score</th>
<th>z-score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Gitbendu</td>
<td>304.38</td>
<td>2.423</td>
</tr>
<tr>
<td>2</td>
<td>Bright Star</td>
<td>293.72</td>
<td>2.090</td>
</tr>
<tr>
<td>3</td>
<td>Kanjahi</td>
<td>243.94</td>
<td>0.534</td>
</tr>
<tr>
<td>4</td>
<td>Kiuu</td>
<td>238.69</td>
<td>0.370</td>
</tr>
<tr>
<td>5</td>
<td>Ngutu</td>
<td>232.71</td>
<td>0.183</td>
</tr>
<tr>
<td>6</td>
<td>Yakarengo</td>
<td>223.63</td>
<td>-0.100</td>
</tr>
<tr>
<td>7</td>
<td>Gakambura</td>
<td>223.00</td>
<td>-0.120</td>
</tr>
<tr>
<td>8</td>
<td>Nyangiti</td>
<td>222.19</td>
<td>-0.145</td>
</tr>
<tr>
<td>9</td>
<td>Chui</td>
<td>212.11</td>
<td>-0.460</td>
</tr>
<tr>
<td>10</td>
<td>Mihuti</td>
<td>209.40</td>
<td>-0.545</td>
</tr>
<tr>
<td>11</td>
<td>Ruiru</td>
<td>205.20</td>
<td>-0.676</td>
</tr>
<tr>
<td>12</td>
<td>Gitugi</td>
<td>202.42</td>
<td>-0.763</td>
</tr>
<tr>
<td>13</td>
<td>Karung’e</td>
<td>201.15</td>
<td>-0.803</td>
</tr>
<tr>
<td>14</td>
<td>Kambara</td>
<td>200.96</td>
<td>-0.809</td>
</tr>
<tr>
<td>15</td>
<td>Kanoro</td>
<td>189.16</td>
<td>-1.178</td>
</tr>
</tbody>
</table>

Source: Zonal Education office, Gitugi education zone

From the z-scores, the two top performing schools are more than 2 standard deviations above the mean implying that their performance is far above that of the other schools. The bottom ten schools have negative z-scores, thus their performance is below the zonal mean with the lowest performance being more than 1 standard deviation below the mean.

Table 4.3 below shows the distribution of the performance when the mean scores are organized into classes. Only two schools have scores above 250 out of the total score of 500. The gap between the two schools and the others is shown by the absence of scores between 250 and 289.
Table 4.3  KCPE performance mean scores distribution – 2011

<table>
<thead>
<tr>
<th>Score</th>
<th>frequency</th>
<th>Z-score</th>
</tr>
</thead>
<tbody>
<tr>
<td>180-189</td>
<td>1</td>
<td>-1.178</td>
</tr>
<tr>
<td>190-199</td>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td>200-209</td>
<td>4</td>
<td>-0.755</td>
</tr>
<tr>
<td>210-219</td>
<td>2</td>
<td>-0.500</td>
</tr>
<tr>
<td>220-229</td>
<td>3</td>
<td>-0.122</td>
</tr>
<tr>
<td>230-239</td>
<td>2</td>
<td>0.227</td>
</tr>
<tr>
<td>240-249</td>
<td>1</td>
<td>0.434</td>
</tr>
<tr>
<td>250-259</td>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td>260-269</td>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td>270-279</td>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td>280-289</td>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td>290-299</td>
<td>1</td>
<td>2.090</td>
</tr>
<tr>
<td>300-309</td>
<td>1</td>
<td>2.423</td>
</tr>
</tbody>
</table>

This distribution is shown in Figure 4.2a below. It shows that the performance is skewed to the right thus indicating that the zonal mean is below 250. It also implies that most of the schools are clustered at this level of performance.
Figure 4.2b below shows the distribution of the raw 2011 KCPE individual candidate scores obtained from five schools. (The table showing the distribution of their scores is given in Appendix I). Three of the schools (Nyangiti, Chui, Ruiri) with a total candidate population of 103, are skewed to the right thus most of their candidates scored below 250 marks. Kiuu with a population of 29 shows a near normal distribution, while Githendu with 34 candidates is skewed to the left thus most of the candidates scored above 250 marks.
4.2 Formative evaluation and performance in KCPE

Table 4.4 below shows the Mean Scores (MS) obtained by nine of the schools studied in the two formative examinations, the end-of-year 2010 exam and the joint mock exam in 2011 and their ranks. (Results of these examinations were not available from the one boarding school in the sampled schools)
Table 4.4  Formative examination results, 2011 and 2010

<table>
<thead>
<tr>
<th>KCPE 2011 Rank</th>
<th>Mock exam 2011</th>
<th>Mock exam rank</th>
<th>End-of-year exam 2010</th>
<th>2010 exam rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>288.27</td>
<td>1</td>
<td>280.85</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>233.70</td>
<td>3</td>
<td>233.94</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>243.98</td>
<td>2</td>
<td>218.54</td>
<td>5</td>
</tr>
<tr>
<td>4</td>
<td>228.36</td>
<td>4</td>
<td>241.80</td>
<td>2</td>
</tr>
<tr>
<td>5</td>
<td>225.29</td>
<td>5</td>
<td>241.00</td>
<td>3</td>
</tr>
<tr>
<td>6</td>
<td>225.29</td>
<td>8</td>
<td>212.13</td>
<td>8</td>
</tr>
<tr>
<td>7</td>
<td>219.04</td>
<td>9</td>
<td>192.38</td>
<td>9</td>
</tr>
<tr>
<td>8</td>
<td>181.67</td>
<td>6</td>
<td>216.56</td>
<td>6</td>
</tr>
<tr>
<td>9</td>
<td>212.44</td>
<td>7</td>
<td>215.92</td>
<td>7</td>
</tr>
</tbody>
</table>

The Spearman rank coefficient ($r_s$) calculated for the KCPE 2011 and the mock exam, 2011 is 0.8500. The calculated $r_s$ value for KCPE 2011 exam and the end-of-year 2010 exam is 0.733. The critical value of $r_s$ at a significance level $\alpha$ of 0.05 and $N=9$ is 0.700, (where $N$ is the number of items).

The two calculated values are greater than the critical value of 0.700, that is $0.85 > 0.700$ and $0.733 > 0.700$ respectively. This implies that there is a significant relationship between performance in formative examinations and performance in KCPE. This agrees with teachers' responses whereby 90% responded that performance in class eight is 'strongly dependent' on performance in class seven. Thus, the null hypothesis that 'there is no significant relationship between performance in KCPE and formative evaluation examinations in Gitugi Education zone' is rejected and the alternative hypothesis accepted that 'there is a significant relationship between performance in KCPE and formative evaluation in Gitugi education zone'. This agrees with reports by Renner (1978), Chiarellot (1994) and Cheng (2005) who
separately explain that regular evaluation gives constant information so that when a terminal examination is administered the grades are rarely a surprise.

4.3: School characteristics and performance in KCPE

Two sets of values for the Spearman’s rank coefficient ($r_s$) were calculated. These were from learners’ responses and, from teachers’ and head teachers’ responses.

4.3.1 Learners’ responses on school characteristics

Learners were asked to express their satisfaction with the resources available in their school, classroom and text books on a rating scale of good, fair, bad and very bad. Most learners in all the schools seemed satisfied giving a rating of ‘good’ at 86%, 10% at ‘fair’, with the remaining 4% at ‘bad’. None gave the response at ‘very bad’. This is shown in Figure 4.3 below.

![Figure 4.3: Learner responses to school characteristics](image)

The coefficient obtained from learners’ responses was 0.4212 against a critical value of 0.649. Since 0.4212 is less than 0.649, the null hypothesis that ‘There is no significant relationship between KCPE performance and resources in Gitugi education zone’ is accepted.
Despite the differences observed by the researcher between schools in positions 1, 2, and 4 which were the best resourced against schools in positions 3, 5 and 6 with their poor and meager resources, over 90% in the latter group responded that the resources were ‘good’.

4.3.2 Teachers’ responses on school characteristics

Teachers’ responses were separated into different categories to allow for analysis of the different characteristics of the schools. These include:-

i. school size (total number of learners) and the number of teachers giving a ratio of learner population to teachers.

ii. professional qualification of teachers.

iii. teachers’ average work load.

iv. availability and sufficiency of teaching/learning resource and class size.

Table 4.5 below gives the results on teacher qualifications as percentages of total number of teachers involved in all the ten schools.

Table 4.5 Teachers’ qualifications

<table>
<thead>
<tr>
<th>Qualifications (%)</th>
<th>Degree</th>
<th>Diploma/P1</th>
<th>P L</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teachers</td>
<td>10</td>
<td>34</td>
<td>49</td>
<td>7</td>
</tr>
<tr>
<td>Head teachers</td>
<td>30</td>
<td>0</td>
<td>50</td>
<td>20</td>
</tr>
</tbody>
</table>

Out of the 39 teachers involved, 93% are basically professionally trained P1 certificate holders. Fifty percent of head teachers hold the same certificate. In the three top performing schools, all the teachers (including head teachers) involved hold the same P1 certificate; two of their head teachers additionally have Bachelor of Education degrees. Four of the 29 teach-
ers hold a Bachelor of education degree giving a 10% representation. Thirty four percent of the 29 hold both a diploma in Early Child Development and the P1 qualification. The remaining 7% include A-level, P2 or P3 certificate holders who are ATS certified. Among head teachers, 30% hold degrees, 20% are ATS holders and 50% hold P1 certificates only.

The different qualifications were coded and totaled for each school from which ranking was done. From the ranking, a Spearman’s rank coefficient, \( r_s \) value of 0.033 was computed leading to an acceptance of the hypothesis that ‘there is no significant relationship between the professional qualifications of teachers in Gitugi education zone and performance in KCPE’. This contradicts results of a study conducted by Onderi & Croll (2008) in Gucha district secondary schools which showed strong correlation between qualifications of teachers and performance.

Tables 4.6 and 4.7 below give the findings on school- and-class sizes, teacher workload and availability of teaching/learning resources.

Table 4.6 below gives the findings on teacher: learner ratio and teachers’ average workload

<table>
<thead>
<tr>
<th>2011 school rank</th>
<th>KCPE</th>
<th>Teacher: learner ratio (t:1)</th>
<th>Teachers’ average workload</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>39</td>
<td>39.7</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>21</td>
<td>34</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>27</td>
<td>35</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>32</td>
<td>37.3</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>32.1</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>34</td>
<td>35.2</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>42</td>
<td>39.7</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>16</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>40</td>
<td>37.7</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>31</td>
<td>38.3</td>
<td></td>
</tr>
</tbody>
</table>
Two aspects of resources were assessed. These were the teachers and learners views on availability and adequacy of resources and, the actual availability and adequacy from the resources checklist as detailed by the deputy head teacher. The rank coefficients obtained were 0.4545, 0.4212 and 0.609 from teachers, learners and resource checklist respectively. The Spearman’s rank coefficients for all these school characteristics are given in Table 4.7 below.

Table 4.7: Spearman’s rank coefficients (r_s) for school characteristics

<table>
<thead>
<tr>
<th>School characteristic</th>
<th>Rank order coefficient (r_s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learner population: number of teachers ratio</td>
<td>0.2833</td>
</tr>
<tr>
<td>Average work load</td>
<td>0.3727</td>
</tr>
<tr>
<td>Professional qualification</td>
<td>0.0333</td>
</tr>
<tr>
<td>Teaching/learning resources (learners)</td>
<td>0.4212</td>
</tr>
<tr>
<td>Teaching/learning resources (teachers)</td>
<td>0.4545</td>
</tr>
<tr>
<td>Teaching/Learning resources (deputy H/T)</td>
<td>0.6090</td>
</tr>
<tr>
<td>Class size</td>
<td>0.2110</td>
</tr>
</tbody>
</table>

From Table 4.7, all the coefficients obtained are lower than the critical value of 0.649 at a significance level of 0.05 and N=10. The null hypothesis is thus accepted that ‘there is no significant relationship between school characteristics and performance in KCPE in Gitugi education zone’. This seems to agree with Hanushek (1999) who observes that there appears to be no systematic relationship between students’ achievement and school inputs when
different areas are studied thereby concluding that there is no statistical significance between them. This is based on the realization that there are conflicting observations from different areas. The resources checklist result is significant at a level of significance 0.1 whose critical value is 0.564, which makes for the rejection of the null hypothesis and acceptance of the alternative hypothesis that "there is a significant relationship between school characteristics and performance in KCPE". In a similar study conducted in Gucha District secondary schools, those with better infrastructure appeared to produce better results. This result would imply that resources influence the schools' differences in performance in KCPE but to a low extent since most have near similar quantities. Of the top four ranked schools in KCPE the most adequately resourced is position 4, while the most inadequately provided with resources occupies position 3. Overall the school that ranks position 10 is also ranked position 10 in KCPE performance. Parents' views on resources were hazy. Most did not know the specifics that their children needed, or what their schools were lacking. The leaders were aware that all the schools in the zone had enough text books which they considered the most critical resource.

4.4: Orderliness of the school and performance in KCPE

Orderliness in this study referred to presence of established and coordinated programs for examinations, syllabus coverage, homework, discipline and cleanliness of the learning environment. More than 90% of all learners and teachers in all the schools stated that homework was given and marked by teachers most of the time. The discipline of learners was reported to be "good" in all the schools explaining why very few teachers (five out of 29 teachers) mentioned discipline as one of the means to improve performance. Most the teachers responded that they were able to complete the syllabus adequately although some head teachers differed.
Putting all these characteristics together produced a Spearman's rank coefficient, $r_s$, value of 0.297 from the learners' responses. The teachers and head teachers combined responses gave a coefficient of 0.727. Using the teachers' results allows for the rejection of the null hypothesis that 'there is no significant relationship between performance in KCPE and orderliness of the school' thus accepting the alternative hypothesis that 'there is significant relationship between orderliness and performance in KCPE. The learners' calculated coefficient implies an acceptance of the null hypothesis. It would appear that orderliness of school programs influences teachers more than it does learners.

4.5: Expectations and performance in KCPE

Expectations in this study are presumed to be implied by the presence of discussions between the learner, their parents and teachers on homework; previous performance in formative examinations; and the setting of targets the learners themselves, the teacher and the parent hope or expect the learners to attain. In general where there is satisfaction and acceptance of the current situation, targets were set very close to the current performance while where there was dissatisfaction targets were set that were either too high or too low. Learners' targets do not appear to relate to anything specific in the items given.

4.5.1 Teachers' responses on expected performance

Teachers' satisfaction with examination performance both at KCPE and in class 7 was rated on a scale of 'very good', 'good', 'satisfactory', 'poor' and 'not sure'. Their expectations on class 8 performance in KCPE this year (2012) was rated on the same scale. When their responses were coded, totalled and ranked the result agreed very closely with the KCPE ranks of their schools giving a Spearman's rank coefficient of 0.723.
4.5.2 Learners' and head teachers' responses on setting targets

Learners were asked whether or not they set their exams targets for themselves or with their teachers. Over 90% in each school responded in the affirmative. On further inquiry on the target set, only two schools had written targets on the walls. These are Githendu and Bright star schools whose targets were 310 and 320 respectively. These alternately rank in positions 1 and 2 in most examinations in the zone.

Learners in class 8 were asked to write their individual targets for the end of the year 2012 KCPE exam. Table 4.8 below gives the targets head teachers gave for KCPE and those given by their learners in class 8. Except for the top two schools mentioned above, none of the other schools had a written statement of the targets.

Table 4.8 2012 KCPE Targets set by Head teachers and class 8 learners

<table>
<thead>
<tr>
<th>2011 KCPE Rank</th>
<th>School</th>
<th>2012 KCPE H/T target</th>
<th>2012 KCPE Learners targets</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Githendu</td>
<td>310</td>
<td>280 - 440</td>
</tr>
<tr>
<td>2</td>
<td>Bright star</td>
<td>320</td>
<td>275 - 420</td>
</tr>
<tr>
<td>3</td>
<td>Kiuu</td>
<td>260</td>
<td>240 - 380</td>
</tr>
<tr>
<td>4</td>
<td>Ngutu</td>
<td>250</td>
<td>270 - 400</td>
</tr>
<tr>
<td>5</td>
<td>Nyangiti</td>
<td>240</td>
<td>280 - 420</td>
</tr>
<tr>
<td>6</td>
<td>Chui</td>
<td>280</td>
<td>240 - 360</td>
</tr>
<tr>
<td>7</td>
<td>Mihuti</td>
<td>260</td>
<td>240 - 350</td>
</tr>
<tr>
<td>8</td>
<td>Ruiru</td>
<td>245</td>
<td>270 - 370</td>
</tr>
<tr>
<td>9</td>
<td>Gitiugi</td>
<td>240</td>
<td>240 - 350</td>
</tr>
<tr>
<td>10</td>
<td>Kambara</td>
<td>250</td>
<td>230 - 340</td>
</tr>
</tbody>
</table>
Responses on setting targets asked of parents, teachers and learners were coded condensed and ranked. These combined and ranked results from learners, teachers and parents constituting the expectations gave a coefficient of 0.794.

Since 0.727 and 0.794 values are higher than the critical value of 0.649, it leads to rejection of the null hypothesis that ‘there is no significant relationship between performance in KCPE and expectations’ and acceptance of the alternative hypothesis that ‘there is a significant relationship between performance in KCPE and expectations.'

4.5.3 Learners’ responses on expectations

Learners were asked to state how often they discussed their homework and performance in examinations with their parents and/or teachers on a rating scale of very often, often, rarely or very rarely. After coding of the responses, a rank coefficient, of 0.557 was calculated relating the discussion with performance in KCPE.

Learners were asked to state whether they or the teachers set targets on a yes or no scale. The responses generated a coefficient of 0.758, while combining homework and targets gave 0.775. Combination of parent/teacher involvement, homework and target setting together gave a rank coefficient of 0.533.

Since 0.758 is greater than 0.649 (0.758 > 0.649) and, 0.775 is greater than 0.649 (0.775 > 0.649), the null hypothesis that ‘there is no significant relationship between performance in KCPE and expectations’ is rejected and the alternative hypothesis accepted, ‘that there is significant relationship between performance in KCPE and expectations’. These observations on expectations agree with Bamburg (1994), Griffin(1993) and Raffin i(1993) who explain that performance will rise as high, or drop as low as the expectations communicated.
4.5.4 Parents' responses on expectations

Out of the ten schools, a total of 19 parents were interviewed. The thrust of their questions aimed at determining how informed parents were about the performance in the schools in major examinations, their visits to the schools and the reasons for the visits, their expectations from the learners and teachers and what they thought would be their contribution to the school. Their responses were coded and ranked giving a rank order coefficient of 0.788 when compared with the KCPE performance. This implies that the community around the school which in this study constitutes the out-of-school expectations is highly significant in performance in KCPE.

Responses from the area chief, the TAC tutor in charge of the zone and the ward councilor also emphasized the critical role the community plays in influencing schools and performance. On what could be done to improve performance, 46 out of 122 different responses constituting 38% of the responses from the teachers intimated that more parental involvement in the learning of each learner would help. This agrees with other studies which explain that parents' involvement and encouragement boost a child's performance (Whalley, 2007; Muola, 2010). They also explain that schools which receive support from parents and the Management Committees, whose parents visit the schools often and whose parents appear to keenly follow the performance of their children, seem to do well. The converse is true whereby where parents seemed to complain, are ignorant and unsupportive, performance is poor.
CHAPTER FIVE
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction
This chapter presents the summary of the study on the causes and their significance, on the observed differential performance in KCPE in Gitugi education zone, Murang’a County. It also gives conclusion to the discussions out of which recommendations are made on the way forward and, on possible areas for further research to help consolidate the findings.

5.1 Summary of findings
The study was carried out in an effort to unravel the significance of the factors that inform the differences in performance in KCPE in the different schools even though (it was assumed at the outset) they were all similar in most aspects. The objectives were set geared towards assessing the extent of variation in performance among the schools, the significance of formative evaluation, school characteristics, level of orderliness and in- and out- of school expectations, on KCPE performance in the schools.

Justification for the study was established through analysis of the KCPE results over a span of five years showing that the schools have been maintaining near the same ranking across the years. The findings are hereby summarized guided by the objectives that the study sought to achieve.

5.1.1 Variation in KCPE performance
In 2011, the KCPE mean scores of the schools in the zone had a range from 189.16 to 304.38 which is equal to 115.22 marks producing 3.601 standard deviations apart. The mean was 226.84 whereby only four out of the fifteen schools had a mean above the zonal mean.
Since 2007 performance has been inconsistent in most of the schools showing a general downward trend with the exception of the two top performing schools, Githendu and Bright Star. In general most learners in all the schools perform below the mean, resulting in distributions that are skewed to the right as shown in the distribution curves in Figures 4.2a and 4.2b.

5.1.2 Formative evaluation and KCPE performance

The findings of this study show that formative evaluation is highly significant as it gives a Spearman's rank coefficient of 0.85 for mock examinations and 0.733 for end of class seven exams. It shows that the mock exams learners do before the final examinations and, the entry exam into class 8 (done in class 7) are important measures of learner performance and thus school performance at KCPE.

5.1.3 School characteristics and KCPE performance

It would appear from the results of this study that learners' perception on the adequacy or otherwise of the resources available in their schools does not influence their performance. The teachers' responses were equally intriguing as it shows that they are generally satisfied with the material and physical resources they have in their schools which explains the low rank coefficient from their responses. In the third ranked school, the head teacher and the teachers are squeezed into a tiny room with the minimum of furniture, while school number 7 has more rooms and furniture than the staff need. From the coded results analysis the 3rd ranked and 1st ranked schools have scores of 29 and 30 respectively implying the top ranked school has higher expectations for better and more resources yet it has far much better resources than the third ranked school. In the last school ranked number 10, space and furniture are enough but the maintenance of the same is very poor. All the schools have a ratio of 1:2 with regard to textbooks (few reported loss of some books giving a ratio of 1:3 in some subjects).
When the checklist is used whereby the researcher in collaboration with the deputy head teacher conducted an inventory of resources, the rank coefficient was higher which may imply that resources do become significant at some level but in Gitugi education zone it does not appear to have impacted on KCPE performance so far.

The ratio of teacher to learner, and teacher workload do not appear to have significant relationship with KCPE performance. Class size and teacher qualifications have low rank coefficients which imply that they are not very significant in this area of study at the time of study. Although most head teachers said their schools did not have enough teachers, the difference in teacher: learner ratio is not much among the schools. This would imply that the differences in performance in KCPE in the zone are not influenced to a significant level by the teacher: learner ratio.

Most schools have class sizes between 35 and 40 except those ranked 1st and 4th which have 42 and 43.7 respectively, and 2nd, 3rd and 8th which are below 20. This result seems to indicate that class size is not significant to explain the differences observed in KCPE performance in the zone.

5.1.4 Orderliness and KCPE performance

Orderliness of school programs appears significant with performance in KCPE. Learners seem content with the way programs run in their schools. According to the teachers, effectively coordinated programs help to produce good results as shown by the fact that most of the top ranking schools rated their programs as 'good' or 'very good' while the others had 'satisfactory'. Parents also raised concerns about the same. In the poorer performing schools, teachers' responses on homework and exams policies varied widely hinting at lack of importance while the others gave near the same for each item questioned.
5.1.5 Expectations and KCPE performance

Expectations produced the highest coefficients from learners, teachers and parents. Discussions on homework and performance alone are not significant; target setting alone is highly significant, while combining discussions on homework and performance gives a higher significance value.

5.2 Conclusions

This study was designed to determine the significance of factors that have been found to influence the differences in performance in KCPE in different schools, but with specific application in Gitugi education zone. This was prompted by the observation that most of the schools in this zone have persistently performed poorly in KCPE and, have maintained near the same ranking year after year despite the presumed similarity in their catchment.

From the study it was clear that not only is performance in KCPE in the schools low and different, but the greater percentage of the learners, in most of the schools have performances far below the mean in their own schools.

Formative evaluation appears to be highly significant. It would mean that schools that organize their evaluation policies and practices and, strive to do well in all formative evaluation would tend to do well in KCPE.

Learners in the ten schools studied appear to accept the systems and resources in their schools. They tend to perform only as high as their teachers expect them to which is indicated by the high significance of setting targets.

Orderliness indicated by management of homework, combined with expectations through setting of targets appears to be highly significance in influencing performance in KCPE.

Material and physical resources appear to be only very mildly significant. This is shown by the fact that even very poorly furnished schools are doing better than others that have more
and better resources. In this zone, size of school, number of teachers, class size, teachers' workload or teacher qualification do not seem to be sufficient to explain the differences in performance in KCPE.

Parents' show of interest in their children’s and schools' performance, and in the setting of targets seems to be highly significant.

In conclusion, several factors are significant in influencing the observed differential performance in KCPE in Gitugi education zone. These include organization of, and performance in formative evaluation, orderliness of school policies, completion of syllabus, setting of achievable targets for learners by the teachers and constructive involvement of parents and the community in the learners' performance. Although all the other factors are important these seem to be the most significant in the zone and thus need to be addressed by all the schools.

5.3 Recommendations

Three areas of concern need to be addressed concerning performance in KCPE in Gitugi Education zone. These are:

i. improving the performance and, bridge the gap between the schools,

ii. improving of performance of the low performing learners to reduce the positive skew to allow for the attainment of EFA and MDGs in the zone.

From the results of this study the following recommendations are made:

i. Teachers need to set targets for learners that are realistic and to effectively communicate them to the learners. When learners can state with certainty what targets they are preparing to achieve, they will be able to work towards them.
The administration of each school needs to establish programs that address effective and regular administration of formative evaluation. These should be used to address deficiencies and develop strategies to direct learners’ efforts more effectively.

Parents need to be encouraged and challenged to get better engaged in their children’s performance at school. Positive working relationship between schools and their SMCs, and the larger community should be cultivated.

Physical and material resources in schools need to be established, maintained and utilized better to improve results in both formative evaluation and KCPE.

Bench – marking among the schools should be encouraged to challenge all administrators to raise the bar with regard to performance. Teachers need to be less complacent in most of the schools with regard to performance and the policies under which their schools are run. They need to encourage the improvement of facilities, rise above the acceptance of ‘satisfactory’ results towards ‘excellence’, and develop greater commitment to performance even in difficult circumstances as they bench – mark.

Leaders inclusive of provincial administrators, political leaders and other opinion leaders need to get more aggressively involved in enlightening parents and the community on the critical role their positive involvement in the school help to improve performance.

5.4 Suggestions for further research

Similar studies should to be carried out in other counties to confirm the veracity of these results since most schools within the country perform very poorly.

More intensive study needs to be conducted in both primary and secondary schools focused on the parents’ role in influencing the performance of their
charges in the zone and county in view of the recurrences of secondary schools unrests.

iii. A case study of at least two schools should be done to ascertain the actual causes of the skewed performance in most of the schools whereby majority of learners perform below the mean of their own schools
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Ha


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The Star, Dec. 29th, 2010. ‘Kenya’s education system- surely we should have learnt a lesson by now?’ at www.kenya.forum.net


### APPENDIX 1

**DISTRIBUTION OF RAW KCPE SCORES IN SAMPLED SCHOOLS**

<table>
<thead>
<tr>
<th>Scores</th>
<th>Nyangiti</th>
<th>Githendu</th>
<th>Kiuu</th>
<th>Chui</th>
<th>Ruiru</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 150</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>150 - 159</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>160 - 169</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>180 - 189</td>
<td>3</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>190 - 199</td>
<td>4</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>200 - 209</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>210 - 219</td>
<td>4</td>
<td>1</td>
<td>2</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>220 - 229</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>230 - 239</td>
<td>6</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>240 - 249</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>250 - 259</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>260 - 269</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>270 - 279</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>280 - 289</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>290 - 299</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>300 - 309</td>
<td>1</td>
<td>3</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>310 - 319</td>
<td>0</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>320 - 329</td>
<td>0</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>330 - 339</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>340 - 349</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>0</td>
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</tr>
<tr>
<td>350 - 359</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<tr>
<td>360 - 369</td>
<td>1</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>370 - 379</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total frequency</strong></td>
<td><strong>47</strong></td>
<td><strong>34</strong></td>
<td><strong>29</strong></td>
<td><strong>38</strong></td>
<td><strong>16</strong></td>
</tr>
</tbody>
</table>
APPENDIX II

LEARNER'S QUESTIONNAIRE

Dear Respondent,

The following questions are meant to help the researcher identify the factors that influence performance in KCPE and other exams in this school specifically and, other schools in the zone.

All the information you will give will be held in strict confidence by the researcher and will not be given to anyone else.

Kindly give as much information as you have that may be used to help in improving the school’s performance.

Finally, do not write your name.

Yours sincerely,

Karongo Violet.

Section A: Performance and Expectations

Tick (✓) only one of the alternative choices given

1. How often do you discuss your own performance in examinations with any of your teachers?
   Very often ( ) Often ( ) Not often ( ) Not at all ( )

2. How often does your class teacher discuss the class performance with all of you in class?
   Very many times ( ) Many times ( ) Few times ( ) Very few times ( )
   Never ( )

3. How often does the head teacher talk about the school’s performance with you in class?
   Very often ( ) Often ( ) Not often ( ) Not at all ( )

4. How often do you discuss your performance in exams with your parents?
   Very often ( ) Often ( ) Not often ( ) Not at all ( )

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5. How often do you complete homework that is given?
   Always ( ) Sometimes( ) Few times( ) Never ( )

6. How often do you mark the homework for yourselves?
   Always ( ) Sometimes ( ) Few times( ) Never ( )

7. How often does the teacher mark the homework?
   Always ( ) Sometimes ( ) Few times( ) Never ( )

8. Have you set the target of the marks you want to achieve in the end-of-term exam?
   Yes ( ) No ( )

9. Have you set a target for KCPE? Yes ( ) No ( ) Not sure ( )

10. Has your class teacher set a target for your class in the end of term examinations and, in KCPE?
    Yes ( ) No ( ) Not sure ( )

Section B: School characteristics

1. What would you say about the following things in your classroom?
   Tick (✓) only one that you agree with most among the choices, Very good, Good, Fair and Not good.

<table>
<thead>
<tr>
<th></th>
<th>Very Good</th>
<th>Good</th>
<th>Fair</th>
<th>Not good</th>
</tr>
</thead>
<tbody>
<tr>
<td>Floor of your class</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black board of class</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Desks in the class</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Windows of the class</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arrangement of desks</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Easy movement in class</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enough text books to use</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neatness of text books</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
2. What would you say about the cleanliness of your class room, the toilets and the school compound in the school?

Tick (✓) only one that you agree with most.

<table>
<thead>
<tr>
<th></th>
<th>Very clean</th>
<th>Clean</th>
<th>Fairly clean</th>
<th>Not clean/dirty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classroom</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Toilets</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>School compound</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Section C: Orderliness of the school

Tick (✓) only one of the choices given, in the brackets

1. How strict are the school rules in your school?
   Very strict ( )  Strict ( )  Fairly strict ( )  Not strict ( )

2. Who makes sure that the rules are obeyed in the school most of the time?
   Class teacher ( )  Deputy head teacher ( )  Teacher on duty ( )
   Head teacher ( )

3. How often do pupils get rewards for obeying the school rules very well in school?
   Very often ( )  Often ( )  Not very often ( )  Never ( )

4. Do you agree that many pupils keep moving in and out of class during lessons?
   Strongly agree ( )  Agree ( )  Disagree ( )  Strongly disagree ( )

5. What time are you required to get to school in the morning? __________________

6. Do you normally have early morning classes before lessons start? Yes ( ) No ( )

7. Are the early morning classes taught by the teachers? Yes ( )  No ( )
8. How often do extra-curricular activities cause interruptions to the lessons?
   Many times ( ) Few times ( ) Very few times ( ) Never ( )

   Give at least two examples of such activities i) ______________________

   ii) ______________________

9. How many big tests do you do every term? ______________________
APPENDIX III
TEACHERS QUESTIONNAIRE

Dear Respondent,

The following questions are meant to help the researcher identify the factors that influence performance in KCPE and other exams in this school specifically and other schools in the zone.

All the information you will give will be held in strict confidence by the researcher and will not be given to anyone else.

Kindly give as much information as you have that may be used to help in improving the school’s performance.

Finally, do not write your name.

Yours sincerely,

Karongo Violet.

Section A: Personal information

Tick ( √ ) only one of the alternatives given for each item.

1. What is your highest academic qualification?
   - Degree ( )
   - KACE/EAACE ( )
   - KCSE/KCE/EACE ( )
   - Others (specify) ____________

2. What is your highest professional qualification?
   - B.Ed ( )
   - Diploma ( )
   - P1 ( )
   - P2 ( )
   - Others (specify) ____________

3. Indicate your age in the categories given.
   - 20-25 years ( )
   - 26-30 years ( )
   - 31-39 years ( )
   - 40+ years ( )

4. Indicate your gender by ticking one of the choices given. Male ( ) Female ( )

5. How long have you been teaching?
   - 0-5 years ( )
   - 6-10 years ( )
   - + 10 years ( )

6. How long have you taught in this school?
   - 0-3 years ( )
   - 4-7 years ( )
   - 8+ years ( )

7. You are the class teacher for class:
   - seven ( )
   - eight ( )

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8. Indicate your teaching load. _______ lessons per week.

9. How many pupils are there in your class? _______

Section B: Performance and Expectations
Tick (✓) against only one of the choices given that you agree with most.

1. How has performance in KCPE in the school been in the last 3 years?
   Very good ( )  Good ( )  Satisfactory ( )  Poor ( )

2. How has performance in joint exams for this class been this year?
   Very good ( )  Good ( )  Satisfactory ( )  Poor ( )

3. From your experience, how much does performance in class 8 depend on previous performance in class 7?
   Strongly dependent ( )  Dependent ( )  Lightly dependent ( )  Not at all ( )

4. From previous experience how do you think the class 8 pupils performance in KCPE this year will be?
   Very good ( )  Good ( )  Satisfactory ( )  Poor ( )  Not sure ( )

5. How frequently do parents come to school to enquire about their children's performance?
   Frequently ( )  Few times ( )  Very few times ( )  Never ( )

6. a) What would you say is the level of discipline among classes 7 and 8 pupils currently?
   Very good ( )  Good ( )  Satisfactory ( )  Not good ( )

   b) Suggest one thing you would wish to see improve in discipline in classes 7 and 8.

   c) From past experience, what target have you set for your class in KCPE? _______

7. Have you discussed this target with:
   A) The pupils?  Yes ( ) No ( )
   B) Other teachers?  Yes ( ) No ( )
   C) Head teacher?  Yes ( ) No ( )
   D) Parents?  Yes ( ) No ( )

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Section C: School characteristics
Indicate which of the choices given in each table you agree with most by ticking (✓) against it.

1. The state of the following items in my class is acceptable.

<table>
<thead>
<tr>
<th>Item</th>
<th>Strongly agree</th>
<th>Agree</th>
<th>disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Floor</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Windows</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pupils desks</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teachers table</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of pupils</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cleanliness of room</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black board</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Charts on the walls</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. The state of the following resources in the school is acceptable.

<table>
<thead>
<tr>
<th>Resource</th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching /learning resources</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Text books</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stationery</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Staff room</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Staff toilets</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Staff feeding program</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Playing fields</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Book storage</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flower beds/compound</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Section D: Orderliness of the school
1. Do pupils have supervised early morning lessons? Yes ( ) No ( )

2. Do pupils complete their homework every day?
   Always ( ) Sometimes ( ) Few times ( ) Never ( )

3. How regularly is the homework given marked by the teacher?
   Always ( ) Sometimes ( ) Few times ( ) Never ( )
   Give a brief explanation for your answer above ______________________
4. a) Identify 2 major co-curricular activities that the school participates in often and regularly.
   i) ____________________________________________
   ii) ____________________________________________

   b) How strongly do these activities interfere with regular class lessons?
      Very strongly ( ) strongly ( ) Fairly strongly ( ) not strongly ( )

5. Do the extra programs affect completion of the syllabus? Yes ( ) No ( )

6. How frequent is movement of pupils in and out of class during lessons in the school?
   Very frequent ( ) Frequent ( ) Few times ( ) Very times ( )

7. How many exams and tests do the pupils do within the term? ______

8. List in order of importance three things you feel the school urgently needs, in order to improve performance in KCPE.
   i. ____________________________________________
   ii. ____________________________________________
APPENDIX IV

HEAD TEACHER'S QUESTIONNAIRE

Dear Respondent,

The following questions are meant to help the researcher identify the factors that influence performance in KCPE and other exams in this school specifically and other schools in the zone.

All the information you will give will be held in strict confidence by the researcher and will not be given to anyone else.

Kindly give as much information as you have that may be used to help in improving the school's performance.

Finally, do not write your name.

Yours sincerely,

Karongo Violet.

Section A: Personal information

Tick (✓) only one of the alternatives given for each item

1. How long have you been teaching?
   0 – 5 years ( ) 6 – 10 years ( ) 10+ years ( )

2. How long have you been serving as a Head teacher?
   0 – 3 years ( ) 4 – 7 years ( ) More than 7 years ( )

3. How long have you been the Head teacher in this school ________________

4. What is your highest academic qualification?
   Degree ( ) KACE/EACE ( ) KCSE/KCE/EACE ( )
   Other ( specify) ___________________________

5. What is your highest professional qualification?
   B. Ed ( ) Diploma in Ed. ( ) P1 ( ) P2 ( )
   Other ( specify) ___________________________

6. Indicate your age in the categories given below.
   20 – 25 years ( ) 26 – 30 years ( ) 31 – 39 years ( ) 40 + years ( )

7. Indicate your gender by ticking one of the choices given below.
   Male ( ) Female ( )

8. Indicate your teaching load. _______ lessons per week.
Section B: Performance and Expectations

Tick (✓) against only one of the choices given that you agree with most?

1. How has performance in KCPE in the school been in the last 3 years?
   Very good ( )  Good ( )  Satisfactory ( )  Poor ( )

2. How has performance in joint exams in class 8 been this year?
   Very good ( )  Good ( )  Satisfactory ( )  Poor ( )

3. How much does a pupil's previous performance in class 7 influence their performance in class 8?
   Very strongly ( )  Strongly ( )  Slightly ( )  Very slightly ( )

4. From previous experience how do you expect the class 8 pupils' performance in KCPE this year to be?
   Very good ( )  Good ( )  Satisfactory ( )  Poor ( )
   Give one reason for your answer above._____________________________________

5. How frequently do parents come to school to discuss their children's performance?
   Many times ( )  Few times ( )  Very few times ( )  Never ( )

6. How would you rate the level of discipline among classes 7 and 8 pupils currently?
   Very good ( )  Good ( )  Satisfactory ( )  Not very good ( )

7. In your discussions with members of the community, how do they expect your school to perform in KCPE this year?
   Very well ( )  Satisfactory ( )  Average ( )  Not sure ( )

8. Based on their previous performance, what target have you set for class 7 at the end of year exam?_________________________

9. What target have you set for class 8 in their KCPE this year?______________

10. Have you discussed these targets with:
    a) teachers  Yes ( ) No ( )
    b) pupils  Yes ( ) No ( )
    c) parents  Yes ( ) No ( )
Section C: School characteristics

Indicate which of the choices given in the table below you agree with most by ticking (✓) against it.

The state of the following resources and equipments in the school is acceptable.

<table>
<thead>
<tr>
<th></th>
<th>Strongly agree</th>
<th>Agree</th>
<th>disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Text books</td>
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<tr>
<td>Stationery</td>
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<td>Staff room</td>
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<tr>
<td>Head teacher's office</td>
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<tr>
<td>Computers</td>
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<tr>
<td>Pupils’ desks</td>
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<tr>
<td>Teachers’ work tables</td>
<td></td>
<td></td>
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<tr>
<td>Class rooms</td>
<td></td>
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<tr>
<td>Staff feeding program</td>
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<tr>
<td>Staff toilets</td>
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<tr>
<td>Pupils toilets</td>
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<tr>
<td>Teaching/learning resources</td>
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<tr>
<td>Book storage</td>
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<tr>
<td>Flower beds</td>
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<tr>
<td>Playing fields</td>
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<td></td>
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<tr>
<td>Water</td>
<td></td>
<td></td>
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<tr>
<td>Electricity</td>
<td></td>
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</tbody>
</table>

Section D: Orderliness of the school

1. Do pupils have supervised early morning lessons? Yes (✓) No ( )

2. a) Do pupils get homework daily? Yes (✓) No ( )
   b) If your answer above is YES, is this homework checked by the teachers afterwards
      Yes (✓) No ( ) Not sure ( )
   c) If your answer is NO give a reason.

3. How active is the school in co-curricular activities?
   Very active (✓) Active ( ) Fairly active ( ) Not active ( )

4. How would you rate completion of syllabus in classes 7 and 8?
   Good (✓) Satisfactory ( ) Fair ( ) Below average ( )

5. How would you rate your teachers’ commitment to their duties?
   Very good (✓) Good ( ) Satisfactory ( ) Below average ( )
6. How regularly are exams done in the school within the term?
   Weekly ( )  Monthly ( )  Once per term ( )
   Other (specify) ____________________________

7. How would you rate movement of pupils in and out of class during lessons?
   Very frequent ( )  Frequent ( )  Infrequent ( )

8. List in the order of importance four areas or aspects of your school that you feel urgently need attention to improve performance in KCPE and all other examinations.
   i. ____________________________________
   ii. ____________________________________
   iii. ____________________________________
   iv. ____________________________________

9. Mention two things you feel the community could do to assist in improving performance in KCPE in the school.
   i. ____________________________________
   ii. ____________________________________
APPENDIX V

INTERVIEW SCHEDULE

Kindly respond to these questioned aimed at verifying the factors that contribute to the difference in performance in KCPE in the schools in this zone.

1. What office or responsibility do you hold in the area?

2. In your opinion, how have primary schools in the area been performing in KCPE in the last couple of years?

3. When did you last visit the school (any of the schools in the zone)?

4. What was the reason for your visit?

5. In your opinion, does the school have all the facilities it needs for effective learning?

6. Have you ever discussed the performance of the school or any of the pupils with any of the teachers?

7. What in your opinion does the school need, or what is it lacking that would help improve its performance?

8. As a member of the community how do you think the community could contribute to help the school perform better?

9. Could you specify the kind of performance you would like the school to have?

10. What contribution do you think parents could make to improve the performance of the school?
APPENDIX VI

OBSERVATION SCHEDULE/CHECK LIST

<table>
<thead>
<tr>
<th>Items</th>
<th>Available</th>
<th>Quantity/number</th>
<th>Condition</th>
<th>Remarks</th>
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<tr>
<td>Office equipments</td>
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<tr>
<td>Class rooms</td>
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<tr>
<td>Pupils’ desks</td>
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<tr>
<td>Text books</td>
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<tr>
<td>T/L resources</td>
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<tr>
<td>Games equipments</td>
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<tr>
<td>Running water</td>
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<tr>
<td>Electricity</td>
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<tr>
<td>Flower beds</td>
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<tr>
<td>Staff toilets</td>
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<tr>
<td>Pupils’ toilets</td>
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<tr>
<td>Feeding program</td>
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</table>
## APPENDIX VII

### WORK PLAN

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>DURATION</th>
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<tbody>
<tr>
<td>Literature review</td>
<td>July - November, 2011</td>
</tr>
<tr>
<td>Preparation of draft instruments</td>
<td>December 2011 – January 2012</td>
</tr>
<tr>
<td>Pretesting/piloting</td>
<td>March – May 2012</td>
</tr>
<tr>
<td>Data collection</td>
<td>July, 2012</td>
</tr>
<tr>
<td>Data coding</td>
<td>August, 2012</td>
</tr>
<tr>
<td>Data analysis</td>
<td>August – September 2012</td>
</tr>
<tr>
<td>Report writing</td>
<td>September - November 2012</td>
</tr>
<tr>
<td>Submission of report</td>
<td>November, 2012</td>
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</table>
## APPENDIX VIII

### BUDGET

<table>
<thead>
<tr>
<th>Budget item</th>
<th>Constituent item</th>
<th>Cost per item</th>
<th>Total item cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Production of Research instruments</td>
<td>1. Proposal writing</td>
<td>6 sets @ Ksh1000.00</td>
<td>6000.00</td>
</tr>
<tr>
<td></td>
<td>2. Piloting</td>
<td>45 pages @ Ksh 60.00</td>
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</tr>
<tr>
<td></td>
<td>3. Travelling &amp; literature search</td>
<td>Ksh 5000.00</td>
<td>5000.00</td>
</tr>
<tr>
<td></td>
<td>4. Printing and copying research</td>
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<td>5000.00</td>
</tr>
<tr>
<td></td>
<td>instruments</td>
<td>30 @ Ksh 60.00</td>
<td>1800.00</td>
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<tr>
<td></td>
<td>Photo copying</td>
<td>@ Sh 3.00 per page (270 respondents)</td>
<td>137050.00</td>
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<tr>
<td>Transport /data collection</td>
<td>1. Fuel for 10 days</td>
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<tr>
<td></td>
<td>2. Subsistence for 10 days</td>
<td>Ksh 1000 per day</td>
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<td></td>
<td>3. Assistant for 10 days</td>
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<tr>
<td>Compiling and submission of final report</td>
<td>1. Draft research report</td>
<td>Analysis and booklets</td>
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<tr>
<td></td>
<td>2. Final research report</td>
<td>10 copies @ Ksh1500.00</td>
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<tr>
<td></td>
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<td></td>
<td>137050.00</td>
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</tbody>
</table>
Our Ref: NCST/RCD/14/012/1532

Date: 6th November 2012

Violet Wanjiru Karongo
Kenyatta University
P.O.Box 43844-00100
Nairobi.

RE: RESEARCH AUTHORIZATION

Following your application for authority dated 30th October, 2012 to carry out research on “Differential schools’ performance in KCPE: Causes and their significance in Gitugi Education Zone, Murang’a County,” I am pleased to inform you that you have been authorized to undertake research in Mathioya District for a period ending 31st July, 2013.

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

On completion of the research, you are expected to submit two hard copies and one soft copy in pdf of the research report/thesis to our office.

DR M.K. RUGUTT, PhD, HSC.
DEPUTY COUNCIL SECRETARY

Copy to:

The District Commissioner
The District Education Officer
Mathioya District.
THIS IS TO CERTIFY THAT:
Prof./Dr./Mr./Mrs./Miss/Institution
Violet Wanjiru Karongo
of (Address) Kenyatta University
P.O.Box 43844-00100, Nairobi,
has been permitted to conduct research in

on the topic: Differential schools’ performance in KCPE: Causes and their significance in Gitung’ education zone Murang’a County.

Applicant’s
Signature

Secretary
National Council for Science & Technology

CONDITIONS
1. You must report to the District Commissioner and the District Education Officer of the area before embarking on your research. Failure to do that may lead to the cancellation of your permit.
2. Government Officers will not be interviewed without prior appointment.
3. No questionnaire will be used unless it has been approved.
4. Excavation, mining and collection of biological specimens are subject to further permission from the relevant Government Ministries.
5. You are required to submit at least two (2) / four (4) bound copies of your final report for Kenyans and non-Kenyans respectively.
6. The Government of Kenya reserves the right to modify the conditions of this permit including its cancellation without notice.