THE INFLUENCE OF TUITION WAIVER (2008) ON QUALITY OF SECONDARY EDUCATION IN NG’ENDA DIVISION, KIAMBU COUNTY, KENYA

NJAU NICHOLAS WAMATU
E55/CE/25923/2011

A PROJECT SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF MASTER OF EDUCATION DEGREE IN ECONOMICS OF EDUCATION IN THE DEPARTMENT OF EDUCATION MANAGEMENT POLICY AND CURRICULUM STUDIES, KENYATTA UNIVERSITY

MAY, 2015
DECLARATION

I confirm that this research project is my original work and has not been presented in any other University. This project has been complemented by referenced works duly acknowledged. Where text, data, graphics, pictures or tables have been borrowed from other works-including the internet, the sources are specifically accredited through referencing in accordance with anti-plagiarism regulations.

Nicholas Wamatu Njau

We confirm that the work reported in this project was carried out by the candidate under our supervision as University supervisors.

Dr. Mary Otieno
Lecturer, Department of Educational Management, Policy and Curriculum Studies
Kenyatta University

Dr. Mukirae Njihia
Lecturer, Department of Educational Management, Policy and Curriculum Studies
Kenyatta University
DEDICATION

This work is dedicated to my parents who struggled to bring me up and made sure I remained in school at all costs. It is also dedicated to my wife and children for their unwavering support throughout the study period.
# TABLE OF CONTENTS

DECLARATION ........................................................................................................................................ ii  
DEDICATION ........................................................................................................................................ iii  
TABLE OF CONTENTS ......................................................................................................................... iv  
LIST OF TABLES ................................................................................................................................... vii  
LIST OF FIGURES ............................................................................................................................... viii  
ACKNOWLEDGEMENTS ...................................................................................................................... ix  
ABBREVIATIONS AND ACRONYMS ................................................................................................. x  
ABSTRACT ............................................................................................................................................. xi  

## CHAPTER ONE: INTRODUCTION ........................................................................................................ 1  
1.1 Background of the Study ................................................................................................................ 1  
1.2 Statement of the Problem .............................................................................................................. 8  
1.3 Purpose of the study ...................................................................................................................... 9  
1.4 Objectives of the Study ................................................................................................................. 9  
1.5 Research Questions ...................................................................................................................... 10  
1.6 Significance of the Study ............................................................................................................. 10  
1.7 Assumptions of the Study ............................................................................................................. 11  
1.8 Limitations of the Study .............................................................................................................. 11  
1.9 Delimitations of the Study .......................................................................................................... 11  
1.10 Theoretical Framework .............................................................................................................. 12  
1.11 Conceptual Framework .............................................................................................................. 14  
1.12 Operational Definition of Terms ............................................................................................... 16  

## CHAPTER TWO: LITERATURE REVIEW .......................................................................................... 17  
2.1 Introduction ................................................................................................................................... 17  
2.2 Tuition Waiver, School Enrollment and Performance ..................................................................... 17  
2.3 Physical Facilities and Education Quality ..................................................................................... 21  
2.4 Learning Materials and the Teaching Process .............................................................................. 23  
2.5 Quality Education and Teachers’ Qualification .......................................................................... 25  
2.6 Summary of the Literature Review .............................................................................................. 28
CHAPTER THREE: RESEARCH METHODOLOGY ........................................... 29
3.1 Introduction ........................................................................................................ 29
3.2 Research Design and Locale ............................................................................ 29
   3.2.1 Research Design ......................................................................................... 29
   3.2.2 Locale of the Study ..................................................................................... 29
3.3 Target Population .............................................................................................. 30
3.4 Sampling Technique and Sample size Determination ..................................... 30
   3.4.1 Sampling Technique ................................................................................... 30
   3.4.2 Sample Size Determination ...................................................................... 31
3.5 Research Instruments ....................................................................................... 32
   3.5.1 Questionnaires ......................................................................................... 32
   3.5.2 Interview Schedules ................................................................................ 32
3.6 Piloting of questionnaires ................................................................................ 33
   3.6.1 Validity of Instruments ............................................................................. 33
   3.6.2 Reliability of Instruments ........................................................................ 34
3.7 Data Collection Procedure ............................................................................. 34
3.8 Data Analysis and Presentation ...................................................................... 35
3.9 Logical and Ethical Considerations .................................................................. 36

CHAPTER FOUR: DATA ANALYSIS INTERPRETATION AND PRESENTATION OF FINDINGS ............................................................. 37
4.1 Introduction ....................................................................................................... 37
4.2 Background Data of Respondents in the study .............................................. 38
4.3 Effects of tuition waiver on students’ enrollment and quality of FSE ............ 40
4.4 The status of physical facilities and quality of secondary education .......... 46
4.5 Adequacy of teaching and learning resources .............................................. 48
4.6 Adequacy and qualification of teachers .......................................................... 49

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS ......................................................................................... 55
5.1 Introduction ..................................................................................................... 55
5.2 Summary of Findings ....................................................................................... 55
5.3 Conclusions ..................................................................................................... 57
5.4 Recommendations

5.4.1 Policy Recommendations

5.4.2 Recommendations for Further Research

REFERENCES

APPENDICES

APPENDIX I: Principal’s Questionnaire

APPENDIX II: Teacher’s Questionnaire

APPENDIX III: Students Questionnaire

APPENDIX IV: AEO Interview Guide

APPENDIX V: School Observation Checklist

APPENDIX VI: Research Authorization by NACOSTI

APPENDIX VII: Research Authorization by County Commissioner

APPENDIX VIII: Research Authorization by D.E.O

APPENDIX IX: Research Permit
LIST OF TABLES

Table 1.1: Results analysis for secondary schools in Ng’enda division between 2008-2012 .........................................................7
Table 3.1: Sampled Respondents .................................................................32
Table 4.1: Different numbers of respondents in 6 schools in Ng’enda division .38
Table 4.2: Gender of the respondents .........................................................38
Table 4.3: Level of Education of Principals and Teachers ............................39
Table 4.4: Work Experience of the Teachers ...............................................39
Table 4.5: KCSE mean score result for the 6 schools in Ng’enda division ......40
Table 4.6: Overall student enrollment between 2005-2013 ..........................41
Table 4.7: Number of students per class ........................................................43
Table 4.8: Teachers’ workload ......................................................................44
Table 4.9: Teachers’ rating of their teaching workload .................................45
Table 4.10: Adequacy of physical facilities .................................................46
Table 4.11: Adequacy of Teaching and Learning resources ..........................48
Table 4.12: Number of teachers versus Number of Streams .......................50
Table 4.13: Adequacy of Teachers in Schools ..............................................51
Table 4.14: Reasons Students join Secondary Schools in Ng’enda Division .....53
Table 4.15: The Challenges Secondary Schools in Ng’enda Division Face ........54
LIST OF FIGURES

Figure 1.1: Graph of secondary school enrolment from 2007-2010 .................. 6
Figure 1.2: Framework showing the implications of FSE on quality of secondary education .............................................................. 14
Figure 4.1: Enrollment statistics for schools in Ng’enda division between 2005-2013 ........................................................................ 42
Figure 4.2: Education Qualifications of Teachers ........................................ 52
ACKNOWLEDGEMENTS

First, I am particularly grateful to Kenyatta University for offering me a chance to do my postgraduate studies. I also thank all my lecturers at Kenyatta University who have taught me and particularly my supervisors Dr. Mary Otieno and Dr. Njihia Mukirae of the Department of Educational Management, Policy and Curriculum Studies for the extraordinary service, guidance and concern.

Great and sincere thanks go to my family, my wife Magdalene, my children-Mike and Michelle who bear the brunt of my absence in their various undertakings as I take time to study. Thanks to my wife for taking up responsibilities in other areas of life so that I can concentrate with my studies. I am so grateful for your unwavering support and encouragement.

I highly thank my old friend Mathu, my dear sisters Muthoni and Kui who through their encouragement, provision of additional materials, moral and financial support has greatly assisted me in writing this project.

Lastly, I cannot also fail to thank the almighty God for blessing me with talents and abilities that have enabled me to continue learning and whose grace has seen me through a difficult period in my life.
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>EFA</td>
<td>Education for All</td>
</tr>
<tr>
<td>BOM</td>
<td>Board of Management</td>
</tr>
<tr>
<td>CDF</td>
<td>Constituency Development Fund</td>
</tr>
<tr>
<td>FPE</td>
<td>Free Primary Education</td>
</tr>
<tr>
<td>FSE</td>
<td>Free Secondary Education</td>
</tr>
<tr>
<td>GER</td>
<td>Gross Enrolment Rate</td>
</tr>
<tr>
<td>K.C.P.E</td>
<td>Kenya Certificate of Primary Education</td>
</tr>
<tr>
<td>K.C.S.E</td>
<td>Kenya certificate of secondary education</td>
</tr>
<tr>
<td>KNUT</td>
<td>Kenya National Union of Teachers</td>
</tr>
<tr>
<td>KUPPET</td>
<td>Kenya Union of Post Primary Education Teachers</td>
</tr>
<tr>
<td>MDG</td>
<td>Millennium Development Goals</td>
</tr>
<tr>
<td>MOE</td>
<td>Ministry of Education</td>
</tr>
<tr>
<td>NARC</td>
<td>National Rainbow Coalition</td>
</tr>
<tr>
<td>SSA</td>
<td>Sub-Saharan Africa</td>
</tr>
<tr>
<td>UN</td>
<td>United Nations</td>
</tr>
<tr>
<td>UK</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>TSC</td>
<td>Teachers Service Commission</td>
</tr>
<tr>
<td>NACOSTI</td>
<td>National Commission for Science, Technology and Innovation</td>
</tr>
<tr>
<td>UNESCO</td>
<td>United Nations Educational, Scientific and Cultural Organization</td>
</tr>
</tbody>
</table>
ABSTRACT

Low completion rates and wastage in secondary schools continue to be areas of great concern to school administrators in Ng’enda division. Although Free secondary Education is intended to mitigate a wide scope of these problems, its implementation does not guarantee quality education. The purpose of this study was to investigate the influence of tuition waiver (2008) on quality of secondary education in Ng’enda division, Kiambu County. The objectives of the study were: to establish the effects of tuition waiver on student’s enrollment and how this affects the quality of secondary education, to find out the current status of teaching and learning materials for implementation of FSE and how this affects the quality of secondary education, to assess the current status of physical facilities and how this affects the quality of education in secondary schools and to establish the qualification and number of teachers for implementation of FSE and how this affects the quality of education in secondary schools. The study was undertaken in 6 public schools. It adopted an exploratory approach using descriptive survey. The population targeted was 3564 individuals consisting of 9 principals, 129 teachers, 3425 students and 1 A.E.O. The participants sampled included 6 principals, 24 teachers, 336 students and 1 Area Education Officer giving a total of 367 participants. Simple random sampling was used in selecting 6 out of 9 schools for the study. 6 principals from the participating schools and 1 A.E.O. were purposely selected to take part in the actual study. In addition, 24 teachers (4 per school) and 336 students (56 per school) were selected by stratified sampling, yielding a total of 367 participants. The instruments for collecting data from principals, teachers and students were the questionnaires while data from the A.E.O. was gotten through an interview. Piloting was carried out in 3 schools not in the sample. Microsoft Excel 2007, spreadsheet software was used for statistical and pictorial presentation of results. Measures such as frequencies, means and percentages were used. On the other hand, qualitative data was analyzed using content analysis based on analysis of meaning and implications emanating from respondents information and documented data. Results of the data analysis were presented using frequency distribution tables, bar graphs and pie charts. The study established that tuition waiver led to an increased enrollment; there were inadequate and well equipped laboratories, computers, libraries and playgrounds. Teachers were found not to be enough but those that are there are qualified. However, teaching/learning resources were found to be adequate. The study recommended that: Head teachers should enroll students according to the resources they have, the Government should continue building more schools and employ more teachers, the Government should allocate enough funds and resources to schools to ensure FSE runs smoothly without compromising the quality of education as more laboratories and apparatus, computers, stocked libraries, and more land for expansion can only be acquired with enough funds.
CHAPTER ONE
INTRODUCTION

1.1 Background of the Study

Education forms the basis upon which economic, social and political development of any nation is founded. Investment in education can help foster economic growth, enhance productivity, contribute to national and social development and reduce social inequality (World Bank, 1998). The United Nations Educational, Scientific and cultural organization (UNESCO, 2005) argues that the level of a country’s education is one of the key indicators of its level of development. Quality aspects of education involve quality resources and inputs, quality content, quality process and quality output as outcome (Adams, 1993).

Since independence, Kenya has been responding to issues raised in eight millennium development goals (MDG’s) in different ways, for instance; Kenya has had its own version of MDG’s since 1965 when the Government published sessional paper number 10 of 1965 in which the state committed itself to eradicate poverty, illiteracy and disease which have been emphasized in most national development plans and other policy documents. In most educational reports, issues of equity, completion rates and access to quality education have been raised.

At independence the country was faced with the need to Africanize the economy and public service as well as spur economic growth. This called for harmonized education and training so as to keep the nation united and create sufficient trained manpower for the development of our country (Ominde report, 1964). The challenge at this period in time was to design a curriculum that would guarantee delivery of
quality education and training for all. Since then, Kenyan education system has undergone reviews and restructuring through various education commissions.

With concerns arising from Gachathi report (1976), the Government of Kenya appointed a ‘presidential working party on education and training for the next decade and beyond” in 1988 (Kamunge report, 1988). This report focused on issues of education quality and relevance, cost of empowerment of local management bodies, efficiency in resource utilization and concerns of wastage within the education sector. This report emphasized a need for cost sharing between Government, parents and communities. The implementation of cost sharing policy in a population where majority of the Kenyans are poor led to adverse effects on access, retention and quality of education.

At a world conference in education for all (EFA) in Jomtien (1990), Kenya reaffirmed her commitment to providing universal access to education for all its school age children. In January 2003, soon after taking over power, National rainbow coalition Government (NARC) introduced free primary education (FPE). The policy abolished school fees and other levies arguing that fees and levies posed a serious hindrance to children wanting to access education in schools (Okwach & George, 1997). This led to an increase in the number of school going children and even most of the schools became overwhelmed by the large number of pupils especially in urban areas. According to United Nations Educational, Scientific and Cultural Organization’s assessment report, after introduction of FPE, more than 1.5 million children who were previously out of school joined primary schools.
(UNESCO, 2005). Funds were allocated to schools based on number of pupils they had in school.

There has been a rapid growth in Kenya’s primary education without a corresponding growth in secondary education. For instance, in 2003, there were 3661 public secondary schools and 641 registered private schools against 18,081 public primary schools.

In an effort to deal with the race for the demand for secondary education following introduction of Free Primary Education (FPE), the following policies are outlined by the Government in sessional paper number 1 of 2005 on education (Republic of Kenya, 2005):

i. Working towards integrating secondary education as part of basic education

ii. Promoting the development of day schools as a means of expanding access and reducing costs to parents

iii. providing targeted instructional materials to the needy public schools while

iv. Encouraging parents and communities to provide infrastructure and operation costs.

v. Providing support to poor disadvantaged students through secondary school bursaries

The test that the Government faced after the launch of FPE was to ensure that pupils graduating from class eight joins form one. To counter this test, the Kenyan Government introduced Free Secondary Education (FSE) in 2008. The introduction of FSE in 2008 was a fulfillment of the education for all (EFA) global commitment and strategy to give children universal education. During the launch of FSE,
president Kibaki explained the main objective of providing FSE as ensuring children from poor households acquire a quality education that enables them to access opportunities for self advancement and become productive members of society. (Kibaki, 2008:para8).

Unlike the free primary education initiative where earlier preparations had been done through gatherings, meetings and various expert papers had been written on the same subject, FSE could have been implemented to fulfill a political promise to the Kenyan people which meant that no prior preparations were done before its implementation. The program was thus adopted without prior research findings.

Upon launching the FSE program in Nairobi, president Kibaki said plans were underway to expand existing facilities and recruit more teachers to cope with the extra demand. Encyclopedi Britannica (2011) observes that the provision of FSE in Kenya by the Government became a problem as the number of secondary schools grew. The Government was however overwhelmed by the high transition rate from primary to secondary school hence could not manage to provide adequate teachers and enough teaching and learning materials in most schools.

In 2008, the average pupil teacher ratio at secondary level stood at 1:45. In an interview to the international press service (2009), a KUPPET official urged the Government to employ more teachers or compensate the teachers for taking more lessons.

Indications are that many public schools are struggling with overcrowded classrooms, inadequate number of trained teachers, inadequate funds among other
challenges. Many of the public schools are struggling to perform well in national examinations and the situation could be made worse by pupils entering schools that are ill equipped to receive them. All these challenges compound the issue of poor quality education in some public schools. The allocation of ksh10, 265 per student was not enough to cater for tuition and administrative costs (Daily nation, 23rd February 2008).Parents in some schools were asked to pay additional costs undermining the concept of free education.

Before introduction of FSE, the Government had been operating a bursary scheme to assist the needy and bright students in secondary schools with a view of improving access and retention in schools. By 2003, the bursary was found to cater for only 23% of the needy. This necessitated the need to expand the scope to cater for at least 60% of the needy students. (Report of sector review and development, 2003).

The introduction of FSE in 2008 was therefore a relief to many and a logical step in reducing learning costs in secondary school five years after implementing free primary education in Kenya. The introduction of FSE raised student enrollment from 1.18 million in 2007 to 1.32 million in 2008, 1.52 million in 2009 and further to 1.7 million in 2010 (Republic of Kenya, 2012). It also aimed at ensuring that deserving children from poor families do not miss out on secondary education.
As the country moves towards achieving universal primary schooling, demand for education is shifting towards secondary education. (World Bank, 2005). However, there are concerns about lack of quality, lack of facilities in many public secondary schools which are struggling to do well in national examinations. The issue of teaching staff is itself problematic. Currently TSC has frozen recruitment of additional teachers only employing staff to replace those leaving the service through normal attrition and death. In addition, they have increased retirement age from 55 to 60 years giving room to a group of aged teachers having to deal with overly large classes. Getting children through secondary education without providing quality education is not good enough. (Obuna, 2009).

Although FPE and FSE have reduced ignorance levels across the country, education sector is still beset by problems. Top among these are lack of classrooms and shortage of teachers. These continue to affect the quality of education especially in public schools (Daily Nation, 3rd June, 2013). The introduction of FSE assumed that there were adequate physical infrastructure for secondary education that can

Figure 1.1: Graph of secondary school enrolment from 2007-2010
accommodate more students, there were enough teachers in schools, there were enough teaching and learning materials and that tuition fees constituted a significant proportion of secondary school fees and its waiver would be a reprieve to parents, guardians and sponsors. By 2008, Kenya had 4,478 secondary schools many of which are in a state of disrepair and lack essential facilities (Daily Nation, Feb 23rd, 2008).

Reports from the DEO’s office, Gatundu district for the period before introduction of FSE cited congestion in classrooms, inadequate teaching and learning materials, inadequate physical facilities as well as shortage of staff as a major challenge facing the schools in the district and which affect their performance in K.C.S.E. The table below gives the mean scores of schools in Ng’enda division for the period 2008-2012.

Table 1.1: Results analysis for secondary schools in Ng’enda division between 2008-2012

<table>
<thead>
<tr>
<th>SCHOOL/YEAR</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.Ituru</td>
<td>6.73</td>
<td>7.79</td>
<td>7.02</td>
<td>7.45</td>
<td>7.26</td>
</tr>
<tr>
<td>3.Kimunyu</td>
<td>4.00</td>
<td>4.35</td>
<td>4.60</td>
<td>5.03</td>
<td>5.50</td>
</tr>
<tr>
<td>4.Githaruru</td>
<td>4.64</td>
<td>4.73</td>
<td>4.51</td>
<td>5.44</td>
<td>4.81</td>
</tr>
<tr>
<td>5.Ng’enda</td>
<td>3.74</td>
<td>3.95</td>
<td>4.11</td>
<td>4.30</td>
<td>4.50</td>
</tr>
<tr>
<td>8.Muthurumbi</td>
<td>2.65</td>
<td>3.5</td>
<td>3.18</td>
<td>3.09</td>
<td></td>
</tr>
<tr>
<td>9.Ikuma</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2.33</td>
</tr>
<tr>
<td>Overall</td>
<td>4.57</td>
<td>4.73</td>
<td>4.61</td>
<td>4.78</td>
<td>4.60</td>
</tr>
</tbody>
</table>
These results translates to an average overall mean score of 4.65 which translates to a C’ (minus) grade which is far below the university entry requirement of C+(plus) which raises questions on the quality of education offered to rising number of learners in Ng’enda division.

It is against this background that the study investigated the influence of the waiver on tuition (2008) on quality of secondary education in Ng’enda division, Kiambu County.

1.2 Statement of the Problem

The performance of the learning institutions is very vital as it defines the future of the learners and the country in general in relation to the production of the relevant workforce. Secondary education is important in preparing the learners to fit in the various relevant courses in preparation for the relevant workforce that befits the economy of the country. Kapal (2012) investigated the school based factors that influence the student’s academic performance in KCSE and established that various factors enhance a student’s performance. The waiver on tuition in 2008 by the government gave preference to giving access to many including some of the vulnerable poor. There is however glaring evidence of imbalance with the quality of education in many of the secondary schools. Problems of inadequate teachers, limited physical facilities in schools, inadequate teaching and learning resources always condemn students to poor results (Kapal, 2012). Sessional paper No.1 of 2005 pointed out that one challenge in secondary education is that the quality of education has remained low. Education should equip a student to be a responsible citizen in line with the rules of the land and religious grounds. It has not been clear
even to policy makers how the increasing demand for secondary education has affected the quality of education offered in our secondary schools against the background of tuition waiver strategy in secondary education. To this end, the study has investigated the influence of the waiver of tuition fees on the quality of secondary education offered in relation to the education goals set by the ministry of education.

1.3 Purpose of the study

The study investigated the influence of the waiver on tuition on quality of secondary education in Ng’enda division, Kiambu County.

1.4 Objectives of the Study

The objectives of the study were as follows:-

i. To establish the effects of tuition waiver on student’s enrolment and how this affects the quality of secondary education in schools in Ng’enda division.

ii. To find out the current status of Physical facilities for implementation of FSE and how this affects the quality of secondary education in schools in Ng’enda division.

iii. To assess the adequacy of teaching and learning materials for implementation of FSE and how this affects the quality of secondary education in schools in Ng’enda division.

iv. To find out the impact of FSE on quantity and quality of secondary school teachers and how this affects the quality of education in secondary schools in Ng’enda division.
1.5 Research Questions

The study was guided by the following questions:-

i. What are the effects of tuition waiver on student’s enrolment and how does this affect the quality of education in secondary schools in Ng’enda division?

ii. How adequate are physical facilities in secondary schools in Ng’enda division to support quality free secondary education?

iii. How adequate is the teaching and learning resources in secondary schools in Ng’enda division to support quality free secondary education.

iv. Are there adequate and qualified teachers in secondary schools in Ng’enda division to support implementation of quality free secondary education?

1.6 Significance of the Study

The study sought to provide information on quality of education upon implementation of the waiver on tuition in secondary education in Ng’enda division of Kiambu County. It was hoped that the recommendations based on the findings will be of assistance in the following ways:-

i. It will provide teachers and education officers in leadership positions with specific implications of the waiver on tuition fees in secondary education in Ng’enda division thus design appropriate interventions enhancing the effectiveness of the Tuition waiver.

ii. The study will provide teachers and education officers with more specific strategies to resolve emerging challenges in the effective implementation of tuition waiver in Ng’enda division.

iii. It will provide education officers with insights on how local education players deal with the effects of the tuition waiver programme.
1.7 Assumptions of the Study

The study was based on the following assumptions:

i. The academic performance is affected by the quality of education offered.

ii. The physical facilities, teaching and learning materials determine the quality of education offered.

iii. The academic qualification of teachers affects the quality of education. High number of learners per teacher leads to poor quality of education.

1.8 Limitations of the Study

The following will be the limitations of the proposed study:

i. The study will limit itself to only one division in Kiambu County. For a more conclusive result, all divisions in the county should be studied. However; this is not possible due to financial and logistical constraints such as time.

ii. It will not be possible to get the opinion of parents and other stakeholders in the division despite the fact that their input is essential on the influence of tuition waiver on the quality of secondary education in the division as involving them require considerable time, resources and other logistics.

1.9 Delimitations of the Study

The study was limited to the influence of tuition waiver on quality of secondary education in public secondary schools. Private schools were not part of the study because they do not receive direct Government support in provision of education.

Secondly, the study did not explore other factors that influence negatively on the implementation of tuition waiver and how these affect the quality of secondary education. This is due to time constraints.
1.10 Theoretical Framework

This study was guided by the classical liberal theory. The classical liberal theory of equal opportunity and social Darwinism asserts that each person is born with a given amount of capacity, which to a large extent is inherited and cannot be substantially changed. Thus, educational systems should be designed so as to remove barriers of any nature (economic, gender, geographical) that prevent bright students from lower economic backgrounds from taking advantage of inborn talents which accelerate them to social promotion. Liberal progresivists like Horance Mann termed education as the “great equalizer”, main instrument, which would enhance life chances of those born into humble circumstances. The theory demands for further going through education at primary and secondary level to which access would be determined on the basis of individual’s merit and not on social background.

Several educational policies have been guided by this theory. By making secondary education free by the Kenyan Government in 2008 and available to all children regardless of the social classes, it is hoped that the handicaps that are inherited in being poor can be removed. There are innumerable examples of people from poor families who have taken advantage of educational opportunities and proceeded to obtain better jobs than they would have otherwise done. If the state did not provide education without charges, these individuals would have been denied the opportunity for advancement.

There is widespread belief that by removing barriers and making more places available in secondary education, ideal conditions could be created to implement the vision of equal opportunity, where everybody has access to the kind of education
that suits his/her inherited capacity. In developing countries where inequalities of education provisions are severe, it may be desirable on equity and efficiency grounds to pursue the goal of equal distribution of educational opportunities. Inequality of participation means the benefits of education are disproportionately enjoyed by the upper income families where children are far much more likely to complete primary and secondary cycle or enroll in higher education. The introduction of free secondary education has enhanced access to secondary education. However, inadequacies of teachers, untrained teachers, lack of physical facilities, lack of instructional materials etc affect the quality of education in the institutions. Therefore, for equity consideration, it is practically impossible to ignore the fact that unequal participation in education will in the long run worsen the status of the poor and vulnerable groups.

This theory was found relevant for the proposed study because ill equipped secondary schools i.e. lack enough teachers, adequate physical facilities, instructional materials) discriminate poor families who cannot afford to take their children to well established boarding schools and private schools in search of quality education. This impact negatively in bridging the gap between the rich and the poor. Equity in educational planning can be understood in two ways: equality of access to educational opportunity, equality of conditions and equality of outcomes. Equality of access to educational opportunity means no groups of people should be discriminated on grounds of social status, gender, religion and race. Secondly, equality of conditions in education means no difference in facilities, teacher qualifications or teaching skills, and curriculum among schools in a country. As Coleman (1968) pointed out, equality in education refers not only to equality in access but to attending equally effective schools.
1.11 Conceptual Framework

![Conceptual Framework Diagram]

**Figure 1.2: Framework showing the implications of FSE on quality of secondary education**

**Source:** Researcher’s own (2013)

As shown in Figure 1.2, the implementation of FSE in Kenya could lead to problems related to enrolment, availability of teaching and learning materials, availability of physical facilities and availability of enough trained teachers. These factors are the independent variables in the study which could affect the quality of FSE, which is the dependent variable.
There is increased enrolment brought about by FSE. With increased number of students, the student to teacher ratio is affected. This affected the student-teacher interaction which in turn defines the quality of learning. For effective learning to take place, the teacher-student ratio must not exceed recommended limit.

Introduction of FSE can bring about imbalance in supply of teaching and learning materials. These include course books, set books, teacher’s guides etc. Unavailability of these can negatively influence on the classroom teaching and learning process.

As enrolment increase, the physical facilities would be strained. These include classrooms, desks, library, toilets etc. The unavailability of these would have implications on the immediate quality improvement in the FSE implementation.

As FSE is meant to raise the number of students attending school, the demands for an increased number of qualified teachers prevail. If the increased number of students is met with few qualified teachers, academic performance will be wanting and more so the quality of FSE.
1.12 Operational Definition of Terms

Education for all- Refers to provision of education for everybody regardless of age.

Free primary education- Is taken to mean the teaching/learning processes in public primary schools without paying fees.

Free secondary education- Is taken to mean teaching/learning processes in public day and boarding schools without paying tuition fees. Parents only pay boarding fees in case a school is boarding.

Influence- means the power to affect something. In this study, the effects or consequences that FSE has on enrollment, physical facilities, teaching and learning materials and qualification and numbers of teachers will be investigated.

Investigate - Means to carry out a detailed examination or inquiry in order to find out about something or somebody. In this study, a detailed examination of enrollment, physical facilities, teaching and learning materials and qualification and number teachers in schools in Ng’enda division will be carried out.

Physical facilities- Refers to classrooms, desks, toilets, library, staff offices, computers, laboratories.

Principal- Is the head teacher of any public secondary school in Kenya.

Public secondary schools- Are schools that are sponsored by the Government of Kenya through the ministry of education.

Teaching and learning - materials Refers to textbooks, reference books, teacher’s guides.

Quality education- Refers to access to a stated minimum of instructional time for each student, increased resources, a safe and healthy place in which to learn, individual access to learning materials, and enough teachers who are sufficiently trained and have a masterly of content and pedagogy. In this study, schools that are overenrolled, without teachers, textbooks or learning materials will not be able to do an effective job lowering the quality.
CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter looks at the global perspective of secondary education and its status in Kenya and influence of tuition waiver on quality of secondary education with particular emphasis on enrollment, physical facilities, teaching/learning materials and qualification and number of teachers and finally gives a brief summary.

2.2 Tuition Waiver, School Enrollment and Performance

In developed countries, education beyond the secondary level was usually financed in part and sometimes wholly by the state. This includes among other countries Britain, Japan and the United States of America (USA). In these three countries, the Government provides for free education up to secondary level.

Pressure on governments in Sub-Saharan Africa (SSA) to expand secondary education is growing. Increasing number of students flowing from expanded primary education and the need to improve the educational levels of the labour force to benefit from a globalizing economy make it inevitable that governments in SSA will turn their attention to expanding and improving secondary education (Alvarez, 2003; World bank, 2005). The introduction of FSE in Kenya appears to be a move towards the extension of compulsory education to secondary level.

In South Africa, user fees are identified as a barrier to education. While school budgets are funded from state revenue, school fees are required to supplement these
budgets so that schools are able to run smoothly. The South Africa School Act (SASA) provides that a majority of parents at a public school may determine whether or not school fees are charged and the amount to be paid. There were however exemptions from paying school fees for parents who could afford to meet the cost. Exemption is extended to parents whose income is less than 30 times, but not more than 10 times the amount of fees (Veriava, 2002).

The demand for secondary education is increasing rapidly in almost all SSA countries. With increasing completion rates, the number of primary school leavers could even triple by 2020 in many SSA. This creates an enormous challenge for secondary education policy which needs to be designed not only to respond to inevitable rapid increase in demand for access but also to provide quality instruction necessary to ensure the supply of personnel with higher levels of education and training demanded by a growing and modernizing economy. Breaking away from the low growth equilibrium that has characterized too many African economies for too long will require sustained investment in the improvement of human resources, including most importantly secondary education (Verspoor, 2008). In Rwanda for instance, 80% of the students are enrolled in private schools, almost 40% of which receive no public subsidy and have to rely on fee income.

Campbell (1990) suggests determinants of performance components. Individual differences on performance are a function of three main determinants: declarative knowledge, procedural knowledge and skill, and motivation. Declarative knowledge refers to knowledge about facts, principles, objects, etc. It represents the knowledge of a given task's requirements.
The job performance among the individuals in an organization encompasses the level at which the job to be done has been performed. Performance on a general view refers to the criterion that relates to the organizational outcomes and successes. Performance ranges from the organizational performance to the national performance and also the individual performance which is equally important. Performance might not have to be directly observable in some instances in relation to an individual’s actions although other influences are also instrumental in the whole process.

Various parameters for performance may have implications on the performance itself in return. The first one is the distinction between speed and accuracy. This distinction is similar to the one between quantity and quality. Important questions that should be considered include: which is most valued by the organization, maximized speed, maximized accuracy, or some balance between the two? The performance of the school as an organization is dependent on various factors including the performance of the nonteaching staff in conjunction to the teaching staff.

According to Kapal (2012) in his study on school based factors that influence performance students’ academic performance at KCSE, various factors are combined to enhance performance including; employing adequate teachers to handle the increasing workloads in schools to enhance teacher student interaction; teachers should be provided opportunities for more exposure through in service programs; the head teachers should be at the frontline in supervising the teachers and the teaching-learning process to enhance performance.
No one principle can be considered in isolation if maximum learning is to occur for each student. The principles are categorized into domains of basic factors that cannot be ignored in understanding individual learners and the learning process as they provide the foundation for sound teaching practices.

In 2007, there were 1.2 million children in Kenya’s secondary school system. Some 400,000 students entered secondary school in 2008, about 60% of those who sat for K.C.P.E. This number was expected to rise by 200,000 in 2008 with the introduction of subsidies to cover tuition and other related costs (Daily Nation, Feb, 23rd, 2008). Upon implementation of FSE in Kenya, the number of secondary schools has increased from 6,566 secondary schools in 2008 to 7,308 in 2010. Enrolment grew from 1.18 million in 2007 to 1,328,964 students in 2008 and further to 1,701,501 students in 2010. The number of students have almost doubled but not much has been done on the facilities in the institutions, (Republic of Kenya, 2012).

Transition rate has improved from 60% in 2006 to 74% in 2012. There has also been a rise in enrolment in secondary education from 1.7 million in 2010 to 1.9 million in 2012.(Republic of Kenya 2012). Mutisya (2011) in his study found an increase in enrollment in secondary schools upon implementation of FSE without a corresponding increase in facilities. This study seeks to analyze trends in student enrollment in relation to introduction of FSE in Ng’enda division and how this affects the quality of secondary education.
2.3 Physical Facilities and Education Quality

Despite the continued improvement in access, there are various issues that affect secondary education one among which is limited facilities which continue to impact negatively on the quality of education.

Asayo (2009) asserts that sustainable provision of quality secondary education is hampered by limited physical facilities in secondary schools, inadequate trained teachers and ever growing financial deficits. The study found that the number of untrained teachers has increased tremendously from 23% to 29% between 2007 and 2008. This number was expected to rise further and could affect the quality of education provided. These findings concur with Irene et al (2010) who found that mixed day secondary schools did not have adequate teachers or adequate instructional materials.

Sifuna (1990) notes that secondary education program in Kenya is geared towards meeting the needs of both the students who terminate their education after secondary school and those who proceed to higher education. The objectives of secondary education are to prepare students to make a positive contribution to the development of society, acquire attitudes of national patriotism, self respect, self reliance, cooperation, adaptability and a sense of purpose and self discipline. The government thus encourages establishment of more schools in order to accommodate the high numbers of primary school graduates so as to equip the young generation with quality education.
Bray (2002) advances the argument that financing education requires spending on levels for which social returns exceed private returns and increased private spending on investments that yield higher private returns. The total social benefits of educating children equals the sum of benefits that accrues individually to the children and their families plus the benefits to society that arise from interaction with educated individuals.

The benefits of education both to individuals and society include increased adult wages and income, increased participation in the political process, greater charity giving and reduced dependency on social support programs, reduced criminal activity, increased savings, better health, lower mortality rates and increased life expectancy.

In Kenya, private returns to education generally increase with level of education as revealed by Manda et al (2002). Human capital externality for female and male students has positive impact on earnings for all workers. This analysis gives strong justification for design of sustainable financing mechanisms for post primary education, particularly secondary education, which is a transitional level to tertiary and university education. This study notes that the Government should always be the principal investor in education. Such an initiative cannot be left entirely to private sector because future objectives of human resource development involve long term planning and large financial outlays, which only the government is capable of mobilizing. Studies done earlier have found inadequacy of funds and resources, lack of enough teachers and overcrowding as some of the challenges facing effective implementation of FSE.
This study seeks to unearth the relationship between the school physical facilities and the provision of quality education which has not been covered by the existing literature.

2.4 Learning Materials and the Teaching Process

Onyango (2001) explains that material resources are those designed, modified and prepared to assist in teaching. Ayot (1984) concurs with Onyango when he emphasizes that textbooks are valuable books for teaching but their value is limited if pupils have no access to them. Lack of textbooks and other teaching and learning materials, teacher unpreparedness, lack of schemes of work and lesson plans are some problems postulated by Malusu (1981) hence importance of textbooks and other teaching and learning materials cannot be overemphasized and require proper planning in production and distribution to enhance education quality.

The challenges facing secondary education in SSA countries concern provision of goods and services for schools. Most SSA countries no longer rely on public entities for provision of goods and services, in particular classrooms and textbooks. Textbooks are procured from private publishers and private contractors sometimes hired by schools or communities build classrooms. Verspoor (2008) proposes that effective textbook strategies will depend on a vibrant local publishing industry and booksellers’ network. In smaller countries, cooperation is essential in order to keep costs down. The cost of construction of classrooms and specialized facilities is another important cost item that needs careful consideration. Verspoor (2008) proposes that at junior secondary level facilities can resemble primary school facilities, which can often be constructed at reasonable cost by communities without
expensive specialized rooms. For such constructions, a transparent process of procurement that is decentralized, managed at school level and simplified to allow tendering by smaller local contractors will usually be the most cost effective.

Verspoor (2008) argues that increases in public spending will be adequate to generate increases in education attainment and learning achievement unless accompanied by reforms that aim to a more efficient use of the available resources and find sources of additional funding. He advises that well structured public-private partnerships can help diversify the source of financing and provision. The government should concentrate on equipping existing schools with adequate resources to enhance educational quality. Quality secondary education helps young people realize their full human potential and fit in society as productive, responsible and democratic citizens.

Studies done in the past have found that some of the challenges facing day secondary schools include lack of adequate instructional materials as well as lack of teaching staff. Kinanu (2012) in his study found that lack of enough teachers, textbooks and teaching learning materials affect the quality of education in secondary schools. With introduction of FSE, schools could have registered over enrolment which meant that the available resources were constrained. This is likely to have a negative impact on quality of education.

This study seeks to establish the relationship between learning and teaching materials and the provision of quality secondary education since inception of FSE which has not been covered by existing literature.
2.5 Quality Education and Teachers’ Qualification

Secondary education is a gateway to the opportunities and benefits of economic and social development. Demand for higher levels of education is growing dramatically as countries approach universal primary education. The global education for all (EFA) effort provides added momentum for the growth in secondary education. Furthermore, globalization and the increasing demand for a more sophisticated labour force combined with the growth of knowledge based economies gives a sense of urgency to the heightened demand for secondary education. In today’s world, secondary education has vital mission, one which combines the policy peculiarities of being at the same time terminal and preparatory, compulsory and post-compulsory, uniform and diverse, general and vocational. (World Bank, 2005).

The quality of education offered depends upon the number of teachers available and the quality of work provided by these teachers. Onyango (2001) observes that human resource is the most important in a school organization. Though the contribution made by other support staff such as secretary, bursar accounts clerk, matron, nurses, messengers etc is important, teachers comprise the most important staff in a school. This is according to Odhiambo (2005), because the most important purpose of a school is to provide children with equal and enhanced opportunities for learning and the most important resource a school has for achieving that purpose is the knowledge and skills of teachers.

Quality secondary education is indispensable in creating a bright future for individuals and nations alike (World Bank, 2011). In the 20th century, both U.S. and Soviet education policies led to secondary education models aimed at the creation of
massive systems that emphasized open access and universal coverage. After 1945, what were later called comprehensive secondary schools began to spread from Northern to Southern Europe. In comprehensive schools, all students receive secondary education in a single institution, based on a common curriculum, and may be streamed through elective subjects. This is in contrast to students being tracked and grouped either by academic ability or by choice on entering secondary education. Meanwhile, the vocational approach to secondary schooling developed rapidly in Eastern Europe.

By the 1960s and 1970s secondary education was de facto linked more to primary than to tertiary education. The extension of compulsory education had entirely changed the concept, as well as the duration of basic education to the point that basic education included lower secondary schooling. Arising average level of schooling was seen as an important objective and as a measure of success of education reforms. Many other countries have embraced the goal of extending and expanding the notion of basic education to encompass much of what used to be restricted-access, elitist schooling. In sharp contrast with the United States, in European countries nearly half a century elapsed between when primary education was generalized and made free and compulsory and when access to secondary education was opened to all. In 1945, countries such as France, Ireland and Spain enrolled a fairly low proportion of the relevant age group in secondary education.

Teacher recruitment, retention and deployment are insufficient and inefficient. According to World bank simulation based on UNESCO statistics, sub-Saharan Africa will need 1,361,000 new teachers between 2000 and 2015 to meet the demands of primary education. (Schwile and Dembele,2007). As more countries feel
they are reaching their UPE goals and begin expanding secondary education, the requirements for additional teachers will increase pressure on already stretched system. To better identify the conditions that would allow secondary education expansion to be successful, it is important to start assessing the current institutional capacities in these systems and analyzing their impacts on teacher training policy and practice (Lewin and Calloids 2001; Mulkeen, 2005).

Majason (1995) asserts that teachers have the responsibility of transmitting knowledge, skills and moral values to learners. According to sessional paper No. 1 of 2005, teachers are an important resource in the teaching and learning process and their training and utilization require critical consideration. According to Republic of Kenya (2005), the government is committed to providing qualified teachers. The government asserts that qualified teachers are centre to ensuring provision of quality education.

Mwiria (2010) observes that the government’s inability to provide adequate teachers and delays in government financial aid has affected most secondary schools and especially day schools. According to Eshiwani (1993), school achievements are determined by availability of facilities as desks, textbooks, laboratory facilities as well as the quality of teachers. Kinanu (2012) in his study found there are not enough textbooks, instructional materials as well as adequate teaching staff in most secondary schools in the country.

Despite the importance of qualified teachers for quality education, there has not been adequate staffing. Availability and distribution of qualified teachers provide an
important index on quality of education provided. TSC informed international press service (IPS) that with the introduction of tuition waiver policy in secondary schools in January 2008, there were plans to employ an additional 4000 teachers to handle additional high school students, but noted that TSC have frozen recruitment of additional teachers only hiring those leaving the service. Hence some teachers have to deal with overly large classes affecting the quality of learning taking place. The teacher training process should also be in line with the educational requirements of the country.

This study aims at unearthing the impact FSE has had on the quality and quantity of teachers in regard to provision of quality education which has not been captured by existing literature.

2.6 Summary of the Literature Review

In the literature review, it has been noted that the demand for secondary education is increasing and globally there is need to have a well educated workforce hence the need to have it free and compulsory. In most developing countries, secondary education has been met as a basic requirement. In 2007, the Kenyan Government declared FSE. There are few studies done, analyzed and documented on the influence of FSE on the quality of secondary education eight years since its inception.

This study seeks to unearth the influence FSE has had on enrollment, effectiveness of available physical facilities, adequacy of teaching and learning materials and the quality and quantity of teachers and how this affect the quality of secondary education in Ng’enda division of Kiambu county.
CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter discusses the Research Design and Locale, Target population, Sampling procedure and Sample size determination, Research instruments, Data collection procedure, Data analysis, logistical and ethical considerations.

3.2 Research Design and Locale

3.2.1 Research Design

The study employed a descriptive survey research design. Descriptive survey designs are used in preliminary and exploratory studies to allow researchers to gather information, summarize and interpret for the purpose of clarification (Orodho, 2002). Mugenda and Mugenda (1999) give the purpose of descriptive research design as determining and reporting the way things are. Borg and Gall (1989) noted that descriptive research survey research is intended to produce statistical information about aspects of education that interest policy makers and educators. The study fitted with the provisions of descriptive survey design because the researcher collected data and reported the way things are without manipulating the teaching learning resources, physical facilities, quality and quantity of teachers and enrollment rate of students.

3.2.2 Locale of the Study

The study was conducted in Ng’enda division of Gatundu Sub-county in Kiambu County. It is one of the divisions that make Gatundu Sub-county. The division was chosen because schools in the division have been registering poor performances in
K.C.S.E. since introduction of FSE. In fact some stakeholders have continuously been raising concerns over the poor performances in K.C.S.E. registered by most schools in the division.

Furthermore, reports from the District education office, Gatundu district, for the year 2006 indicate that schools within the division have had challenges related to congestion in classrooms, inadequacy in teaching and learning materials, inadequacy in physical facilities as well as understaffing (Gatundu DEO, 2006). It was therefore important to gain empirical data on the quality of secondary education upon implementation of the tuition waiver in schools in Ng’enda division of Gatundu district.

3.3 Target Population

Target population is defined as all members of a real or hypothetical set of people, events or objects to which a researcher wishes to generalize the result of the research study (Borg and Gall, 1989). The study targeted 9 principals, 129 teachers and 3425 students from the 9 public secondary schools in the Ng’enda division. In addition, the A.E.O. Ng’enda division was part of the population. Therefore, the total population for the study was 3564 subjects.

3.4 Sampling Technique and Sample size Determination

3.4.1 Sampling Technique

According to Gay (1992), the minimum acceptable sample for a survey is between 10% and 20% for a small population of about 1000 persons. He observes that a researcher selects the sample due to various limitations that may not allow researching the whole population.
The study used simple random sampling to select one zone out of the 3 zones that are in Gatundu Sub-county. Ng’enda division was thus selected. Simple random sampling was also used to select 6 out of 9 schools to participate in the actual study. Orodho(2009) defines simple random sampling as a procedure in which all individuals in the population have an equal chance of being selected as a member of the sample.

In this study which is a descriptive study, the school principals would give crucial information about their schools and FSE in particular since they are involved in policy implementation hence the need to have a higher percentage in their sample(67%).The opinions of the teachers would complement those of their principals hence the lower percentage whereas the percentage for the students is lowest since they may not be as informed about issues concerning FSE as their teachers and the principal.

The study used stratified sampling to select 24 teachers (4 per school) and 336 students (56 per school) in order to have a balanced representation of males and females in the study. The A.E.O. of Ng’enda division had to be purposely selected to give inside information concerning FSE and other crucial educational data pertaining to this study.

3.4.2 Sample Size Determination

The table below illustrates the percentage of each of the respondents from the target population represented by the sample.
Table 3.1: Sampled Respondents

<table>
<thead>
<tr>
<th>Participant</th>
<th>Total</th>
<th>Number chosen</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principals</td>
<td>9</td>
<td>6</td>
<td>67</td>
</tr>
<tr>
<td>Teachers</td>
<td>129</td>
<td>24</td>
<td>18</td>
</tr>
<tr>
<td>Students</td>
<td>3425</td>
<td>336</td>
<td>10</td>
</tr>
<tr>
<td>A.E.O</td>
<td>1</td>
<td>1</td>
<td>100</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>3564</td>
<td><strong>367</strong></td>
<td><strong>10</strong></td>
</tr>
</tbody>
</table>

3.5 Research Instruments

The main tools of data collection for this study were questionnaires and interview schedules. Questionnaires contained both close-ended and open-ended items.

3.5.1 Questionnaires

The questionnaires was completed by the principals, teachers and students as it was the most efficient way of reaching many respondents in the shortest time available. Anonymity is also possible and therefore respondents were free to express their views (Orodho, 2005).

The questionnaires were organized in a way so as to collect background information of the principals, teachers and students. They gave information on enrollment, teaching and learning materials, physical facilities available and the number and qualification of teachers available in the schools under study.

3.5.2 Interview Schedules

An interview schedule was preferred for A.E.O.’s because it was possible to get more information by using probing questions (Orodho, 2005). An interview schedule with relevant questions about the study was prepared. This was used to
guide the interview conducted for the A.E.O. The data collected from the A.E.O. was used to complement the information provided in the questionnaires. The interview collected administrative details and the A.E.O’s view on enrollment, teaching and learning materials, physical facilities as well as number and qualifications of teachers in Ng’enda division of Gatundu Sub-county.

In addition, the researcher used a school’s observation checklist where the researcher would ascertain the status of various physical facilities of each of the school sampled.

3.6 Piloting of questionnaires

According to Gay (1987), piloting is important in ensuring a study reasonably adopts a plan and approach that will significantly guarantee the purpose of the investigation. Piloting was carried out in the neighboring Kiganjo zone in 3 schools which were not included in the final study. The purpose of the pilot study was to enable the researcher to ascertain the reliability and validity of the instruments, and to familiarize himself with the administration of the questionnaires therefore improving the instruments and procedures.

3.6.1 Validity of Instruments

According to Orodho (2009), validity refers to the extent to which an instrument measures what it is supposed to measure. The instruments were evaluated for content validity as the extent to which the questionnaire or test content is representative of the domain of content skills. The questionnaire content were read by the experts in the area of Educational Management, Policy and Curriculum
studies. This ensured the use of appropriate vocabulary, sentence structure and that the questions were suitable for the intended respondents.

3.6.2 Reliability of Instruments

A research instrument is reliable to the extent that it measures whatever it is measuring consistently (Mwiria and Wamahiu, 1995). Mugenda and Mugenda (2004) define reliability as a measure of the degree to which a research instrument yields consistent results or data after repeated trials. It will be verified by the consistency of the observation of an outcome. The split half technique was used to assess the reliability of the research instrument. This was done through dividing the pilot questionnaires into two equivalent halves and then a correlation coefficient for the two halves computed using the Spearman Brown prophecy formula. The coefficient indicates the degree to which the two halves of the test provide the same results and hence describe the internal consistency of the test. A reliability coefficient of 0.74 was obtained. According to Kiess and Bloomquist (1985), a minimum correlation coefficient of 0.65 is recommended as indicating that an instrument is reliable and therefore the coefficient was within the required range.

3.7 Data Collection Procedure

The researcher sought permission to conduct research from the National Commission for Science Technology and Innovation (NACOSTI). The Commission granted the researcher the authority and enabled him to carry out the study without administrative hindrances. The researcher personally visited all the schools selected in the sample. On the day of the visits, the researcher administered questionnaires to teachers, students and the head teacher. The researcher collected the questionnaires
from teachers and student after 3 days except those for head teachers which were collected after one week due to its relatively detailed nature. The researcher made an appointment with the A.E.O and interviewed him using probing questions and other questions as guided by the interview schedule. Notification of the visit to schools and interview schedule was done a week before to avoid inconveniences arising from unpreparedness, absent informants or program clashes.

3.8 Data Analysis and Presentation

After all data was collected, the researcher conducted data cleaning, which involved identification of incomplete or inaccurate responses which were corrected to improve the quality of the responses. After data cleaning, the data was coded and entered in a computer for analysis using Microsoft Excel 2007 spreadsheet software. This yielded both quantitative and qualitative data.

Quantitative data was analyzed using various measures of central tendency. Simple descriptive statistics as frequency counts, means and percentages were employed. As Mugenda and Mugenda (2003) asserts, the purpose of descriptive statistics is to enable the researcher to meaningfully describe distribution of scores or measurements using statistics. Once the questionnaire and other instruments were administered, mass of raw data collected were systematically organized in a manner that facilitates analysis. The results of data analysis have been presented using frequency distribution tables, bar graphs and pie charts.
On the other hand, qualitative data obtained in this study was analyzed qualitatively using content analysis based on analysis of meaning and implications emanating from respondents information and documented data.

### 3.9 Logical and Ethical Considerations

Logical and ethical considerations were adhered to throughout the study. They entailed participants’ informed consent, right to privacy, confidentiality and protection from any harm. The necessary procedures to gain entry into the field were observed. I got clearance from the Graduate school at Kenyatta University to carry out the study, a research permit from NACOSTI and appropriate administrators in Ng’enda division starting with the County Commissioner, County Education Officer, District Education Officer and Principals of the schools where I conducted the research.

I built a rapport with the A.E.O., principals, teachers and students in order to promote positive interaction between them and I. I assured them of the confidentiality of any information and showed them how important their participation might be helpful to them and I. In addition, I made them aware of the true nature, purpose and importance of the study. Finally, I consciously presented all findings gotten from principals, teachers, students and opinions from the A.E.O. correctly and honestly.
CHAPTER FOUR
DATA ANALYSIS INTERPRETATION AND PRESENTATION
OF FINDINGS

4.1 Introduction

This chapter presents the analysis of the findings from data collected through interviews, observations and analysis made from the previous chapters’. This chapter looks at the analysis of the responses from respondents on the survey questionnaire administered and data collected through interviews, following the research methodology outlined in the previous chapter. It also aims at assessing the influence of tuition waiver on quality of secondary education. The analysis of the findings has been presented in tabular form and statistical representation using graphs and charts for easy interpretation. Frequency charts, tables, bar graphs and pie charts were adopted as one of the main statistical techniques for the interpretation and presentation of data. Microsoft Excel 2007, spreadsheet software, was used for the statistical and pictorial presentation of the results.

The analysis was guided by the following study objectives:

i) To establish the effects of tuition waiver on student’s enrolment and how this affects the quality of secondary education in schools in Ng’enda division?

ii) To find out the current status of physical facilities for implementation of FSE and how this affects the quality of secondary education in schools in Ng’enda division.

iii) To assess the adequacy of teaching and learning materials for implementation of FSE and how this affects the quality of secondary education in schools in Ng’enda division.
iv) To find out the impact of FSE on quantity and quality of secondary teachers and how this affects the quality of education in secondary schools in Ng’enda division.

4.2 Background Data of Respondents in the Study

A total of the 367 respondents participated in the study. The participants comprised 6 principals, 24 teachers, 336 students and 1 AEO. The data was therefore analyzed based on these numbers.

Table: 4.1: Different numbers of Respondents in 6 Schools in Ng’enda division

<table>
<thead>
<tr>
<th>Respondents</th>
<th>Number chosen</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principals</td>
<td>6</td>
<td>67</td>
</tr>
<tr>
<td>Teachers</td>
<td>24</td>
<td>19</td>
</tr>
<tr>
<td>Students</td>
<td>336</td>
<td>10</td>
</tr>
<tr>
<td>AEO</td>
<td>1</td>
<td>100</td>
</tr>
<tr>
<td>Total</td>
<td>367</td>
<td>10</td>
</tr>
</tbody>
</table>

The average number of students per school sampled was 56, an average of four teachers and one head teacher per school.

Table 4.2: Gender of the Respondents

<table>
<thead>
<tr>
<th>Gender</th>
<th>Students (%)</th>
<th>Teachers (%)</th>
<th>Principal (%)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>141 (42)</td>
<td>13 (52)</td>
<td>3 (50)</td>
<td>157</td>
</tr>
<tr>
<td>Female</td>
<td>195 (58)</td>
<td>11 (48)</td>
<td>3 (50)</td>
<td>209</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>336 (100)</strong></td>
<td><strong>24 (100)</strong></td>
<td><strong>6 (100)</strong></td>
<td><strong>366</strong></td>
</tr>
</tbody>
</table>

Table 4.2 shows that 57.1% of all the respondents were female with male being 42.9%. For the students, 58% of them were female while 42% were male. For
teachers, 52% of them were male with female being 48%. The principals were balanced at 50% male against female.

Table 4.3: Level of Education of Principals and Teachers

<table>
<thead>
<tr>
<th>Level of Education</th>
<th>Principal Frequency</th>
<th>Principal Percentage</th>
<th>Teachers Frequency</th>
<th>Teachers Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diploma</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>12.50</td>
</tr>
<tr>
<td>Bachelors degree</td>
<td>5</td>
<td>83.33</td>
<td>18</td>
<td>75</td>
</tr>
<tr>
<td>Masters degree</td>
<td>1</td>
<td>16.67</td>
<td>3</td>
<td>12.50</td>
</tr>
<tr>
<td>PhD</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>6</strong></td>
<td><strong>100 %</strong></td>
<td><strong>24</strong></td>
<td><strong>100 %</strong></td>
</tr>
</tbody>
</table>

75% of teachers in Ng’enda division are holders of bachelors of education degree with the 83% of the head teachers holding a bachelors degree too. 12.5% of the teachers are diploma holders while master’s degree holders are also 12.5% in the division.

Table 4.4: Work Experience of the Teachers

<table>
<thead>
<tr>
<th>Work experience</th>
<th>Teachers Frequency</th>
<th>Teachers Percentage</th>
<th>Principals Frequency</th>
<th>Principals Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-5 years</td>
<td>3</td>
<td>12.50</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>6-10 years</td>
<td>1</td>
<td>4.17</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>11-15 years</td>
<td>8</td>
<td>33.33</td>
<td>1</td>
<td>16.67</td>
</tr>
<tr>
<td>16-20 years</td>
<td>7</td>
<td>29.17</td>
<td>2</td>
<td>33.33</td>
</tr>
<tr>
<td>Above 20 years</td>
<td>3</td>
<td>12.50</td>
<td>3</td>
<td>50.00</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>24</strong></td>
<td><strong>100 %</strong></td>
<td><strong>6</strong></td>
<td><strong>100.00 %</strong></td>
</tr>
</tbody>
</table>

Less than 20% of the teaching staff in Ng’enda division have taught for less than 10 years while 62.50% of the teaching staff have taught for 11 to 20 years which
reflects a wealth of experience. 12.50% of the teachers have been in the teaching fraternity for more than 20 years. 50% of the principals have an experience of more than 20 years.

### Table 4.5: KCSE mean score result for the 6 schools in Ng’enda division

<table>
<thead>
<tr>
<th>School</th>
<th>Year 2008</th>
<th>Year 2009</th>
<th>Year 2010</th>
<th>Year 2011</th>
<th>Year 2012</th>
<th>Year 2013</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Githaruru Secondary School</td>
<td>4.64</td>
<td>4.73</td>
<td>4.44</td>
<td>4.81</td>
<td>5.44</td>
<td>4.58</td>
<td>4.77</td>
</tr>
<tr>
<td>Ikuma Secondary School</td>
<td></td>
<td>2.44</td>
<td></td>
<td>3.03</td>
<td>2.74</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kahuguini Secondary School</td>
<td>3.06</td>
<td>3.04</td>
<td>3.01</td>
<td>2.95</td>
<td>3.02</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Muthiga High School</td>
<td>6.27</td>
<td>6.5</td>
<td>5.9</td>
<td>6.3</td>
<td>6.5</td>
<td>6.67</td>
<td>6.36</td>
</tr>
<tr>
<td>Ng’enda Secondary School</td>
<td>3.98</td>
<td>4.12</td>
<td>4.03</td>
<td>4.47</td>
<td>4.44</td>
<td>4.24</td>
<td>4.21</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>18.417</strong></td>
<td><strong>19.513</strong></td>
<td><strong>21.259</strong></td>
<td><strong>22.86</strong></td>
<td><strong>25.28</strong></td>
<td><strong>25.45</strong></td>
<td></td>
</tr>
<tr>
<td>Number of Schools</td>
<td>4</td>
<td>4</td>
<td>5</td>
<td>5</td>
<td>6</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Average</td>
<td>4.604</td>
<td>4.878</td>
<td>4.252</td>
<td>4.572</td>
<td>4.213</td>
<td>4.242</td>
<td></td>
</tr>
</tbody>
</table>

**Source:** Gatundu Sub-county Education Office, 2013

The general performance of Ng’enda division is below average (6.00). It is far below the University entry requirement of C+ (plus) or a raw mark of 55-59 marks.

### 4.3 Impact of tuition waiver on students’ enrollment and quality of FSE

The first research objective sought to establish the effects of tuition waiver on student’s enrollment and how this affects the quality of secondary education in
schools in Ng’enda division. To establish this, the respondents were given some questions whose answers are discussed below.

On enrollment, the principals were asked to give the total population of both boys and girls in their schools in subsequent years between 2005-2013 and the cumulative totals are shown in table 4.6.

Table 4.6: Overall student enrollment between 2005-2013

<table>
<thead>
<tr>
<th>Year</th>
<th>Total population</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>1415</td>
<td>_____</td>
</tr>
<tr>
<td>2006</td>
<td>1539</td>
<td>+124</td>
</tr>
<tr>
<td>2007</td>
<td>1660</td>
<td>+121</td>
</tr>
<tr>
<td>2008</td>
<td>1411</td>
<td>-249</td>
</tr>
<tr>
<td>2009</td>
<td>1656</td>
<td>+245</td>
</tr>
<tr>
<td>2010</td>
<td>1767</td>
<td>+111</td>
</tr>
<tr>
<td>2011</td>
<td>1874</td>
<td>+107</td>
</tr>
<tr>
<td>2012</td>
<td>1862</td>
<td>-12</td>
</tr>
<tr>
<td>2013</td>
<td>1983</td>
<td>+121</td>
</tr>
</tbody>
</table>
These figures are represented statistically in figure 4.1

Figure 4.1: Enrollment statistics for schools in Ng’enda division between 2005-2013

The total number of students admitted in high schools in Ng’enda Division has been increasing progressively from 2008 to 2013 except for the year 2012. Figure 4.1 shows that between 2007 and 2008, the student population declined by 15%. Since then, the numbers increased by 17% in 2009, six percent (6%) in 2010, six percent (6%) in 2011 while a small drop in population of 0.64% was registered in 2012. However, the population increased by 6.4% in 2013. For the past three years before the advent of FSE, there has been a general increase in population of students by 8% in 2006 and 7% in 2007. In general, the population of students has been on the increase since the advent of FSE. This is positive as per the Government policy but would be counterproductive if resources like teachers, physical facilities and
teaching learning resources were not increased. According to the AEO, student enrollment shot after implementation of FSE. He noted that while rise in enrollment meant more students joining schools, it had negatively affected the teaching/learning process. This was mainly due to congestion and opening up of day schools which lacked adequate staff, physical facilities as well as teaching / learning resources. One of the challenges of increased enrollment is increased number of students per class.

On the impact of enrollment on the quality of FSE, the teachers were asked the average number of students per class in their schools. Their responses are in the table 4.7.

<table>
<thead>
<tr>
<th>Average number of students per class</th>
<th>Teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
</tr>
<tr>
<td>Below 30</td>
<td>0</td>
</tr>
<tr>
<td>31-35</td>
<td>2</td>
</tr>
<tr>
<td>36-40</td>
<td>2</td>
</tr>
<tr>
<td>41-45</td>
<td>1</td>
</tr>
<tr>
<td>46-49</td>
<td>13</td>
</tr>
<tr>
<td>Above 50</td>
<td>6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>24</strong></td>
</tr>
</tbody>
</table>

Increased enrollment has led to overcrowding in classes as shown in table 4.6 above. 25 % of the teachers confirmed teaching classes with more than 50 students per class which is beyond the recommended number of students per class. 79.17 % of the teachers recorded having more than 45 students per class, which shows very few
learners are getting the right learning classroom environment. The recommended teacher to pupil ratio stands at 1:45 (MOE, 2008) while internationally the ratio stands at 1:40.

Increased enrollment in schools after FSE was introduced led to an increase in the workload. The teachers were further asked their weekly lessons and responded as shown in Table 4.8.

<table>
<thead>
<tr>
<th>Number of lessons per week</th>
<th>Frequency of teachers</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>10-15</td>
<td>0</td>
<td>0.00 %</td>
</tr>
<tr>
<td>16-20</td>
<td>3</td>
<td>12.50 %</td>
</tr>
<tr>
<td>21-25</td>
<td>7</td>
<td>29.17 %</td>
</tr>
<tr>
<td>26-30</td>
<td>11</td>
<td>45.83 %</td>
</tr>
<tr>
<td>Above 30</td>
<td>3</td>
<td>12.50 %</td>
</tr>
<tr>
<td>Total</td>
<td>24</td>
<td>100.00 %</td>
</tr>
</tbody>
</table>

The modal workload of the teachers in Ng’enda division is 26-30 lessons per week. Most of the teachers at 58.33 % are having a workload of above 26 lessons per week while 12.50 % of them have a work load beyond 30 lessons per week. The AEO through the interview confirmed that the increased enrollment due to FSE has led to an increase in the workload per teacher due to the increase in the number of streams per school beyond their capacity.

Previous studies had also established that teachers in Kenya are overworked. A study carried on FPE in 2008 for example found out that due to the rising number of pupils enrolling in schools after its introduction, teachers were sometimes
overwhelmed and not able to give individualized attention to pupils. Teachers could not mark pupils’ assignments’ and this contributed to a decline in academic performance. The teachers rated their workload as shown in Table 4.9.

**Table 4.9: Teachers’ rating of their teaching workload**

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Too high</td>
<td>18</td>
<td>75</td>
</tr>
<tr>
<td>High</td>
<td>3</td>
<td>12.5</td>
</tr>
<tr>
<td>Average</td>
<td>2</td>
<td>8.3</td>
</tr>
<tr>
<td>Low</td>
<td>1</td>
<td>4.2</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>24</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Table 4.9 shows that 4.2% of the teachers responded by saying that the workload was low, 8.3% rated it as average while 12.5% rated it as high. However, 75% rated their workload as too high. This shows that teacher’s workload in Ng’enda division was high after implementation of FSE. Hannagan (2002) notes that heavy workloads stress out the brain more than the body and having too much work to do demoralize teachers by making them feel powerless and sinking. He added that it frazzles them by depriving them sufficient time to organize and manage their thoughts well which may affect the performance of students. Adams (2013) adds that teaching occupations overload some teachers making teaching one of the most stressful occupations in the UK, with rates of suicide running at a third above the national average. Mutisya (2011) in his study found that the school environment was under pressure due to the higher number of learners. He found that this has affected teachers’ workload and the quality of learning has greatly been affected. Kimani (2013) concurs with him and in his study found that teachers’ workload had a
significant effect on academic achievement. Schools where teachers had 25 lessons or less registered higher mean scores to schools where teachers had 26 lessons or more.

4.4 The Status of Physical Facilities and Quality of Secondary Education

The second research objective sought to find out the adequacy of physical facilities in secondary schools in Ng’enda division to support quality FSE. To establish this, the teachers were asked to rate the adequacy of physical facilities in their schools and responded as shown in the table below.

Table 4.10: Adequacy of Physical Facilities

<table>
<thead>
<tr>
<th>Facility</th>
<th>Adequate Frequency</th>
<th>Adequate Percentage</th>
<th>Inadequate Frequency</th>
<th>Inadequate Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Library</td>
<td>9</td>
<td>37.50 %</td>
<td>15</td>
<td>62.50 %</td>
</tr>
<tr>
<td>Classrooms</td>
<td>17</td>
<td>70.83 %</td>
<td>7</td>
<td>29.17 %</td>
</tr>
<tr>
<td>Desks</td>
<td>15</td>
<td>62.50 %</td>
<td>8</td>
<td>37.50 %</td>
</tr>
<tr>
<td>Dining hall</td>
<td>16</td>
<td>66.67 %</td>
<td>8</td>
<td>35.33 %</td>
</tr>
<tr>
<td>Playground</td>
<td>7</td>
<td>29.17 %</td>
<td>17</td>
<td>70.83 %</td>
</tr>
<tr>
<td>Toilets</td>
<td>12</td>
<td>50.00 %</td>
<td>12</td>
<td>50.00 %</td>
</tr>
<tr>
<td>Laboratories</td>
<td>7</td>
<td>29.17 %</td>
<td>17</td>
<td>70.83 %</td>
</tr>
<tr>
<td>Lab apparatus</td>
<td>7</td>
<td>29.17 %</td>
<td>17</td>
<td>70.83 %</td>
</tr>
<tr>
<td>Computers</td>
<td>4</td>
<td>16.67 %</td>
<td>20</td>
<td>83.33 %</td>
</tr>
<tr>
<td>Staff offices</td>
<td>19</td>
<td>79.17 %</td>
<td>5</td>
<td>20.83 %</td>
</tr>
<tr>
<td>Clean water</td>
<td>18</td>
<td>75 %</td>
<td>6</td>
<td>25 %</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>131</strong></td>
<td><strong>49.62 %</strong></td>
<td><strong>132</strong></td>
<td><strong>50.38 %</strong></td>
</tr>
</tbody>
</table>

Classrooms, desks, dining halls, toilets, staff offices and clean water were rated at 70.83%, 62.5%, 50%, 79.17% and 75% respectively in terms of adequacy. This
shows that generally the teachers rated these physical facilities to be adequate, and they would be expected to perform their duties effectively.

The school library, the laboratories, laboratory apparatus, computers as well as the playgrounds were the most inadequate physical facilities in most schools at 62.5 %, 70.83 %, 70.83 %, 83.3% and 70.83% respectively. These facilities are essential to the learning process and hence their unavailability partly explains the poor results experienced. Inadequate laboratories for instance would mean that learners are not exposed to proper practical work in science subjects which is important in the masterly of such key subjects.

The success of teaching-learning process depends on physical and material resources. To enhance the learning process, the students need to be comfortable, safe and secure.

Onyango (2001) notes that one of the duties of head teachers in Kenya is to develop the school’s physical facilities. He said that in dealing with physical facilities, a head teacher has to bear in mind where to house the educational program, the population to be served by the facility and ensure the financial resources are readily available for the school expansions.

The AEO confirmed that most schools lack essential physical facilities with most lacking laboratories, laboratory equipment, libraries and computers. He added that lack of some of these key facilities have had adverse effects on curriculum delivery and implementation. Lack of laboratories and apparatus led to poor performance in
science subjects. A study done on some of the challenges facing effective implementation of FSE in Kangundo district found some of the challenges as inadequate funds and resources, teachers and overcrowding. Amukowa (2013) asserts in his study that inadequate physical facilities including laboratories led to poor performance in K.C.S.E.

4.5 Adequacy of teaching and learning resources

The third research objective required to find out the sufficiency of instructional resources in secondary schools in Ng’enda division to support quality FSE. To establish this the principals, teachers and students were asked to rate the adequacy of various key teaching and learning resources in their schools. Their responses are shown in table 4.11.

<table>
<thead>
<tr>
<th>Material</th>
<th>Principals Frequency</th>
<th>Percentage</th>
<th>Teachers Frequency</th>
<th>Percentage</th>
<th>Students Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guide books</td>
<td>5</td>
<td>83.33 %</td>
<td>18</td>
<td>75 %</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Teaching aids</td>
<td>3</td>
<td>50 %</td>
<td>12</td>
<td>50 %</td>
<td>176</td>
<td>52.3 %</td>
</tr>
<tr>
<td>Text books</td>
<td>2</td>
<td>33.33 %</td>
<td>12</td>
<td>50 %</td>
<td>181</td>
<td>53.8 %</td>
</tr>
<tr>
<td>Writing materials</td>
<td>3</td>
<td>50 %</td>
<td>18</td>
<td>75 %</td>
<td>158</td>
<td>47.0 %</td>
</tr>
</tbody>
</table>

Total 13 54.17 % 60 62.50 % 515 51.03 %

More than half of the principals, teachers and students agree that the schools have adequate teaching and learning resources at 54.17 %, 62.50 % and 51.03 % respectively. The AEO’s views on the adequacy of the teaching and learning
resources confirmed the situation. He believed the schools had adequate teaching and learning materials as the Government had disbursed enough funds for the purchase of the same. With introduction of FSE, schools get some funding from the Government while parents are required to meet various other costs such as school development projects and boarding fees. Under this arrangement, the Government pays Ksh10,265 per student annually amount that is to be allocated in lump sums at the start of the three school terms and which is expected to cover tuition and administrative costs, school maintenance and improvements, and class activities (MOE, 2009).

The success of the teaching learning process depends on the availability of teaching-learning resources. One of the roles of head teachers is to allocate instructional resources and materials necessary for the teaching-learning process. Onyango (2001) explains that material resources are those designed, modified and prepared to assist in teaching. Such include teacher’s guide books, teaching aids, textbooks and writing materials among others.

Mutisya (2011) in his study found that head teachers were positive if the Government continued to give support to schools to acquire teaching and learning materials, the situation in public schools would improve tremendously and in the long run a textbook ratio of 1:1 would be attained.

4.6 Adequacy and qualification of teachers

The fourth research objective sought to find out the number and qualification of teachers in secondary schools in Ng’enda division to support implementation of
quality FSE. To establishes this, the principals were asked to give the number of teachers in their schools against the number of streams. Their responses are shown in the table 4.12

<table>
<thead>
<tr>
<th>School</th>
<th>No. of Teachers</th>
<th>Number of Forms</th>
<th>No. of Streams</th>
</tr>
</thead>
<tbody>
<tr>
<td>Githaruru</td>
<td>10</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Kahuguini</td>
<td>17</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Muthiga</td>
<td>16</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Ng’enda</td>
<td>19</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Wamwangi</td>
<td>10</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Ikuma</td>
<td>9</td>
<td>4</td>
<td>1</td>
</tr>
</tbody>
</table>

As can be seen in table 4.12 above, the schools offer classes up to form 4. All the schools sampled are offering a curriculum of 11 subjects in form 1 and 2 and the same number of subjects in form 3 and 4. With only 10 teachers and having 2 streams, teachers in Githaruru secondary would teach as many as 32 lessons as per their curriculum based establishment. This is too high a workload at secondary level. Only Ng’enda and Kahuguini have enough teachers. In most of the schools sampled, some of the teachers are employed by the BOM. Githaruru has 2, Muthiga has 3, Wamwangi has 2 and Ikuma has 2. These configurations shows that Government employed teachers are few and even the teachers available are not enough as per the curriculum establishment of most of the schools.

Further the principals were asked whether the teachers in their schools were adequate or not and gave the responses in table 4.13.
**Table 4.13: Adequacy of Teachers in Schools**

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adequate</td>
<td>2</td>
<td>33.33</td>
</tr>
<tr>
<td>Inadequate</td>
<td>4</td>
<td>66.67</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>6</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Only 2 (33.33%) schools out of those studied had enough teachers. 4 (66.67%) rated the number of teachers as inadequate. It therefore implies that majority of schools in Ng’enda division do not have enough teachers.

The AEO confirmed the head teachers’ views as true; he believed the schools in Ng’enda division were understaffed although the school population had grown than their capacities can hold. In fact, he noted that the number of teachers in some schools had remained the same for a long time.

The TSC informed the international press service (IPS) that with the introduction of tuition waiver policy in secondary schools in January 2008 there were plans to employ additional teachers but also noted that the Government had frozen the recruitment of additional teachers only hiring those leaving the service. Hence some teachers had to deal with overly large classes affecting the quality of learning taking place. A study of the challenges facing effective implementation of FSE in Kangundo district found that there was a shortage of teachers to attend to the rising number of students resulting in inadequate curriculum supervision and implementation in schools.
The quality of education offered depends upon the number of teachers available and quality of work provided by those teachers. Onyango (2001) observes that human resource is the most important in a school organization.

Further, the principals were asked to give the qualifications of teachers in the 6 schools in Ng’enda division and their responses are as shown in figure 4.2

![Teaching Staff Qualifications in Ngenda Division](image)

**Figure 4.2: Education Qualifications of Teachers**

Most of teachers in Ng’enda division are holder of a bachelors’ degree at 75%, 13% are untrained graduate teachers while 3% are diploma holders. 9% of the teachers have advanced their studies and are holders of master’s degree. The level of academic qualification was adequate according to the head teachers. The AEO confirmed that most teachers teaching in schools in the division are qualified.
Further, the students were asked to give reasons why they joined their respective schools in Ng’enda division, their responses are as shown in the figure below.

<table>
<thead>
<tr>
<th>Reason</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home proximity</td>
<td>224</td>
<td>66.67</td>
</tr>
<tr>
<td>Parents inability to pay fees</td>
<td>168</td>
<td>50.00</td>
</tr>
<tr>
<td>Lack of alternative</td>
<td>168</td>
<td>50.00</td>
</tr>
<tr>
<td>Good performance</td>
<td>112</td>
<td>33.33</td>
</tr>
<tr>
<td>Adequate facilities</td>
<td>56</td>
<td>16.67</td>
</tr>
</tbody>
</table>

Most students at 66.67% opted to join their respective schools due to its proximity to their respective homes. However, a considerable number, 50 %, had joined their respective schools due to their parent’s inability to take them to bigger schools in other places. A good number of them, at 50% also join their respective schools due to lack of alternatives as the marks scored at K.C.P.E. does not allow them admission to better schools. The A.E.O. in his interview confirmed that a good number of pupils graduating from standard eight did not attend the schools they were admitted in form one and opted to join the local day schools due to school fees problem and low scores at K.C.P.E.

The researcher also sought to know from the principals some of the challenges that the schools in Ng’enda are facing and the responses are as shown below.
Table 4.15: The Challenges Secondary Schools in Ng’enda Division Face

<table>
<thead>
<tr>
<th>Challenge</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial problems</td>
<td>5</td>
<td>83.33</td>
</tr>
<tr>
<td>Inadequate physical facilities</td>
<td>4</td>
<td>66.67</td>
</tr>
<tr>
<td>Inadequate teaching aids</td>
<td>3</td>
<td>50.00</td>
</tr>
<tr>
<td>Shortage of teachers</td>
<td>3</td>
<td>50.00</td>
</tr>
<tr>
<td>Over enrollment</td>
<td>1</td>
<td>16.67</td>
</tr>
<tr>
<td>Political interference</td>
<td>1</td>
<td>16.67</td>
</tr>
</tbody>
</table>

Most surveyed schools in Ng’enda faced financial challenges in their operations, at 83.33%. Other challenges reported by more than 50% of the schools are inadequate physical facilities, inadequate teaching aids and shortage of teachers. Over enrollment and political interference also featured among the prominent challenges facing the secondary schools in Ng’enda division.
CHAPTER FIVE
SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction
This study undertook to investigate the influence of waiver on tuition on quality of secondary education. These measurements of the influence are qualitative in nature with respect to the study. Responses from Questionnaires distributed, informal interviews with principals and educational officers and manuals characteristic to project topic were the only means of analysis.

This chapter gives the summary of the findings, conclusions, recommendations for policy and practice and suggestions for further research.

5.2 Summary of Findings
The purpose of the study was to find the influence of tuition waiver (2008) on the quality of secondary education in Kenya, with specific focus on Ng’enda division of Kiambu County. The study sought to meet the following research objectives;

i) To establish the effects of tuition waiver on student’s enrollment and how this affects the quality of secondary education in schools in Ng’enda division.

ii) To find out the current status of physical facilities for implementation of FSE and how this affects the quality of secondary education in schools in Ng’enda division.

iii) To assess the adequacy of teaching and learning materials for implementation of FSE and how this affects the quality of secondary education in schools in Ng’enda division.
iv) To establish the qualification and number of teachers for implementation of FSE and how this affects the quality of education in secondary schools in Ng’enda division.

The study established a gradual increment of enrollment of students in Ng’enda division from 2008-2013. The statistics indicated a slight drop in enrollment in 2012 but once again the number shot up in 2013. This was as a result of pressure of many pupils leaving primary school and Government support to the program through the FSE funds. The findings further showed that most teachers had more than 45 students in class. This in turn resulted in overcrowding. The findings further showed that most teachers had a heavy workload with the A.E.O. confirming a marked increase in teachers’ workload as a result of FSE.

The findings showed that most of the physical facilities were adequate. However, computers, laboratories, laboratory apparatus, playgrounds as well as school libraries were found to be inadequate. These facilities are essential to the learning process. The A.E.O. confirmed that lack of key facilities like laboratories have had adverse effects on curriculum delivery and implementation.

The study established that the schools sampled had adequate teaching and learning resources. These include guide books, teaching aids, textbooks and writing materials. The A.E.O. confirmed the situation adding that the Government had disbursed enough funds for the purchase of the same.
The study established that schools visited did not have enough teachers. The A.E.O. confirmed that the schools were understaffed. However, the study found that the teachers teaching in schools in Ng’enda division had the right qualification and the necessary experience to teach. The experience and qualification is commendable but the performance in the past five years is not impressive which shows that the teachers need to do more.

5.3 Conclusions

Based on the findings of this study, it can be concluded that tuition waiver (2008) has led to an increase in enrollment. This increased enrollment has led to overcrowded classrooms which in turn impede effective learning. The teachers’ workload was found to have increased. Teachers are not able to work effectively and evaluate student’s work under the current circumstances. This has negatively affected the quality of education as is demonstrated by the performance of most schools in Ng’enda division.

The study also found that such physical facilities as computers, laboratories and apparatus, playgrounds and school libraries were inadequate which had a negative impact on the implementation of FSE bearing in mind the increased number of students. Shortages of laboratories and apparatus have led poor performance in science subjects.

Most of the teaching and learning resources were found to be adequate. Textbooks lost though should be replaced to maintain a student to book ratio of 1:1.
The qualifications and experience of most of the teachers were found to be commendable. There is a shortage of teachers in Ng’enda division as most schools studied were found not to have enough teachers. The performance, however, was not impressive showing that teachers needed to do more.

It emerges that the tuition waiver (2008) had negatively affected the quality of education in secondary schools.

5.4 Recommendations

Gathering from the work done on this study, the following areas were identified by the researcher as being of paramount importance and hence the researcher makes the following recommendations;

5.4.1 Policy Recommendations

i) School principals should enroll students according to the resources and teachers they have to prevent overcrowding in classrooms and overworking of teacher.

ii) The Government should continue to build new schools and employ more teachers to accommodate all those qualifying for secondary education from primary schools.

iii) The Government should allocate enough funds and resources to schools to ensure FSE runs smoothly without compromising the quality of education. Stocked libraries, computers ore laboratories and apparatus, and more land for expansion can only be acquired with enough funds.
5.4.2  Recommendations for Further Research

i) A study on the best ways of coping with the high number of secondary schools students without compromising the quality of education in Ng’enda division.

ii) A study on the effects of FSE on academic performance in Ng’enda division.

iii) A study on the strategies employed by the Government to cope with challenges of FSE in Ng’enda division.
REFERENCES


APPENDIX I

Principal’s Questionnaire

The purpose for which this questionnaire was designed is to analyze the influence of tuition waiver on the quality of education in Ng’enda Division. All your responses and information will be treated with utmost confidentiality and only be used for analytical purposes of the study. Please give your view by filling in the blank spaces or putting a tick [✓] in the appropriate spaces that corresponds with your response.

1. Gender    Male [ ]    Female [ ]

2. Name of your school ........................................................................................................

3. Academic qualification (Tick as appropriate)
   Diploma [ ]    Bachelor’s degree [ ]
   Masters degree [ ]    PhD [ ]

4. Working experience
   Below 5 years [ ]    5-10 years [ ]
   10-15 years [ ]    16-20 years [ ]
   Above 20 years [ ]

5. (a) Is Government funding enough to meet operations
    Yes [ ]    No [ ]

   (b) If no, where do you get money to supplement Government Funding?
    CDF [ ]    Projects [ ]    Parents [ ]    Sponsors [ ]
    Any other......................................................................................................................

6. (a) Do parents pay levies on time    Yes [ ]    No [ ]

   (b) If no, what are the possible causes?
    not economically endowed [ ]    assume education is free [ ]
    disregard to education [ ]    orphaned student [ ]
7. a) How many TSC teachers are there in your school?

<table>
<thead>
<tr>
<th>Below 5</th>
<th>6-10</th>
<th>10-15</th>
<th>Above 15</th>
</tr>
</thead>
<tbody>
<tr>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
</tbody>
</table>

b) Are they adequate in teaching students

Yes [ ] No [ ]

c) If no, how do you get extra teachers to teach students?

Volunteers [ ] B OG [ ] TP [ ]

d) Have you employed untrained teachers

Yes [ ] No [ ]

e) If yes, what is the level of education?

Form 4 [ ] undergraduate [ ] graduate [ ]

any other (specify) ..............................................................

(f) (i) Give a summary of the qualifications of teachers in your school in the table below

<table>
<thead>
<tr>
<th>Qualification</th>
<th>Number of teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td>B/ED</td>
<td></td>
</tr>
<tr>
<td>BA,BSC/PGDE</td>
<td></td>
</tr>
<tr>
<td>Diploma</td>
<td></td>
</tr>
<tr>
<td>S1</td>
<td></td>
</tr>
<tr>
<td>U.T. Graduate</td>
<td></td>
</tr>
<tr>
<td>M/ED/MSC</td>
<td></td>
</tr>
<tr>
<td>Any other(specify)</td>
<td></td>
</tr>
</tbody>
</table>

(ii) Is the level of training of teachers adequate?

Yes [ ] No [ ]
(iii) Give a summary of the teaching experience of your teachers in the table below

<table>
<thead>
<tr>
<th>Teaching experience(years)</th>
<th>Number of teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-5</td>
<td></td>
</tr>
<tr>
<td>5-10</td>
<td></td>
</tr>
<tr>
<td>10-15</td>
<td></td>
</tr>
<tr>
<td>15-20</td>
<td></td>
</tr>
<tr>
<td>Over 20 years</td>
<td></td>
</tr>
</tbody>
</table>

(iv) Do your teachers attend in-service courses/seminars

Yes [ ] No [ ]

(v) Did you attend in service prior to implementation of FSE

Yes [ ] No [ ]

(vi) Do all teachers have adequate:

(a) Guidebooks Yes [ ] No [ ]

(b) Teaching Aids Yes [ ] No [ ]

8. (a) Does your school have adequate facilities?

Yes [ ] No [ ]

(b) Which of the following physical facilities does your school have? (Tick appropriately)

Library [ ] enough classrooms [ ]
Dining hall [ ] Spacious playground [ ]
Adequate toilets [ ] Adequate laboratories [ ]
Computers [ ] Staff offices [ ]
Clean water [ ]
9. In your opinion, why do students join your school?

- Lack of alternative due poor performance
- Proximity to home
- Parents inability to pay fees in boarding school
- School is performing well
- Adequate facilities
- Any other (specify) ..........................................................

10. (a) Among the challenges listed below, which one(s) affect your school

- Undisciplined students
- Uncooperative students
- Inadequate physical facilities
- Shortage of teachers
- Financial problems
- Political interference
- Over enrollment
- Inadequate learning and teaching materials

(b) Apart from these challenges, what other challenges does your school face?

.................................................................................................

11. Please give a summary of enrolment of your school in the 6 years indicated below

<table>
<thead>
<tr>
<th>Year</th>
<th>Boys</th>
<th>Girls</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2009</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2013</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
12. Please give a summary of textbook ratio in the following table

<table>
<thead>
<tr>
<th>Year</th>
<th>Form 1</th>
<th>Form 2</th>
<th>Form 3</th>
<th>Form 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2009</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2013</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

13. Please give a summary of the school’s performance on the years indicated below

<table>
<thead>
<tr>
<th>Year</th>
<th>The MSS in KCSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td></td>
</tr>
<tr>
<td>2009</td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td></td>
</tr>
<tr>
<td>2013</td>
<td></td>
</tr>
</tbody>
</table>

14. Give a summary of total student enrollments for the years indicated below
2005 -
2006 -
2007 -

Thank You
APPENDIX II

Teacher’s Questionnaire

The purpose for which this questionnaire was designed is to analyze the influence of Tuition waiver on the quality of education in Ng’enda Division. All your responses and information will be treated with utmost confidentiality and only be used for analytical purposes of the study. Please give your view by filling in the blank spaces or putting a tick [✓] in the appropriate spaces that corresponds with your response.

1. Gender Male [ ] Female [ ]

2. Age
   Below 20 [ ] 21 – 25 [ ] 26- 30 [ ]
   31-35 [ ] Above 35 [ ]

3. Qualification
   Diploma [ ] First degree [ ]
   Second degree [ ] PhD [ ]

4. Teaching experience

5. (a) How many lessons do you teach in a week?
   (b) How do you rate this workload?
   Too high [ ] high [ ] Average [ ] low [ ]

6. (ii) If too high or high ‘how do you cope with this?’

7. What is the average class size in your school?

8. Do you have adequate:-
   i) Guide books Yes [ ] No [ ]
   ii) Teaching aids Yes [ ] No [ ]

9. How many times have you received in service training since being employed?
10. How often are you absent from school? .................................................................

11. Does your school has:-
   a) Enough textbooks Yes [  ] No [  ]
   b) Enough laboratory apparatus Yes [ ] No [ ]
   c) (i) Enough classrooms Yes [ ] No [ ]
      (ii) Overcrowded classrooms Yes [ ] No [ ]
      (iii) If yes, how do you cope with overcrowding? ...........................................
   d) Library Yes [ ] No [ ]
   e) Enough Toilets, latrines, urinals Yes [ ] No [ ]
   f) Enough desks Yes [ ] No [ ]
   g) Enough writing materials, charts, chalk Yes [ ] No [ ]

12. (a) How many laboratories do you have in your school?
    (b) Are they adequate Yes [ ] No [ ]
    (c) Are they well equipped? Yes [ ] No [ ]

13. (a) What challenges does your school face upon implementation of FSE.
    (b) In your opinion, give ways of addressing these challenges

    Thank You
APPENDIX III

Students Questionnaire

Please respond to all Questions by putting a tick [✓] against the appropriate answers or giving answers as appropriate.

1. Gender  Male [ ]  Female [ ]

2. Form  1 [ ]  2 [ ]  3 [ ]  4 [ ]

3. Age  13-15 [ ]  15-16 [ ]  17-18 [ ]  19-20 [ ] Above 20 [ ]

4. (a) Does your school provide you with enough textbooks
   Yes [ ]  No [ ]

   (b) What is the ratio in which you share textbooks?
   1:2 [ ]  1:3 [ ]  1:4 [ ]  1:5 [ ]

5. (a) Are you comfortable in your school
   Yes [ ]  No [ ]

   (b) If no what makes you uncomfortable

6. Which of the following challenges do you face in your school:-
   [ ]  Some subjects are not taught
   [ ]  We do not have a playing field
   [ ]  We do not have adequate learning materials
   [ ]  Overcrowding in class
   [ ]  Lack of electricity
   [ ]  Any other (specify)........................................................................................................

7. 8How many laboratories do you have
   1 [ ]  2 [ ]  3 [ ]  4 [ ]  none [ ]

Thank you
## APPENDIX IV

### AEO Interview Guide

<table>
<thead>
<tr>
<th>OBJECTIVE</th>
<th>MAIN QUESTION</th>
<th>PROBING QUESTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. To establish the effect of tuition waiver on student’s enrolment and how this affects the quality of secondary education in Ng’enda division.</td>
<td>What was the impact of FSE on enrolment in secondary schools in the division?</td>
<td>1. What are the positive effects of enrolment in the division?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. What are the negative effects of enrolment in the division?</td>
</tr>
<tr>
<td>2. Find out the current status of physical facilities and how this affects the quality of secondary education in Ng’enda division.</td>
<td>How has the implementation of FSE affected the adequacy of physical facilities in secondary schools in the division?</td>
<td>1. What are your views on the adequacy of physical facilities in the division?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. How has the sufficiency of physical facilities affected the quality of teaching/learning in the division?</td>
</tr>
<tr>
<td>3. To assess the adequacy of teaching and learning materials for implementation of FSE and how this affects the quality of education in secondary schools in Ng'enda division.</td>
<td>How has the implementation of FSE affected the adequacy of teaching/learning resources?</td>
<td>1. What are your views on the adequacy of teaching/learning resources in public secondary schools in the division?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. How has the adequacy of teaching/learning resources affected the quality of secondary education in the division?</td>
</tr>
<tr>
<td>4. To establish the qualification and number of teachers for implementation of FSE and how this affects the quality of education in secondary schools in Ng’enda division.</td>
<td>What was the impact of introduction of FSE on adequacy of teachers in secondary schools in Ng’enda division?</td>
<td>1. What are your views on adequacy and qualification of teachers upon implementation of FSE?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Is there a shortage of teachers in secondary schools in the division?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Are all teachers teaching in secondary schools in Ng’enda division qualified?</td>
</tr>
</tbody>
</table>

Thank you
APPENDIX V

School Observation Checklist

To be ticked appropriately as one observes the physical facilities

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>Adequate</th>
<th></th>
<th>Inadequate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Classrooms</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Classroom space</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Desks and chairs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Library</td>
<td>Available</td>
<td></td>
<td>Not available</td>
</tr>
<tr>
<td>5</td>
<td>Playing ground</td>
<td>Available</td>
<td></td>
<td>Not available</td>
</tr>
<tr>
<td>6</td>
<td>School fence</td>
<td>Available</td>
<td></td>
<td>Not available</td>
</tr>
<tr>
<td>7</td>
<td>Dining hall</td>
<td>Available</td>
<td></td>
<td>Not available</td>
</tr>
<tr>
<td>8</td>
<td>Laboratories</td>
<td>Adequate</td>
<td></td>
<td>Inadequate</td>
</tr>
<tr>
<td>9</td>
<td>Class windows</td>
<td>Available</td>
<td></td>
<td>Not available</td>
</tr>
<tr>
<td>10</td>
<td>Staff offices</td>
<td>Adequate</td>
<td></td>
<td>Inadequate</td>
</tr>
</tbody>
</table>
APPENDIX VI

Research Authorization by NACOSTI

NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

Telephone: +254-20-2213471, 2241349, 310571, 2219420
Fax: +254-20-318245, 318249
Email: secretary@nacosti.go.ke
Website: www.nacosti.go.ke

Ref: No. NACOSTI/P/14/4994/3334

Date: 16th September, 2014

Njau Nicholas Wamatu
Kenyatta University
P.O. Box 43844-00100
NAIROBI.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on “The influence of tuition waiver (2008) on quality of secondary education in Ngenda Division, Kiambu County, Kenya,” I am pleased to inform you that you have been authorized to undertake research in Kiambu County for a period ending 31st December, 2014.

You are advised to report the County Commissioner and the County Director of Education, Kiambu County 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. S. K. LANGAT, OGW
FOR: SECRETARY/CEO

Copy to:

The County Commissioner
The County Director of Education
Kiambu County.
APPENDIX VII

Research Authorization by County Commissioner

OFFICE OF THE PRESIDENT
MINISTRY OF INTERIOR AND CO-ORDINATION OF NATIONAL GOVERNMENT
COUNTY COMMISSIONER, KIAMBU

Reference is made to National Commission for Science, Technology and Innovation letter Re No. NACOSTI/P/14/4994/3334 of 16th September, 2014.

You have been authorized to conduct research on “The influence of tuition waiver (2008) on quality of secondary education in Agenda Division, Kiambu County, Kenya” for a period ending 31st December, 2014.

You are requested to share your finding with the County Education Office upon completion of your research.

MUGO GICHIRI
FOR: COUNTY COMMISSIONER
KIAMBU COUNTY

Cc County Director of Education
KIAMBU COUNTY

National Commission for Science, Technology and Innovation
P.O. Box 30623-00100
NAIROBI
APPENDIX VIII

Research Authorization by D.E.O

REPUBLIC OF KENYA
MINISTRY OF EDUCATION SCIENCE AND TECHNOLOGY
DEPARTMENT OF EDUCATION

Telephone Gatundu 74001
When replying please quote
Email: educationgtd@gmail.com

DISTRICT EDUCATION OFFICE
GATUNDU DISTRICT
P.O BOX 435,
GATUNDU

REF: GTD/EDU/GEN/91
DATE: 23rd September 2014

Principals
Sec. schools
GATUNDU DISTRICT

RE: RESEARCH AUTHORIZATION
NJAU NICHOLUS WAMATU

This is to inform you that the above cited person has been given authority to carry out research on "The influence of tuition waiver (2008) on quality of secondary education in Ng’enda division, Kiambu county, Kenya" for a period ending 31st December 2014.

Please accord him the necessary assistance.

SILOMA KINAYIA
DISTRICT EDUCATION OFFICER
GATUNDU DISTRICT

Cc
NJAU NICHOLUS WAMATU
County Director of Education
KIAMBU COUNTY
APPENDIX IX

Research Permit

THIS IS TO CERTIFY THAT:
MR. NJAU NICHOLAS WAMATU
of KENYATTA UNIVERSITY, 278-1030
Gatundu, has been permitted to conduct
research in Kiambu County
on the topic: THE INFLUENCE OF
TUITION WAIVER (2008) ON QUALITY OF
SECONDARY EDUCATION IN NGANDA
DIVISION, KIAMBU COUNTY, KENYA
for the period ending:
31st December, 2014

[Signature]
Applicant's Signature

[Signature]
Secretary
National Commission for Science, Technology & Innovation