AN ASSESSMENT OF INTERNAL EFFICIENCY OF PUBLIC DAY SECONDARY SCHOOLS AND ITS IMPACT ON KCSE PERFORMANCE: A CASE OF CENTRAL DIVISION, MACHAKOS DISTRICT, KENYA

BY

MWANGI ALICE WAIRIMU

A Research Project Submitted to the School of Education in Partial Fulfilment for the Requirements for the Award of the Degree of Master of Education in Economics of Education

KENYATTA UNIVERSITY LIBRARY

Kenyatta University

August 2011
DECLARATION

This project is my original work and has not been presented for a degree in any other University

Mwangi Alice Wairimu

E55/CE/15463/05

27th Sept. 2011

This project has been submitted for review with our approval as University supervisors.

1. 

DR. NORBERT OGETA

DATE

LECTURER

Department of Educational Management, Policy and Curriculum Studies

2. 

DR. KIRANGA GATIMU

DATE

LECTURER

Department of Educational Management, Policy and Curriculum Studies
DEDICATION

First and foremost this work is dedicated to the Almighty God who gave me physical, mental and financial strength to enroll for this course. Secondly, to my husband Patrick Wambua and our three children Ignatius Mwangi, Caroline Mutio and Irene Nyaitaha for their understanding whenever i had to be absent in the course of my studies.

Finally, to my dear loving parents Dinah Nyaitaha and Francis Mwangi both retired teachers whose interest in Education inspired me at an early age and encouraged me to pursue higher education.
ACKNOWLEDGEMENTS

This project would not have been possible without the help and contributions of several people to whom I am indebted. I would like to acknowledge the following for their invaluable contributions.

I highly appreciate the tireless work of Dr. N. Ogeta and Dr. K. Gatimu for their lecturers between April 2006 to April 2007 and their guidance as my supervisors in writing this project proposal. I also thank Dr. G. Onyango and Dr. J. Shiundu for advice on proposal writing and all the other lecturers of the Department of Educational Management, Policy and Curriculum Studies for laying the ground for this work.

I am constantly thankful to my husband Patrick Wambua for financial and moral support during the studies.

Special thanks to Reuben Mutegi for guidance during data analysis. Robinson Muli for typing this work.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title Page</td>
<td></td>
</tr>
<tr>
<td>Declaration</td>
<td>ii</td>
</tr>
<tr>
<td>Dedication</td>
<td>iii</td>
</tr>
<tr>
<td>Acknowledgements</td>
<td>iv</td>
</tr>
<tr>
<td>Table of contents</td>
<td>v</td>
</tr>
<tr>
<td>List of Tables</td>
<td>ix</td>
</tr>
<tr>
<td>List of Figures</td>
<td>x</td>
</tr>
<tr>
<td>List of Abbreviations and Acronyms</td>
<td>xi</td>
</tr>
<tr>
<td>Abstract</td>
<td>xii</td>
</tr>
</tbody>
</table>

## CHAPTER ONE

### INTRODUCTION

1.1 Background to the study .................. 1

1.2 Statement of the problem .................. 6

1.3 Purpose of the study ...................... 8

1.4 Objectives of the study ................... 8

1.5 Research questions ........................ 8

1.6 Significance of the study ................ 9

1.7 Limitations of the study .................. 9

1.8 Delimitations of the study ............... 10

1.9 Assumptions of the study .................. 10
CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction ................................................. 16
2.2 Historical background of education in Kenya .......... 16
2.3 Educational inputs (direct and indirect costs) ......... 18
2.4 Internal efficiency ........................................... 20
2.5 Enrolments .................................................... 22
2.6 Equity ........................................................... 23
2.7 Repetition, disengagement, and dropouts ............. 27
2.8 Factors militating against internal efficiency in secondary schools ........................................... 30
2.8.1 Institutional factors ........................................ 30
2.8.2 Students characteristics ................................. 31
2.8.3 Family background ....................................... 33
2.9 Summary of the literature review ....................... 34

CHAPTER THREE

METHODOLOGY

3.1 Introduction .................................................... 36
3.2 Research design ............................................... 36
3.3 Location of the study ........................................ 37
3.4 Target population ......................................... 37
3.5 Sampling techniques and sample size ....................... 37
3.6 Research instruments ..................................... 38
3.7 Validity of research instruments ............................ 38
3.8 Reliability of the instruments .............................. 39
3.9 Piloting of the research instruments ....................... 39
3.10 Data collection procedures ................................ 39
3.11 Data analysis and presentation ............................ 40

CHAPTER FOUR

DATA ANALYSIS AND PRESENTATION OF RESULTS

4.1 Introduction .............................................. 41
4.2 Questionnaire return rate ................................. 42
4.3 Demographic information of the respondents ............. 42
4.4 Respondent's (students) level of education ............... 44
4.5 The enrolment trend in the public day secondary schools
   in central division in Machakos district .................... 45
4.6 General trend in absenteeism, repetition, dropout,
   completion/ graduation and survival rate .................. 46
4.7 Repetition, dropout, completion and transition rates .... 48
4.8 Causes of absenteeism .................................. 49
4.9 Causes of dropout ...................................... 50
4.10 Causes of repetition in secondary schools ............... 52
4.11 Causes of poor performance in KCSE ........................................... 52
4.12 Causes of low transition rates from secondary
to university ................................................................. 53
4.13 Strategies for containing the factors which affects
internal efficiency .......................................................... 54
4.14 Strategies of improving academic performance at KCSE. 55

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction .............................................................. 56
5.2 Summary and discussions of the study findings .............. 56
5.3 Conclusions ............................................................... 58
5.4 Recommendations ....................................................... 60
5.5 Suggestions for further research ................................... 61

BIBLIOGRAPHY ................................................................. 63

APPENDICES

Appendix  I  Letter of Introduction ................................. 66
Appendix  II  Head teachers’ Questionnaire .................... 67
Appendix  III  Class Teachers’ Questionnaire .................. 72
Appendix  IV  Students’ Questionnaire ............................ 77
# LIST OF TABLES

Table 1:1 Secondary school completion rate by sex (1998 – 2004) in Kenya ............2

Table 1:2 Enrolments in secondary school by Form and Sex 2000 – 2004 .............3

Table 1:3 Quality grades attained in KCSE from 2002 – 2008 in Public Secondary Schools Central division, Machakos district ............................................. 4

Table 1:4 Secondary to university transition rate from 2003 – 2007 ....................

Table 4:1 Age distribution of the students.........................................................39

Table 4:2 Enrolment trends in Central division Machakos district ....................42

Table 4:3 Respondents’ opinion on absenteeism ..............................................43

Table 4:4 Average number of students absent per week ..................................43

Table 4:5 Repetition, dropout, completion and transition rates ........................44

Table 4:6 Causes of absenteeism .................................................................45

Table 4:7 Causes of dropout ............................................................................46

Table 4:8 Causes of repetition in secondary schools ....................................47

Table 4:9 Causes of low transition rates from secondary to university ............48
LIST OF FIGURES

Figure 1 Conceptual framework ................................................................. 12

Figure 4.1 Gender distributions of Respondent ........................................... 40

Figure 4.2 Respondent’s level of education ............................................... 41
### LIST OF ABBREVIATIONS AND ACRONYMS

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIDS</td>
<td>Acquired Immune Deficiency Syndrome</td>
</tr>
<tr>
<td>AEO</td>
<td>Area Education Officer</td>
</tr>
<tr>
<td>ASALS</td>
<td>Arid and Semi – Arid Lands</td>
</tr>
<tr>
<td>CAT</td>
<td>Continuous Assessment Tests</td>
</tr>
<tr>
<td>CBE</td>
<td>Curriculum Based Establishment</td>
</tr>
<tr>
<td>CDF</td>
<td>Constituency Development Fund</td>
</tr>
<tr>
<td>EFA</td>
<td>Education For All</td>
</tr>
<tr>
<td>FPE</td>
<td>Free Primary Education</td>
</tr>
<tr>
<td>FSE</td>
<td>Free Secondary Education</td>
</tr>
<tr>
<td>GOK</td>
<td>Government of Kenya</td>
</tr>
<tr>
<td>GER</td>
<td>Gross Enrolment Rate</td>
</tr>
<tr>
<td>GNP</td>
<td>Gross National Product</td>
</tr>
<tr>
<td>HIV</td>
<td>Human Immuno – deficiency Virus</td>
</tr>
<tr>
<td>JAB</td>
<td>Joined Admissions Board</td>
</tr>
<tr>
<td>KCPE</td>
<td>Kenya Certificate of Primary Education</td>
</tr>
<tr>
<td>KCSE</td>
<td>Kenya Certificate of Secondary Education</td>
</tr>
<tr>
<td>KNEC</td>
<td>Kenya National Examination Council</td>
</tr>
<tr>
<td>MOEST</td>
<td>Ministry of Education Science and Technology</td>
</tr>
<tr>
<td>NARC</td>
<td>National Alliance Rainbow Coalition</td>
</tr>
<tr>
<td>PTA</td>
<td>Parents Teachers Association</td>
</tr>
<tr>
<td>UN</td>
<td>United Nations</td>
</tr>
<tr>
<td>UNESCO</td>
<td>United Nations Education Scientific and Cultural Organization</td>
</tr>
</tbody>
</table>
This study sought to assess the internal efficiency of Public Day Secondary schools and its impact on KCSE performance in Central Division. It was guided by five objectives which focused on underlying causes of wastage in secondary schools and the strategies that can be employed to mitigate the problem of wastage in secondary schools. The study used descriptive survey design in order to determine the factors associated with internal efficiency. This enabled the researcher to collect in-depth information including sensitive and personalized experiences concerning the issues under investigation. The target population included all public secondary schools in Machakos central division which are 32 in number. Out of the 32 schools 10 of them were randomly sampled where 10 principals, 38 teachers and 100 students were sampled to participate in the study. The main tool for data collection was a questionnaire which was designed to collect data from the Principals who provided necessary information on KCSE performance, staffing and instruction materials available and a questionnaire for class teachers which captured information on class attendance and students’ entry behaviour, while the students’ questionnaire sought information on reasons for absenteeism, repetition and dropout before completing the cycle. The instruments were piloted in one school to determine their reliability and validity. The major finding of the study is that equity and access to education is yet to be realized in public secondary schools in Machakos central division. This is due to high rates of absenteeism, high repetition rates, high dropout rates, low transition rates and low completion rates hence high wastage rate. The study recommended the establishment of more boarding schools as well as subsidizing boarding schools, it also recommended that the community be sensitized on the importance of education and finally reinforcement of guidance and counselling in public secondary schools.
CHAPTER ONE

INTRODUCTION

This chapter highlights the background of the study, statement of the problem, purpose and objectives of the study, research questions, significant of the study, the scope and limitations of the study, delimitation of the study, assumptions of the study, theoretical and conceptual framework as well as definitions of operational terms.

1.1 Background of the study

A historical analysis of the patterns and trends of Secondary school development in Kenya reveals a rising demand of formal education. Due to the many benefits associated with provision of education, economists, governments and parents have invested heavily in education. Consequently in many developing countries like Kenya formal education has become the largest industry and the greatest consumer of public revenue (Todaro, 1987) There is need therefore to assess the internal efficiency of public secondary schools to determine whether the students enrolling in form one complete the course having acquired knowledge and skills which will enable them fit in the society and hence justify investment in human capital.

Secondary school education is very crucial as its main objective is to promote an all round development of learners hence enabling them to choose careers with confidence and build a firm foundation for higher education. This is determined by the quality of grades attained in KCSE, which is reflected by transition rate to universities and other tertiary institutions.
There has been an increase in enrollment at all levels of education in Kenya since independence, which has also led to an increase of recurrent expenditure of MOEST. Though a lot has been done to expand access to education, a number of challenges still persist. These include high cost of secondary education, inequity in access, high wastage rates leading to internal inefficiency and problems of the quality of grades attained by students completing secondary education. Internal inefficiency seems to affect more district public schools than those in the category of national and provincial public schools. The common feature of district public schools is that they are mixed schools; students are mainly day scholars and only a small proportion secures places in universities and middle level colleges due to dismal performance in KCSE.

Considering the completion rates may assess the output in education.

**Table 1.1: Secondary school completion rate by sex (1998 – 2004) in Kenya**

<table>
<thead>
<tr>
<th>Year</th>
<th>1998</th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>85.8</td>
<td>87.0</td>
<td>79.8</td>
<td>91.7</td>
<td>98.1</td>
<td>97.3</td>
<td>87.0</td>
</tr>
<tr>
<td>Female</td>
<td>83.1</td>
<td>75.1</td>
<td>75.5</td>
<td>89.0</td>
<td>94.8</td>
<td>96.1</td>
<td>85.0</td>
</tr>
<tr>
<td>Total</td>
<td>84.5</td>
<td>76.6</td>
<td>77.8</td>
<td>90.4</td>
<td>96.5</td>
<td>96.7</td>
<td>86.0</td>
</tr>
</tbody>
</table>

*Source: G.O.K Education statistical book 2005*

The low completion rates at secondary school level bring about internal inefficiency. This results from students dropping out before graduation or grade repetition within the cycle. Since the completion rates have been fluctuating between 1998 and 2004
for both boys and girls, there is need to arrest the situation of dropout rates and ensure that those enrolled in form 1 complete in form 4.

**Table 1.2: Enrolment in secondary school by Form and Sex 2000 – 2004**

<table>
<thead>
<tr>
<th></th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form 1</td>
<td>108,116</td>
<td>97,196</td>
<td>112,174</td>
<td>103,425</td>
<td>116,221</td>
</tr>
<tr>
<td>Form 2</td>
<td>104,078</td>
<td>93,550</td>
<td>106,725</td>
<td>95,589</td>
<td>110,576</td>
</tr>
<tr>
<td>Form 3</td>
<td>98,610</td>
<td>87,346</td>
<td>103,339</td>
<td>90,351</td>
<td>105,179</td>
</tr>
<tr>
<td>Form 4</td>
<td>91,700</td>
<td>78,371</td>
<td>98,920</td>
<td>86,987</td>
<td>99,303</td>
</tr>
<tr>
<td>Grand</td>
<td>402,504</td>
<td>356,463</td>
<td>421,158</td>
<td>376,352</td>
<td>431,279</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Source: Kenya Economic Survey 2005*

The table 1.2 above shows clearly that the students who enrolled in the Form one in 2000 were 108,116 boys and 97,196 girls totaling to 205,312. Of these only 102,732 boys and 84,207 girls totaling to 186,939 students completed form four in 2003.

This table does not provide data for students who had repeated a form and if this was to be considered, then the completion rates would be lower and wastage occasioned by grade repetition would be quite high.

Many studies show that repetition and drop-out/push out are correlated. The relationship of repeating a grade to final disengagement is complex and shaped by the context of particular schooling systems and countries. Low completion rates, high dropouts and repetition rates are indicators of wastage and internal inefficiency.
Nyakweba (2006) insists that given the scarce resources, there is a need for educational institutions to be both internally and externally efficient.

Economists have traditionally viewed school dropouts and grade repetition as measures of inefficiency or wastage. Kelly in Carnoy (1995) observes that other analysts are more interested in which groups suffer the most as a result of inefficient schooling systems and their work focuses on how schooling often operates to the greater disadvantage of groups on the margins of power in society. Wastage tends to be high in poor countries like Kenya, which have a low GNP per capital while it is very low in industrialized counties of Europe, North America, Japan, Australia and New Zealand.

Internal inefficiency is correlated to performance as indicated by the KCSE results in some of the public secondary schools in Central division.

Table 1.3 Quality grades attained in KCSE from 2002 – 2008 in public secondary school central division, Machakos district

<table>
<thead>
<tr>
<th>SCHOOL</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>*Machakos School</td>
<td>143/219</td>
<td>153/211</td>
<td>144/180</td>
<td>193/216</td>
<td>194/203</td>
<td>174/182</td>
<td>143/229</td>
</tr>
<tr>
<td>*Machakos Girls</td>
<td>85/117</td>
<td>107/131</td>
<td>96/142</td>
<td>102/140</td>
<td>96/127</td>
<td>102/123</td>
<td>117/149</td>
</tr>
<tr>
<td>*Mumbuni Boys</td>
<td>33/198</td>
<td>55/212</td>
<td>46/184</td>
<td>39/227</td>
<td>41/136</td>
<td>83/171</td>
<td>78/231</td>
</tr>
<tr>
<td>*Mua Girls</td>
<td>2/125</td>
<td>2/125</td>
<td>1/83</td>
<td>1/90</td>
<td>1/67</td>
<td>2/103</td>
<td>1/71</td>
</tr>
<tr>
<td>*Ngelani Boys</td>
<td>1/84</td>
<td>0/73</td>
<td>6/70</td>
<td>15/57</td>
<td>Y</td>
<td>10/78</td>
<td>3/67</td>
</tr>
<tr>
<td>Katoloni Sec.</td>
<td>5/81</td>
<td>4/75</td>
<td>10/83</td>
<td>15/81</td>
<td>12/79</td>
<td>7/89</td>
<td>14/116</td>
</tr>
<tr>
<td>Kyanguli Memorial</td>
<td>8/79</td>
<td>12/84</td>
<td>12/115</td>
<td>27/139</td>
<td>19/115</td>
<td>19/128</td>
<td>15/138</td>
</tr>
</tbody>
</table>
Continuation.......

<table>
<thead>
<tr>
<th>Location</th>
<th>Kyambuko</th>
<th>Muvuti</th>
<th>Kwanthanze</th>
<th>Ngomeni</th>
<th>Mikuini</th>
<th>Mangauni</th>
<th>Muindi Mbingu</th>
<th>Kusyomuomo</th>
<th>Katheka – Kai</th>
<th>Kitulu</th>
<th>Kyanda</th>
<th>Mbembani</th>
<th>Mumbuni Girls</th>
<th>Katumani</th>
<th>Kamweleni</th>
<th>Kyeni</th>
<th>Machakos Baptist</th>
<th>ABC Katelembo</th>
<th>ABC Konza</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3/56</td>
<td>2/59</td>
<td>0/44</td>
<td>2/61</td>
<td>0/52</td>
<td>1/31</td>
<td>1/43</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>19/106</td>
<td>14/112</td>
<td>11/101</td>
<td>11/96</td>
<td>13/62</td>
<td>23/126</td>
<td>8/147</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>21/87</td>
<td>23/97</td>
<td>29/102</td>
<td>26/111</td>
<td>44/100</td>
<td>22/91</td>
<td>45/110</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>6/37</td>
<td>8/42</td>
<td>2/30</td>
<td>8/42</td>
<td>8/38</td>
<td>2/35</td>
<td>6/58</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1/15</td>
<td>0/17</td>
<td>3/27</td>
<td>5/36</td>
<td>1/29</td>
<td>0/38</td>
<td>8/33</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3/46</td>
<td>5/51</td>
<td>10/71</td>
<td>15/75</td>
<td>11/55</td>
<td>9/74</td>
<td>9/86</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: AEO office Central division, Machakos

Explanation

* Represents provincial public secondary schools, which will not be part of this study but provides vital comparison.
The numerator represents the quality grades (C+ and above) attained at KCSE, while the denominator represents the students registered for KCSE each year. Y indicates not ranked due to examination irregularities.

The same trend is experienced at national level. The statistics from the KNEC and JAB indicated that very small percentage of student who attained grade c+ which qualifies one to join public university. This is as presented in table 1.4

Table 1.4 secondary to university transition rates from 2003-2007

<table>
<thead>
<tr>
<th>KCSE year</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Candidates registered</td>
<td>198,356</td>
<td>100</td>
<td>207,730</td>
<td>100</td>
<td>222,676</td>
<td>100</td>
</tr>
<tr>
<td>No qualified C+</td>
<td>42,158</td>
<td>21.6</td>
<td>49,870</td>
<td>24.0</td>
<td>58,240</td>
<td>26.2</td>
</tr>
<tr>
<td>Candidates admitted</td>
<td>11,046</td>
<td>5.6</td>
<td>11,000</td>
<td>5.3</td>
<td>11,000</td>
<td>4.9</td>
</tr>
</tbody>
</table>

Source: KNEC and JAB 2010

Table 1.4 indicates that the transition rate from secondary to university is very low with the highest transition rate recorded in 2006/2007 at 7%.

The performance of the public day schools indicates a serious problem in KCSE performance and hence the need to assess the internal efficiency of these institutions.

1.2 Statement of the problem

The foregoing discussion shows that there are very low rates of enrolment, retention, graduation and completion rates in secondary schools in Kenya and more particularly
in Machakos central division. Statistics also shows that the transition rates from secondary to university are very low with the highest recorded in 2007/2008 academic year. These low rates are not in tandem with the government effort of providing tuition free secondary education (FSE) in line with one of the Millenium Development Goals (MDGs) and vision 2030. This implies that if these trends persists the provision of tuition free secondary education (FSE) will not serve its purpose of provision of education for all.

According to Raja and Buret (2004) there is a serious absence of current literature examining the possible causes of internal inefficiency among the developing countries. Although some attention has been drawn on the problem of internal efficiency in the education system, little has been done on internal efficiency in Public day secondary schools in Kenya. This is despite the large amounts invested in secondary education. In the year 2000, the number of secondary schools had risen to nearly 3000 with a total enrolment of 620,000 students. The rapid expansion has been attributed to the vigorous "Harambee" schools movement now categorized as district schools. From 2007 the government introduced tuition free secondary education (FSE). This implies that the government is experimenting on the possibility of eliminating secondary school fees since students in public day schools are only required to pay for their lunch, school uniform and PTA projects.

Despite the government effort to provide education to all its citizens at secondary level through Tuition free secondary education (FSE) the problem of internal inefficiency still persist in these institutions due to repetition, dropout, push out, disengagement, low completion rates, low transition to colleges and poor performance in national examinations. These high wastage rates coupled by paucity
of literature on the same made the researcher carry out a study on the assessment of the internal efficiency in education and its impact on KCSE performance in Machakos central division

1.3 Purpose of the study

The purpose of this study is to assess the internal efficiency of public day secondary schools in Machakos central division and its impact on KCSE performance.

1.4 Objectives of the study

The study was expected to:

i) To establish the enrolment trend in the public day secondary schools

ii) To determine the general trend in absenteeism, repetition, dropout, completion/graduation and survival rates

iii) To establish causes of absenteeism, repetition, dropout, completion/graduation and survival rates

iv) To determine the strategies for containing the factors which affect internal efficiency

v) To determine strategies of improving internal efficiency of secondary schools in Central division, Machakos.

1.5 Research questions

The researcher was guided by the following questions:

i) What is the enrolment trend in the public day secondary schools?

ii) What is the general trend in absenteeism, repetition, dropout, completion/graduation and survival rates?
iii) What are the causes of absenteeism, repetition, dropout, completion/graduation and survival rates?

iv) What are the strategies for containing the factors which affect internal efficiency?

v) What are the strategies of improving academic performance at KCSE?

1.6 Significance of the study

This study may be of use to various educational stakeholders in Kenya. The findings may be useful to the Ministry of Higher Education by using them to formulate policies that enhance internal efficiency in public day secondary schools. With increasing household poverty and increasing demand for secondary education, the researcher feel that the findings will establish the benefits of public day secondary schools with emphasis on their low total cost, low opportunity costs and their ability to utilize locally available personnel and other resources.

It is also hoped that schools can find appropriate ways of enhancing retention in order to increase completion rates, with students attaining quality grades that can propel them to universities and colleges where they are prepared to take up careers.

1.7 Limitations of the study

The conduction of the study was faced by the following limitations

(i) The study was limited to only one division. For more comprehensive details, all the public day secondary schools in the district need to be studied.
(ii) There is little literature on internal efficiency in education in Kenya. Hence, the review of literature was drawn within and outside Kenya.

(iii) The researcher was limited to the quantitative aspects of efficiency and failed to study qualitative efficiency due to limited time and financial constraints.

1.8 Delimitations of the study

This study only sought views from secondary school principals, teachers and student from Machakos Central division, the results were not generalized to other divisions because every geographical area is unique and the causes of wastage rates in one division can be different to another division.

1.9 Assumptions of the study

The following assumptions were made;

i) That information given by the respondents was genuine, honest and reliable

ii) That all the respondents understood the reasons for inefficiency in their schools.

iii) That there are underlying reasons why students who enroll at form I repeat, are pushed out or dropout of school

iv) That the reasons and rate of repetitions, dropout leading to wastage are the same for all the schools in the division of study.
1.10 Theoretical Framework

The Human Capital Theory which guides this study was developed by an American Economist Theodore Schultz (Schultz, 1963). The theory states that human beings invest in themselves by means of education, training or other activities which raise their lifetime earnings. He analyzed educational expenditure as a form of investment. Further, Becker (1964) developed the theory of human capital formation and analyzed the rate of return to investment in education and training.

The theory has been found necessary to guide this study for households and other stakeholders spend on their children’s in diverse ways, not for the sake of present enjoyment, but for the sake of future pecuniary and non pecuniary returns. The Human Capital Theory tends to be more optimistic about the ability of the economy to put additional skill to good use if the price employers must pay for its declines. It focuses on what determines internal efficiency when physical facilities, financial resources and time are considered as major educational inputs. The theory states that people spend on themselves not for the sake of present enjoyment, but for the sake of future returns. It starts with the premise that investment of the student’s time, energy, and money in learning yield benefits over many years that are both pecuniary and non pecuniary. Expected benefits influence the decision of some households and the students about whether to attend, what to study, and how hard to study. The school operates within the economic, social and political environment. It utilizes financial, human and physical resources within a given time, which are inputs, in order to process outputs (Knowledge, skills and attitudes), which are required to benefit the society.
Hence for all the inputs that are invested, quality finished human resources are expected. This would be in form of students who successfully complete secondary school education who would turn their skills into work of economic value to society.

The study fits into this theory since financial and human resources are set aside for secondary education, and they can only be profitable when the process is efficient and does not allow for wastage of scarce resources.

### 1.11 Conceptual Framework

Mbwesa (2006) says that conceptual framework is a hypothesized model showing the variables under study as conceptualized by the researcher. It demonstrates the interrelationships between variables of the study.

In this conceptual framework, the cost (educational inputs) and the expected benefits of education influence the enrolment in schools. Financial resources trigger and control the education system since the human and physical resources depend on them. These costs can therefore lead to repetitions, dropout and absenteeism which lead to inefficiency.

Likewise the institution is the physical plant with physical and human services. This directly affects students' attitudes and overall performance while at the same time greatly influencing retention and wastage. The variable of family background highlights the social - cultural factors, family income and expectations among other factors. This determines the extent to which the individual students get motivation to excel in school and is ready to be processed into a final product that can benefit the
immediate family and the wider society. A weak link between the family and students leads to wastage.

Figure 1. Conceptual framework

Institutional factors
- Teacher quality
- Physical infrastructure
- Learning materials
- Curriculum relevance
- School location
- School rules and regulations
- Administration policies

Educational inputs (Direct and indirect costs)
- Financial resources
- Human and physical resources
- Time utilization

Student's characteristics
- Intellectual ability
- Interest in education
- Peer influence
- Moral standards
- Health status
- Insecurity
- Discipline

Family background
- Parental health/ HIV & AIDS
- Household poverty
- Parental occupation
- Parental educational attainment
- Family income
- Family expectation
- Gender socialization

Expected benefits and outputs
- Direct and indirect to the individual and society

Enrolment
- Repetition
- Dropout
- Absenteeism
- Push outs
- Fade outs
- Disengagement
- Completion/ graduation
- Transition rates

Internal Inefficiency

Source: The Researcher 2010
Explanation

As shown in figure 1, the arrows indicate the factors, which may have a significant influence in the other category.

The dotted arrows (lines) indicate that not all factors in a given category will influence factors in the other category.

The conceptual framework shows the relationship between cost of education (Educational inputs) and enrolment. Direct costs are financial, human and physical while the indirect costs include the opportunity costs (foregone earnings, household chores) of students.

Factors influencing wastage such as dropout, push out and repetition eventually lead to inefficiency and the subsequent waste of educational inputs.

1.12 Definitions of Operational Terms

**Disengagement:** This is passive resistance to learning with such indicators as poor academic progress, grade repetition, suspension due to indiscipline and dislike for school.

**Dropout:** Leaving school before completion of the educational cycle. The term dropout puts inordinate blame on the individual.

**Efficiency:** The ability to obtain maximum output from a given input

**Fade-out:** Refers to students who attend infrequently, leaving and returning several times. They neither seem to drop out nor seem to be pushed out.
Graduation rates: This is the index that measures the population of learners in the final grade who were able to either proceed to the next level of education or enter the labour market

Internal Efficiency: The ability of school to retain all enrolled students until when they complete the system and acquire relevant knowledge and skills to serve the society

Public day secondary school: Secondary school assisted by government and public funds also commonly referred to as "Harambee" schools

Push outs: Leaving school before completion of the educational cycle. The term push-out puts inordinate blame on the institution.

Repetition: Time spent doing the same work in the same class or grade usually an academic year.

Transition rates: The percentage of students promoted to the next level.

Wastage: The occasion when an education system is affected by dropouts and repetition.
CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

This chapter traces factors influencing efficiency and equity in the development of education in Kenya. Views of various authors and researchers were examined with special emphasis placed on the causes of inefficiency in secondary schools.

The purpose of the literature review is to expand upon the background of the study. It also deepens the conceptual framework of the study. The review further brings out various investigations and aims to identify gaps in knowledge and critically explain how the study fills them.

2.2 Historical background of education in Kenya

At the time of independence in 1963, Kenya had 6,058 Primary schools with an enrolment of 891,017 pupils while there were only 151 secondary schools with a total enrolment of 30,121 students (Eshiwani, 1993). The education system was not in favour of Kenyans. Priority was given to the Europeans, Asians and Africans in that order. when the colonialists left, there was great need for trained manpower that would see an independent Kenya achieve its main goals of eradicating ignorance, poverty and disease.

Kenya and other new African independent states converged in Addis – Ababa in June 1961 to try and determine the way forward for the new economies. The Addis – Ababa conference became the guiding light in the planning of education in 1960s,
1970s and the 80’s with a view to providing Universal Primary Education (UPE). The Kenyan government undertook the programme of expanding school opportunities. Where this process was not fast enough, communities took the initiative of constructing schools. According to Psacharopoulus and Woodhall, (1985) this was meant to satisfy the increased social demand for education.

In 1974, the government of Kenya abolished tuition fee in primary schools from standard one to standard four. The result was increased enrolment from 1,816,076 in 1973 to 2,705,878 in 1974 (GOK, 1988) This was followed by abolition of tuition fees for all classes in primary school in 1979, and the introduction of school milk feeding programme. However, the enrolment rates declined in 1980s due to declining economy, indirect cost of education and household poverty. The cost – sharing measures adopted by the government only seemed to worsen the situation as more students dropped out of school due to higher user charges levied on parents. By 2003 when the new NARC government took over, an overwhelming public support necessitated the introduction of free primary education (FPE). Many pupils who had been kept away due to school related factors like maintenance fee; streamed back to school and this was to be met by the challenge of over age pupils and over enrolment especially in the lower primary level. This is supported by Ayot and Briggs (1992) who identified a number of reasons that led to dropping out of school which included, economic related factors, school related factors, personal factors and inter-related factors. The initial over enrolment was significant among the rural poor and slum dwellers in the urban areas. They further assert that dropout statistics vary widely, depending in part on the definition of dropout, the source of the data and the method.
of calculating the rate. True dropout rates are difficult to obtain because few countries collect data on who actually drops out and who gets promoted (UNESCO 2005). On its part, the Kenyan government in Sessional Paper No. 1 of 2005 on meeting the challenges of education, training and research in the 21st century observed that, pursuit to internal efficiency in our education system requires policy attention. Over the last one decade the cumulative dropout rate in primary education has been as high as 37 percent, and the repetition rate has been 14 percent; and although at the secondary level the survival rate has been better at 84 percent the overall performance remains low considering that the GER for the secondary level is 22 percent. A report by the MOES&T shows that enrolments in secondary education rose from 30,121 in 1962 to over 862,907 students in 2003. The number of public secondary schools has also increased from 151 at independence to more than 3,661 today.

2.3 Educational inputs (direct and indirect costs)
Shultz (1989) wrote that the economic value of education rests on the proposition that people enhance their capabilities as producers and as consumers by investing in themselves and that schooling is the largest investment in human capital. It is clearly noted that, educational costs are both direct and indirect. In secondary schools parents have to pay for certain expenses mentioned earlier as the government on its part meets tuition fee and teachers’ salaries. Njeru and Orodho (2003) found that the most critical factor hindering students’ enrolment and participation in secondary school education is the high cost of education in terms of fees and other related school levies. According to the GOK (2003) some of the reasons for secondary schools dropout are high costs of schooling, unfriendly school environment and lack of anticipated future
benefits of education. The latter could be as a result of the high rates of educated unemployed in Kenya today. However, most families and individuals set aside a lot of money for education. Hallack (1990) observed that despite the growing problems of unemployment among secondary school leavers and graduates, there is still a strong social demand for secondary and higher education. The Kenya Government has held this view and it particularly endeared the NARC government to the Kenyans on introducing FPE. Consequently the political campaigns of 2007 had a lot to do with tuition free secondary education (FSE). The private and social benefits of education are enormous as shown by research.

Time utilization in education is a crucial aspect. Education specialist recognize that time is one of the ingredients of a sound instructional process. Though school attendance is not synonymous with learning, student – teacher contact hours significantly influence students’ achievements. Kelly (1995) observes that preparations, interruptions and discipline – oriented activities consume a share of the official school time. This may further lead to disengagement and dropout, among students who are absent for long period during the school learning time.

According to Carnoy (1995), the foregone earnings become more and more substantial as higher levels of education are reached. In post primary education students are more likely to opt for casual employment if other factors like fees payment keep them away from schools from time to time, or they have to take up household chores in the absence of their parents.
2.4 Internal Efficiency

In economics of education the term efficiency is defined as the ability to produce the maximum or the finest products (benefits) from the resources that have been invested. With this definition, is tied up all the inputs and efforts that are channeled to education and the expected outputs inform of society members who are products of the system and are equipped with necessary skills to benefit society. According to Mutua & Namaswa (1992), good management in education must aim at the improvement of the performance of the education system to make it more efficient in its utilization of available resources. Kelly (1995) stresses the almost total failure to investigate the possibilities of improving and increasing the output of schools. This could be as a result of the difficulties involved in measuring the costs of inputs and the value of output in monetary terms, which is possible in a firm. Mutua and Namaswa (1992) further observe that the total cost to society of education is not easy to calculate because many people and groups are involved in the educational process today. The cost of providing buildings, teachers and ministry of education officials may be easy to calculate, but we begin struggling when we try to work out the costs to families and students in earnings foregone or the cost to society of productivity cost by the huge numbers of people engaged in education who would be employed and so producing elsewhere.

Cookie in Blaug (1970) attacks the inefficient use of building with tables showing room utilization per week and striking absence of any gauge of efficiency. This is supported by Levin (1974) in his article on “Measuring efficiency in educational production”. He says, the Best – practice schools utilize inputs in ways very different
from those of average schools. Resources allocated in education must have maximum impact in educational inputs (GOK 1996, 1997, UNESCO (1996) and only through efficient utilization of inputs to produce maximum outputs. Psacharopoulos and Woodhall (1985), assets that to assess internal efficiency of education, we need a statement of its aims and objectives together with a range of measures of output that reflect the various objectives and the success with which they are achieved. The MOES&T in its Sessional Paper No. 1 of 2005 observes that the total numbers of secondary school graduates who enrolled in public and private universities rose to 65,558 from 58,017 in 2003/04. It therefore appears that the aim of the government is to retain all students in the cycle they enroll and ensure smooth transition to the next level of education. It is hoped that the inputs were well utilized and the output of the increased investment in human capital will in the long term lead to development of quality human resource to meet the Millennium Development Goals (MDGs) UNESCO (1972) report says that the number of pupils in a cohort who complete a given educational cycle is generally accepted as a measure of its output.

In this regard, the study considered several indicators of internal efficiency such as enrolment rates, repetition rates, survival rates, graduation rates and transition from secondary school level to higher education. It was assumed that the sampled schools provided the flow rates that determined the internal efficiency of public day secondary schools in Central division – Machakos district for a period of four years (2004 – 2008)
2.5 Enrolments

The number of available places and parents’ willingness to enroll their children determines the enrolment rate. As stated earlier, enrolments in secondary education rose from 30,121 in 1963 to over 862,907 students in 2003. Based on the 1999 census data a total of 2.8 Million boys and girls aged between 14 and 17 years who should have been in secondary school were not enrolled (MOEST, 2005).

Eshiwani (1993) noted that, Kenyan’s population growth rate is the highest in the world and the major problem facing the government is meeting the social demand for education. This relates to the aggregate demand for education by the society. The need to meet the growing social demand at primary and secondary school level has made the government to promote establishment of day secondary schools formally known as “Harambee” schools. The introduction of the constituency development fund (CDF) has also enabled communities to put up more schools to serve their immediate catchment areas. Bishop (1986) studying in Brazil established that founding of village high schools managed by local communities enables students even in far flung remote zones access education and with this eradication of juvenile delinquency became a reality. The numbers of secondary schools thus influence school participation rates. Public day secondary schools have recorded significantly high enrolment rates. However, there is still a considerable number of secondary school aged children with the right qualifications who are still not yet enrolled.

Benson in Carnoy (1995) says that when a large part of the youthful population of a country is affected by malnutrition, or poor health, or where many parents find it
necessary to exploit the labour of their very young children, and then an adequately financial system of education may fail to yield the objectives of educational adequacy.

The enrolment in secondary schools needs to grow in order to match the enrolment in primary school, however, the opportunity costs among the socially and economically disadvantaged groups are high. Levin (1991) agrees that, if a student is required to spend four additional academic years in the educational system, those years could have been used for other productive activities, that, when forgone, have a cost to both the individual and society. Since the enrolment in secondary schools is dependent on the facilities available, this study has established retention and graduation rates in order to determine wastage in the secondary schools. Studies by the MOES&T shows that though enrolments are useful indications of access and spread of education, they do not clearly reflect equity of access and efficiency of the system unless information on promotion, repetition and attrition rates at both regional and national level are availed as they determine holding capacity of the education system and extent of utilization of education resources.

2.6 Equity

According to the Macmillan Dictionary, equity is the sharing of resources or distribution of resources among different individuals, groups in a justifiable manner. Psacharopoulos and Woodhall (1985) agree that, any determination of equity must be based on facts about how society should distribute resources. Equity as a concept is therefore closely associated with fairness.
Educational equity consequently involves, equitable access, and participation by gender and geographical factors. If this is to be achieved it will imply treating the unequal unequally. Equitable access refers to equal opportunity to enter school. In order to enhance access among the geographically disadvantaged areas such as ASALS, Slum dwellers and the rural poor, there is great need to channel more financial resources to those areas.

A sharp distinction between male and female socialization still persists in many countries. The socialization of girls typically emphasizes the predominant sex role where marriage and family, rather than employment in the labour market, are the ultimate goals of women. Parish and Willis (1993) argued that traditional intergenerational contracts between parents and children in Taiwan allowed parents to treat sons and daughters differently. While parents encouraged their sons to develop the knowledge and skills that would rise there future incomes, they increased their control over daughters. They further asserted that credit constrains facing households resorted in investment strategies that worked against older children, especially daughters. Girls education rose during Taiwan economic expansion, but parents took their older daughters out of school so that daughters could help support the schooling of their younger siblings.

Parent’s education shapes gender differences in education, as discussed earlier in this entry, but what does parental education represent? The literature interprets its effects in different ways. First, parent’s education may represent the value that parents attach
to formal education. The expected relationship is that more educated parent’s value formal education for their daughters as much as for their sons. Cochrane, Mehra and Osheba (1986) found that, given the level of family income, parental education had the greatest influence on educational aspiration for both rural and urban areas in Egypt. Second, it measures the degree to which parents may be open to influences outside education. Third, parent’s education is a limited measure of family income or wealth when more direct measures are not available. When estimates of family income are available, as in Malaysia, income was found to have three times as greater an influence on the probability of enrollment of girls aged 12 to 18 as on that of boys.

The greater effect of the mother’s education on daughters than on sons could be a result of the traditional sexual division of labor within families. Mothers tend to spend more times with their daughters, especially in the context of performing household work, while fathers spend more time with their sons. However, this result might also reflect differences in the preferences of mothers and fathers, and the stronger influence of the more educated mother on the allocation of family resources.

Another home factor that affects girl’s education is the demand that their time be put to alternative uses. Parents may not be able to afford the opportunity cost of educating children, which vary by sex. With few exceptions, girls do more home and market place work than boys. They cook, clean the house, fetch water and help their mother care for young children, especially those who are ill. In Nepal and Java, for example, most young girls spend at least one-third more hours per day working at home and in market than boys of the same age, and some age groups as much as 85% more hours.
In Taiwan, a study of the determinants of education indicates that having an older sister means that a child could delay work or marriage and remains in school (Parish and Willis 1993).

Besides lost work, parents may feel that girls are forgoing important training at home if they go to school. The relative importance of this forgone training opportunity will defer across countries depending, in particular, on the expected adult occupation. If women are expected to enter the informal labor market by continuing in a crafts tradition (or in agriculture), the skills for which are imparted by their mothers, then the cost of attending formal schooling must include not only the opportunity cost of current time, but also the lost alternative training. Studies have found that single-sex schools may be more effective for girls learning. In Thailand, these schools certainly make a difference; even after controlling for such factors as socioeconomic home background and schools resources, girls achieved more in single-sex schools than in coeducational schools, while boys did better in the latter (Jimenez and Lockheed 1989).

On realizing that basic education has high social rates of return, the government of Kenya successfully introduced FPE in January 2008, subsidized secondary education. However, this has been done non-selectively implying that even those who are financially endowed are beneficiaries. Since independence, the government has tried to correct the disparities that exist but notes that the concepts of equity seem to be elusive especially at the secondary level. For example, the enrolment ratio of boys to girls was 110:100 in 2003 and 117:100 in 2004 (GOK, 2005). There is need to allow
for fair distribution of scarce resources across gender. This is because, when
distribution is skewed, it implies a high loss from the under – utilization of potential
human capital. Nyakweba (2006), found out that 95 percent of the girls’ drop out was
due to lack of school fees. Poverty is therefore associated with wastage in secondary
schools in Kenya. Likewise gender parity needs to be addressed in order to arrest
wastage associated with the girl child. This study has highlighted factors leading to
internal inefficiency including gender.

2.7 Repetition, Disengagement and Drop outs

A repeater is defined as one who takes longer than the prescribed period to complete
a sub – system of education. According to Mutua and Namaswa (1992), this happens
when either a teacher, or a parent or both decide that a pupil has not mastered the
prescribed educational objectives in a particular year and that he needs to go through
it again. Repeaters take up the extra places that would have accommodated new
enrolments and it is an indicator of wastage of resources and time. Kelly (1995)
oberves that repetition contributes to school drop out among average students. As
they approach the age of adulthood which varies by culture, some students, especially
girls and low – income youths, face increased domestic and work responsibilities and
the prospects of early marriage and pregnancy that may pull them out of school.

In many countries of Africa and Asia, except the poorest, girls’ repetition rates are
lower than those of boys (UNESCO 1984) however; girls tend to drop out at higher
rates and earlier, regardless of their repetition rate. Several studies have shown that
girls are more easily discouraged by repetition. On the other hand, parents more often
encourage boys to repeat a grade in the hope that they will obtain better entrance exam scores. Kelly (1995) found that repetition increased the probability and eventual dropping out of school. Repetition rates show similar patterns; they are highest in the poorest countries. These include Sudan, Korea, Zimbabwe and Malaysia which now practice automatic promotion.

Disengagement is a concept that connotes a long-running interactive process, which may be reversible. Indicators of disengagement from academies include: poor academic progress, classroom withdrawal, participation in non-academic or remedial classes and programmes, grade repetition, suspension and expulsion (Kelly 1995). The literature on dropouts and push outs suggests signs and styles of disengagement primarily displayed within school settings. However, only recently have researchers and educators begun to think of systematically linking patterns of disengagement to individual students in an effort to identify and re-engage those at risk of dropping out or being pushed out. Passive resistance to learning is therefore likely to present problems of absenteeism and fadeouts. In North America, the decisive moment of drop out or push out never occurs; instead students attend infrequently, leaving and returning several times and thus many be aptly described as fadeouts (Kelly 1993)

Fine (1991) observes that researchers particularly those using a dropout framework, have commonly assumed that repetition and dropout were both largely attributable to academic failure. In contrast, those using a push out framework have argued that being retained in a grade sends an institutional message of rejection that contributes directly to students’ disengagement from school. In some Third world countries, students may be over age for their grade due not to repetition but to late enrolment. A
study of schools in Argentina found that eventual dropouts enrolled in school late and had irregular attendance compared with primary school completers. Todaro (1989) asserts that in Africa and Asia, the median dropout rates are approximately 54% and 20% respectively.

Indeed repetition may contribute to dropping out when it results in students being over age for their grade. As they approach the age of adulthood, which varies by culture, some students especially girls and low-income youths, face increased domestic and work responsibilities and the prospects of early marriages and pregnancy that may pull them out of school. (Grissom and Shepherd 1989). Further studies by Anderson (1988) posed the question: do girls leave school due to early pregnancy and marriage, or do these options emerge as a means of escape from an institution (the school) that has failed to offer them a sense of purpose and competence? Scholars and policy makers have often assumed that the school has little influence on girls taking on adult roles early. Yet recent research indicates that pregnancy and marriage may be partly symptoms of and attempts to deal with disaffection with school.

Anderson in Carnoy (1995) reveals that in the United States, a substantial minority of female dropouts or push outs become pregnant after they leave school. This may find to the conclusion that pregnancy may not be the single cause of girls dropping out. He further asserts that in developing countries like Latin America, dropout rates are higher among rural residents than their urban counterparts. He attributes this to lack of school fees, a compliment on grades, large distances between school and home,
lack of flexible scheduling of classes and school year which is unable to meet the needs of the local agrarian population.

Repetition and dropout have been identified as major causes of internal inefficiency. The MOES&T recognizes the urgent need in pursuit to internal efficiency; over the last one decade, the cumulative dropout rate in primary education has been as high as 37 percent, and the repetition rate has been 14 percent between standard 1 and 7. In Kenya, internal efficiency in primary schools is largely due to repetition and dropout. However, there is little literature on secondary school wastage, though transition rates to middle – level colleges and universities still remain low. This study has explored the causes of internal inefficiency in Kenya secondary schools in general and in Central division of Machakos district in particular. Emphasis of the study was on public day secondary schools whose overall performance in academic is low, as posted in the KNEC grading of schools in the KCSE and wastage is still fiend

2.8 **Factors militating against internal efficiency in schools**

There exist main indications of internal inefficiency due to wastage in learning institutions. For the purpose of this study, the factors identified include, institutional factors, Educational inputs and their expected benefits, students characteristics and family background.

2.8.1 **Institutional factors**

The Kenyan policy of 1964 on education recommended an education that can create a dynamic economy. In planning education to achieve the national goals, basic data on enrolments, how many classrooms, teachers’ desks and books was needed. The complete education plan had also to take into account issues of administration,
organizational structure of education, teacher union rules among a host of other complicated features (Mutua and Namiswa, 1992).

Availability of resources in a school will greatly influence the retention powers of the school. Abagi (1997) argues that the burden of providing these resources in secondary schools in Kenya lies with the parents and those students whose parents cannot afford to pay end up dropping out of school. Since institutional factors have been cited as being responsible for high dropouts and hence low completion rates, some factors such as teacher quality, physical infrastructure, learning materials, curriculum relevance, school location, school rules and regulations and administration policies cannot be ignored.

Eshiwani (1983) stresses that inadequate resources can be blamed for poor academic performance and those students in day schools receive poor education than those in provincial and national schools, which are adequately equipped with teaching and learning resources.

2.8.2 Students characteristics

The disposition of an individual student may determine whether they remain in school up to completion or whether they are likely to dropout. Alexander and Simmons (1975) in their study in developing countries, Kenya included, concluded that students' achievement in school was strongly determined by home background and individual personality. Researchers particularly those using a dropout framework have commonly assumed that repetition and dropout were both largely attributed to academic failure. Grisson and Shephard (1989) found that repetition increased the
probability of eventually dropping out of school. Hence the intellectually gifted are likely to be retained in school while the weaker ones become push outs.

Students attending day secondary schools may perceive themselves negatively since they were unable to get admission in provincial and national schools. This may be reflected in absenteeism, which further leads to poor academic progress, class room withdrawal which Kelly (1995) describes aptly as fade – outs. The report of the Task Force on students discipline and unrest in secondary schools show that drug abuse and peer group influence are among the causes of indiscipline and hence dropouts in schools. The MOEST (2001) agrees that there is widespread drug and substance abuse among learning institutions, this has led to increased cases of student indiscipline and wanton destruction of institutional and public property.

National security tends to influence school attendance. The tribal clashes of 1992, 1997 and the post – election violence witnessed from December 2007/ 2008 have been cited as major handicaps in achieving EFA.

HIV and AIDS pandemic tends to keep children particularly out of school as they assist infected parents in daily chores. Children whose parents succumb to AIDS become irregular in school and eventually dropout. Surveys in developing countries reveal that a number of girls leave school due to involvement with boy and male teachers, while others are concerned with distance from school and safety or dropout due to pregnancy and early marriages (Theuri 2003).
2.8.3 Family background

Rumberger (1983), in a United States study, found that differences in dropout rates among ethnic groups could be explained mostly by differences in family background. Children living in poverty are less likely to complete school. Lockheed and Verspoor (1991), further asserted that socioeconomic status, correlated with dropout/ push out, often measured by parental education, father’s occupation, family income and household items available. The most uniform predictor among the various ethnic/ gender groups was the presence in the home of reading materials. Surveys of early school leavers underscore the importance of socio – economic reasons. Some families cannot afford to pay for school fees, books and supplies, transportation, and uniforms. Others cannot afford the opportunity costs, that is, the earned income and domestic labour that parents forego when their children are enrolled in school. Still other children report shame at their relative poverty, reflected in their clothes or lack of lunch.

Psachoropoulous and Woodhall (1985) asserts that dropout and repetition appear common among students from low socio-economic background and more prevalent in rural than urban areas and among female than male students. Parental occupation influences academic performance of their children, the higher the socio-economic group, the more parents attend PTA meetings and the more they discuss with the teachers about the progress of their children at school. The sex-role division of labour within the family and society influences the persistence in school by gender. In some regions boys dropout more often and easier to herd grazing animals and do other tasks. However, more often girls particularly those in low – income and rural families
seem to be needed at home to care for younger siblings and do housework and agricultural tasks (Anderson 1988, Stomquist 1989). A pilot project offered low-income girls scholarships in Bangladesh, and it was evident that the Secondary school dropout rate for girls dropped from 15 percent before the programme to 3.5 percent in 1987. Interviews with parents confirmed that lack of financial resources was the single most important reason that girls do not attend secondary school.

Most parents have the notion that girls do not have qualities of independence and initiatives. Kelly (1995) stipulates that parents tend to reduce study time and completely deny girls access to secondary education. Parents with positive attitude towards education of their children pursue and they build confidence in the children which in turn cultivates self-esteem, high degree of independence and encourage them develop interest in schooling.

Parents with terminal illness including HIV and AIDS tend to spend hugely on medication and scarce resources are available to pay fees in secondary schools. The older children tend to be absent from school either taking care of ailing parents or tending to their siblings, they finally dropout where the extended family does not take-up educating them (Nyakweba 2006).

2.9 Summary of the literature review

The reviewed literature exposes the gaps that exist in relation to internal efficiency in secondary schools in Kenya and KSCE performance. Other studies carried focused more on the causes of factors influencing the internal efficiency in education and little
attention is given on the internal efficiency and its impact on KCSE performance. However the reviewed literature are consistent on enrolment, retention, and completion rates which are shown to be low hence affecting internal efficiency of education in Kenya. This study took a different dimension by assessing the internal efficiency and its impact to KCSE performance.
CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter entails the research design, location of the study, target population, sample selection, research instruments, data collection procedures and data analysis techniques.

3.2 Research design

Orodho (2005) postulates that, research design refer to all the procedures selected by a researcher for studying a particular set of questions or hypothesis. He further says that it is a programme to guide the researcher in collecting, analyzing and interpreting observed facts. In this study, the researcher adopted Descriptive Survey Design to assess factors influencing internal efficiency in public day secondary schools. Best and Khan (1993) asserts that descriptive survey design is the most appropriate design in the behavioral science as it seeks to find out factors associated with certain occurrences, outcome and conditions of behaviour. It encourages the researcher to collect in depth information including sensitive and personalized experiences concerning the issues under investigation.

In this research, the independent variables of family background, educational costs, institutional factors and student’s characteristics are events that have already occurred. The researcher established all causal relationships between these independent variables and the dependant variables of dropout and repetition.
3.3 Location of the study

The study covered central division of Machakos district, eastern province Kenya. This area is chosen because; little has been done before on this topic, in this division and also numbers of parents seeking affordable secondary school education for their children in the area is increasing year by year.

3.4 Target population

According to Kombo and Trump (2006), population is a group of individuals, objects or items from which samples are taken for measurement. Borg and Gall (1996) say that the target population includes all the members of a real or hypothetical set of people, events, or objects to which researchers wish to generalize the results of their research.

This study targets all the public day secondary schools in the division which are 32 in number, which means all the 32 principals, 576 teachers and 2140 students.

3.5 Sampling techniques and sample size

According to Orodho (2005), sampling is the process of selecting a sub-set of cases in order to draw conclusions about the entire set, while a sample is a small part of a large population, which is thought to be representative of the large population.

In this study the researcher used both stratified random sampling and purposeful sampling to identify ten schools for the study. From these schools10 principals were involved in the study, 4 teachers from every school and 10 students from every school; this totaled to 10 principals, 40 teachers and 100 students hence a total sample of 150 respondents.
3.6 Research instruments

The main tool for data collection was a questionnaire. Orodho (2005) says that a questionnaire has the ability to collect a large amount of information in a reasonably quick space of time. In this study, the researcher used self-administered questionnaires, which the principals, teachers and students filled on their own. The questionnaire contained both open ended and closed ended questions.

3.7 Validity of research instruments

Validity shows the extent to which items measure what they are designed to measure. Pre-testing was conducted to assist in determining accuracy, clarity and suitability of the research instrument. According to Borg and Gall (1996), one can carry pilot study on two or three cases. The purpose of the pre-test was to assist the researcher to identity the items which were inappropriate in order to make necessary corrections, examine responses to determine the level of ambiguity of the questions and determine the percentage of responses. Content validity was used to examine whether the instruments answered the research questions (Borg & Gall 1996). The responses where also checked whether they answered what they were intended to answer in order to ensure instruments validity. Based on the analysis of the pre-test, the researcher was able to make corrections, adjustments and additions to the research instruments.
3.8 Reliability of the instruments

Reliability has been defined as the degree of consistency that the instrument or procedure demonstrates (Best and Khan 1993). According to Orodho (2005) variability of an instrument is the consistency in producing a reliable result. In the study, reliability of the questionnaires was assessed through results of piloting, which was done using test – retest technique. The research instruments were administered to the same group of subjects twice in the pilot school. A two – week lapse between the first and the second test was allowed. The Spearman Rank Order Correlation was employed to compute the correlation coefficient in order to establish the extent to which the contents of the questionnaires was consistent in eliciting the same responses (Orodho 2005)

3.9 Piloting of the research instruments

Piloting of the research instruments means administering the instruments to a small representative sample identical to but not including the group one is going to survey. This is important in order to determine the validity and reliability of the instruments (Orodho, 2005). The piloting was done in one of the schools.

3.10 Data collection procedure

The data was collected through the following stages:

A letter of introduction was obtained from the Chairman department of Education Administration, Planning and curriculum development. The researcher sought a research permit from the MOEST headquarters. The research permit was presented to the district education officer Machakos to facilitate visits to schools in central
division. Sampled schools were visited where principals, class teachers and students filled questionnaires. The researcher collected all the questionnaires.

Data analysis was done using the Statistical Package for Social Sciences.

3.11 Data Analysis and presentation

Kerlinger (1986) defines data analysis as categorizing, manipulating and summarizing of data in order to obtain answers to research questions. After collecting the research instruments, the researcher went through all of them to ensure that they were complete. The responses were then classified according to the research questions. The researcher analyzed the data by use of the Statistical Package for the Social Sciences (SPSS) software. The findings were reported using frequency distribution tables and percentages. Graphical representation of data was also used because they were easy to read and interpret. After the analysis of data, deductions were drawn.
CHAPTER FOUR

DATA ANALYSIS AND PRESENTATION OF RESULTS

4.1 Introduction:

This study focuses on assessment of internal efficiency of public day secondary schools and its impact on KCSE performance in central division, Machakos district. It specifically sought to establish the enrolment trend in public day secondary schools as well as determining the general trend of absenteeism, repetition, dropout, completion/graduation and survival rates. It further endeavoured to establish causes of absenteeism, repetition, dropout, completion/graduation and survival rates and also determining the strategies for containing the factors which affects internal efficiency. Lastly, it focused on strategies of improving internal efficiency of secondary schools in central division, Machakos district.

This chapter is structured along those variables of the study in tandem with the conceptual framework and the study objectives. Discussions on the findings are made based on the variables of interest, which forms the basis for conclusions and recommendations given in the following chapter. However, only analysis key to answering research questions have been done.

This chapter focuses on the questionnaire return rate, demographic information of the respondents, data presentation, interpretation and discussion of findings. The presentation was done based on the research questions.
4.2 Questionnaire return rate

Questionnaire return rate is the proportion of the questionnaires which are received by the researcher for purposes of analysis from the sample that participated in the survey as intended in all the research procedures. Out of the 10 principals who were sampled to participate in the study 9 (nine) of them returned the questionnaires making a questionnaire rate of 90% percent. Among the class teachers who also participated in the study 100% of them returned their questionnaires and also 96% percent of the students returned their questionnaires. On average 95% percentage of the questionnaires which were administered to class teachers, principals and students were returned. This makes a good representation of the sample population.

4.3 Demographic information of the respondents.

This section deals with the demographic information of the respondents more particularly the students who are the main consumers of education by virtue of enrolment in schools. They were asked to state their age, gender and their academic level. The question on age was to establish whether those enrolled are of secondary school age-going bracket which is between 14 (fourteen) and 17 (seventeen) years according to the Kenyan education system. The study established that 40.4% of students are above secondary school age-going are still enrolled in school. This means that they either repeated in a particular class or they are the beneficiaries of Free Primary Education where they went back to school after dropping from school when the cost-sharing policy was in effect in primary schools. Table 4 gives the summary of the age distribution of students who participated in the study.
Table 4.1 Age distribution of the students.

<table>
<thead>
<tr>
<th>Age of students</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.00</td>
<td>4</td>
<td>4.2</td>
</tr>
<tr>
<td>15.00</td>
<td>6</td>
<td>6.3</td>
</tr>
<tr>
<td>16.00</td>
<td>21</td>
<td>21.9</td>
</tr>
<tr>
<td>17.00</td>
<td>26</td>
<td>27.1</td>
</tr>
<tr>
<td>18.00</td>
<td>25</td>
<td>26.0</td>
</tr>
<tr>
<td>19.00</td>
<td>8</td>
<td>8.3</td>
</tr>
<tr>
<td>20.00</td>
<td>4</td>
<td>4.2</td>
</tr>
<tr>
<td>21.00</td>
<td>1</td>
<td>1.0</td>
</tr>
<tr>
<td>23.00</td>
<td>1</td>
<td>1.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>96</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

The table shows age distribution of students with the aim of establishing participation in school and find out the relationship between age and wastage. From this table, 59.6% percent of students are of secondary school age-going bracket which is between 14 and 17 years while a significant number 40.4% of students are above the secondary school age-going bracket. This category is prone to practices like absenteeism and dropout because they feel that they are too old to be in school and by law they can participate in gainful employment since they are above the age prescribed by the UN charter on child labour.

The respondents were also asked to state their gender. This aimed at checking whether there was equal representation in terms of gender in the study. From the study, the number of males to females who participated in the study is as shown in figure 4.1.
Figure 4.1. Gender distribution of respondents

The graph represents the gender of participating respondents. It reflects the views given of repetition, completion and transposition rates.

The figure shows that in terms of gender representation in the study, both male and female had a fair representation with males constituting 52.1% and females 47.9%. This means that they were all given a chance to express their views on internal efficiency in secondary schools in terms of repetition, completion, retention and transition rates.

4.4 Respondent’s (students) level of education

In terms of academic level, Students were asked to indicate their level of education. This aimed at establishing whether all the classes were involved in the study. This helped the researcher to establish rates of enrolments, repetition, dropout, completion and transition rates.
The graph analysis the class for the purpose of monitoring transition rates from one class to another. The figure shows that the majority 33.3% percentage of students who participated in the study are in form four. This enabled the researcher to monitor the trend of transition rate from one class to another as well as completion rates. This is followed by form three students, form two and form one in that order.

4.5 The enrolment trend in the public day secondary schools in central division in Machakos district

These research question sought to establishing the completion rates, dropout rates and repetition rates because tabulation of these rates are based on the number enrolled. The enrolment trends are as shown in table 4.2 below.
Table 4.5 Enrolment trends in central division Machakos district

<table>
<thead>
<tr>
<th>Gender</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boys</td>
<td>251</td>
<td>295</td>
<td>313</td>
<td>337</td>
</tr>
<tr>
<td>Girls</td>
<td>244</td>
<td>279</td>
<td>295</td>
<td>310</td>
</tr>
<tr>
<td>Total</td>
<td>495</td>
<td>574</td>
<td>608</td>
<td>647</td>
</tr>
</tbody>
</table>

This table is an attempt to answer the research question, what is the enrolment trend in public day secondary schools? The table shows that the enrolment trends have been increasing from one year to another. However, according to the findings the enrolment for the boys is always higher than that of the girls. This is an indication that girls are more disadvantaged in terms of access to secondary education.

4.6 General trend in absenteeism, repetition, dropout, completion/ graduation and survival rates.

This research question sought to establish the level of absenteeism, repetition, dropout and completion rates in secondary schools, the respondents were asked to state whether absenteeism is a problem in their school. 77.8% percent of the principals said that absenteeism is a major problem while 22.2 percent feel that absenteeism is not a problem in schools. On the other hand, 77.8% of class teachers also were of the opinion that absenteeism is a major problem. However, a higher percentage 92.7% of the students felt that absenteeism is a major problem in schools and 7.3% percent of the students felt that absenteeism is not a big problem. This is an
indication that absenteeism is one of the major factors that lead to internal inefficiency in schools. Table 4.3 gives the summary of responses.

**Table 4.3 Respondents' opinion on absenteeism**

<table>
<thead>
<tr>
<th>Designation</th>
<th>Total</th>
<th>Frequency</th>
<th>%</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teachers</td>
<td>38</td>
<td>29</td>
<td>77.8</td>
<td>9</td>
<td>22.2</td>
</tr>
<tr>
<td>Principals</td>
<td>9</td>
<td>7</td>
<td>77.8</td>
<td>2</td>
<td>22.2</td>
</tr>
<tr>
<td>Students</td>
<td>96</td>
<td>89</td>
<td>92.2</td>
<td>7</td>
<td>7.8</td>
</tr>
</tbody>
</table>

This table shows absenteeism is a problem that could be contributing to internal inefficiency. On numerical basis the respondents were to indicate the average number of students who are absent in a week. All respondent agree that absenteeism is a problem in their schools which contribute to wastage and poor performance.

**Table 4.4 Average number of students absent per week**

<table>
<thead>
<tr>
<th>Average number of absent students in a week</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>40-50</td>
<td>1</td>
<td>14.3</td>
</tr>
<tr>
<td>20-29</td>
<td>3</td>
<td>42.9</td>
</tr>
<tr>
<td>10-19</td>
<td>3</td>
<td>42.9</td>
</tr>
<tr>
<td>Total</td>
<td>7</td>
<td>100.0</td>
</tr>
</tbody>
</table>

The table shows that on average between 20-29 students are absent from school in a week according to the opinion of 42.9% percent of the principals. The same
percentage indicated that 10-19 students are absent in their schools. However, in some schools there is a high rate of absenteeism of 40-50 students in a week according to the opinion of 14.3% of the principals.

4.7 Repetition, dropout, completion and transition rates

The researcher sought to establish repetition, dropout, completion and transition rates. This is because tabulation of these rates is based on the number of those enrolled. The findings are summarized in table 4.5

**Table 4.5 Repetition, dropout, completion and transition rates**

<table>
<thead>
<tr>
<th></th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>boys</td>
<td>girls</td>
<td>boys</td>
<td>girls</td>
</tr>
<tr>
<td>Total enrolment</td>
<td>251</td>
<td>244</td>
<td>295</td>
<td>279</td>
</tr>
<tr>
<td>Number repeated</td>
<td>4</td>
<td>2</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Number dropped out</td>
<td>17</td>
<td>23</td>
<td>14</td>
<td>19</td>
</tr>
<tr>
<td>Number completed</td>
<td>259</td>
<td>247</td>
<td>308</td>
<td>305</td>
</tr>
<tr>
<td>Number joined university</td>
<td>11</td>
<td>7</td>
<td>17</td>
<td>11</td>
</tr>
</tbody>
</table>

The Table shows that the number of boys who repeat classes exceeds the number of girls apart from year 2006 and 2008 when the number of boys who repeated tied with number of girls. However, there is a reversal of the trend on dropout rates across all the years. The number of boys who drop from school is more than the number of girls. In terms of completion rates, the number of boys who complete are more than the number of girls but in terms of transition rates the trend is skewed in favour of
boys. This means that more boys qualify to join institutions of higher learning like university as opposed to girls.

4.8. Causes of absenteeism

Absenteeism evidently affects students in day schools which in turn negatively impacts on teacher - student contact hours. In trying to establish the causes of absenteeism, the researcher asked the respondents to indicate the most prevalent causes in their schools. The results of absenteeism are summarized in table 4.6

<table>
<thead>
<tr>
<th>Causes</th>
<th>Count</th>
<th>percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of interest in school</td>
<td>26</td>
<td>27.4</td>
</tr>
<tr>
<td>Fear of punishment</td>
<td>17</td>
<td>17.9</td>
</tr>
<tr>
<td>Distance of school from home</td>
<td>11</td>
<td>11.6</td>
</tr>
<tr>
<td>Lack of school fees</td>
<td>44</td>
<td>46.3</td>
</tr>
<tr>
<td>Drug abuse</td>
<td>5</td>
<td>5.3</td>
</tr>
<tr>
<td>Family problems</td>
<td>23</td>
<td>24.2</td>
</tr>
<tr>
<td>Bad relationship with teachers</td>
<td>1</td>
<td>1.1</td>
</tr>
<tr>
<td>Influence from outsiders</td>
<td>2</td>
<td>2.1</td>
</tr>
<tr>
<td>Illness</td>
<td>43</td>
<td>45.3</td>
</tr>
<tr>
<td>Lack of food/drought</td>
<td>1</td>
<td>1.1</td>
</tr>
<tr>
<td>Attending family ceremonies</td>
<td>1</td>
<td>1.1</td>
</tr>
</tbody>
</table>
Table 4.6 shows that the main cause of absenteeism is lack of school fees. This is an indication that despite the governments' effort to introduce tuition free secondary education (FSE) still there are a number of students who fail to attend school due to lack of school fees which is charged to the students as levy to cater for lunch programme and PTA funds. This is evidenced by 46.3% of the students who were of the opinion that students are absent from school because of such charges. On the other hand according to the opinion of 45.3% of respondents, some students are absent from school due to illness followed by lack of interest in schooling at 27.4%, family problems 24.2%, fear of punishment 17.9%, distance of home from school 11.6% drug abuse 5.3% and influence from outsiders respectively. Other causes of absenteeism are poor relationship between teachers and students, lack of food or drought and attending family ceremonies all attracting opinion of 1.1% of respondents. However, the opinion of the class teachers was different because lack of school fees was rated as the highest cause of absenteeism at 88.9% followed by sickness and family problems all at 33.3%. The opinion of class teachers and students purports lack of school fees as an outstanding cause of absenteeism.

4.9 Causes of dropout

Respondents had divergent opinions on causes of dropout. The causes of dropout are closely related to home based factors, students' characteristics and poverty.
Table 4.7 causes of dropout

<table>
<thead>
<tr>
<th>Causes of dropout</th>
<th>count</th>
<th>percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distance from school</td>
<td>20</td>
<td>20.8</td>
</tr>
<tr>
<td>Poor performance</td>
<td>54</td>
<td>56.3</td>
</tr>
<tr>
<td>lack of interest in schooling</td>
<td>66</td>
<td>68.8</td>
</tr>
<tr>
<td>Peer pressure</td>
<td>73</td>
<td>76.0</td>
</tr>
<tr>
<td>Indiscipline</td>
<td>72</td>
<td>75.0</td>
</tr>
<tr>
<td>teenage pregnancy</td>
<td>87</td>
<td>90.6</td>
</tr>
<tr>
<td>Effect of drugs</td>
<td>57</td>
<td>59.4</td>
</tr>
<tr>
<td>early marriages</td>
<td>66</td>
<td>68.8</td>
</tr>
<tr>
<td>Family problems</td>
<td>73</td>
<td>76.0</td>
</tr>
<tr>
<td>Lack of school fees</td>
<td>81</td>
<td>84.4</td>
</tr>
<tr>
<td>Due to illness</td>
<td>44</td>
<td>45.8</td>
</tr>
<tr>
<td>Lack of support from family members</td>
<td>21</td>
<td>21.9</td>
</tr>
</tbody>
</table>

This table outlined the causes of school dropout with the aim of identifying both institutional and individual causes. It indicates that teenage pregnancy is the main cause of school dropout at 90.6% percent; this is followed by lack of school fees at 84.4%, family problems and peer pressure at 76.6%, lack of interest in schooling and early marriages at 68.8%. Other causes of dropout include poor performance in education, illness, indiscipline, effects of drugs, distance of school from home and lack of support from family members.
4.10 Causes of repetition in secondary schools

In holder to establish the causes of grade repetition the researcher sought responses by use of open ended questions.

Table 4.8 Causes of repetition in secondary schools

<table>
<thead>
<tr>
<th>Causes of repetition</th>
<th>count</th>
<th>percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor performance</td>
<td>71</td>
<td>80.7</td>
</tr>
<tr>
<td>Desire for better grade</td>
<td>16</td>
<td>18.2</td>
</tr>
<tr>
<td>Chronic absenteeism</td>
<td>10</td>
<td>11.4</td>
</tr>
<tr>
<td>Effects of drugs</td>
<td>3</td>
<td>3.4</td>
</tr>
<tr>
<td>Lack of school fees</td>
<td>21</td>
<td>23.9</td>
</tr>
<tr>
<td>Missing exams</td>
<td>5</td>
<td>6.8</td>
</tr>
</tbody>
</table>

The findings were summarized in table 4.8. These causes include, poor performance in examinations at 80.7%, lack of school fees which is correlated with poor performance because of absenteeism denies students to get all the concepts taught in schools hence failing in examinations. Other causes of absenteeism are students missing examinations, effects of drugs, desire for better grade and chronic absenteeism.

4.11 Causes of poor performance in KCSE

The study sought to establish the causes of poor performance in education since it was mentioned as the main cause of repetition. According to the responses given the causes of poor performance in examinations include: drug abuse, negative attitude of students towards teachers, negative attitude towards subjects, teachers not checking
students assignments, family problems, poor studying methods, Boy - girl relationships and finally lack of interest in schooling.

4.12 Causes of low transition rates from secondary to university

The study also sought to establish the cause of low transition rates from secondary to university, similar study done by Mutegi (2005) indicated that the causes of low transition rates from one level of education to another in Tharaka district were lack of school fees, retrogressive culture like FGM and failure in national examinations among others. This study echo Mutegi's findings as indicated in table 4.9.

Table 4.9 Causes of low transition rates from secondary to university

<table>
<thead>
<tr>
<th>Causes of low transition rates</th>
<th>count</th>
<th>percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of interest to continue with further studies</td>
<td>19</td>
<td>21.6</td>
</tr>
<tr>
<td>poor performance</td>
<td>47</td>
<td>53.4</td>
</tr>
<tr>
<td>Lack of fees</td>
<td>32</td>
<td>36.4</td>
</tr>
<tr>
<td>Lack of role models</td>
<td>7</td>
<td>8.0</td>
</tr>
<tr>
<td>Irregularity in examinations</td>
<td>2</td>
<td>2.3</td>
</tr>
<tr>
<td>Lack of preparation in examinations</td>
<td>9</td>
<td>10.2</td>
</tr>
<tr>
<td>Discouragement by outsiders</td>
<td>3</td>
<td>3.4</td>
</tr>
<tr>
<td>Teenage pregnancy</td>
<td>5</td>
<td>4.5</td>
</tr>
<tr>
<td>Lack of syllabus coverage</td>
<td>5</td>
<td>4.5</td>
</tr>
</tbody>
</table>
The table shows causes of low transition with poor performance being the leading cause and lack of school fees this is reflected by 53.4% and 36.4% respectively. Other factors include: lack of interest for further studies, lack of preparation in the examinations leading to failure in examinations, lack of role models in the society, teenage pregnancy leading to discontinuity in education, insufficient syllabus coverage and irregularity in national examinations.

4.13 Strategies for containing the factors which affects internal efficiency

The study also sought to establish the remedies for the factors that affect internal efficiency of education in secondary schools. Respondents were therefore asked to indicate remedies for each and every factor. Pertaining to absenteeism, respondents were of the opinion that community should be sensitized on the importance of education so that they can give education the first priority; the other remedy for absenteeism is to assist the needy students with bursary in order to keep them in school all the days. Respondents were also of the opinion that parents should get involved on academic matters of their children in order to guide them on matters of schools. Lastly, respondents felt that boarding schools should be expanded so as to accommodate more students. This would help to curb the problem of absenteeism especially where the cause of absenteeism is long distance between home and the school.

On repetition rates the respondents outlined curbing of absenteeism, assisting students on fees payment in form of bursary, sensitizing parents on importance of education and students motivation as remedies for curbing repetition. However, some
respondents felt that students should be allowed to repeat in a particular class if at all it contribute positively by improving the grade of students considering that selection for higher education is based on good performance in examinations.

On the other hand respondents were of the opinion that guidance and counseling, introduction of sex education, having a single sex school, helping the needy students with fees payment can solve the problem of high dropout rates. Other remedies deemed fit to curb dropout rates include; motivating students, retaining the poor students in school as well as sensitizing parents on the importance of education.

4.14 Strategies of improving academic performance at KCSE

Pertaining to academic performance which is dwindling in public day secondary schools in Machakos district, the respondents were of the opinion that students should be encouraged to work harder and they should receive guidance and counseling. They were also of the opinion that continuous assessment tests (CATs) should be administered regularly in order to keep students abreast with class work. This coupled with identifying the causes of poor performance and admitting students with high marks would solve the problem of poor performance in schools that severely affect transition rate from secondary to institutions of higher learning.

Finally respondents were asked to give remedy for low transition rates. There were divergent opinions given by respondents. The responses include; reducing dropout rates, increasing the number of teachers to improve on performance in examinations, raising students esteem and admitting more students in form one.
SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter gives a summary of the study, presents the conclusions drawn from the findings and the recommendations made, as well as suggestions for further study.

5.2 Summary and discussions of the study findings.

This study aimed at assessing the internal efficiency of public day secondary schools and its impact on KCSE performance in Central division, Machakos district. The research revealed that enrolments have been increasing in the schools from year to year. This is in line with increased enrolments occasioned by FPE. Enrolment is still higher for boys than girls in the schools targeted by this study. This is an indication that equity and access are yet to be fully realized. The study also revealed that 40.4% of the students enrolled in the schools are above secondary school age-going while 59.6% are of secondary age-going bracket which is between 14 and 17 years. It further revealed that absenteeism is a major impediment in attaining quality grades in KCPE. The opinion of 77.8% principals, 77.8% of the class teachers and 92.7% of the students shows that absenteeism is a major problem that leads to internal inefficiency in public day secondary schools in Machakos district.

The research also sought to establish repetition rates. The results showed that the society still accepts repetition as normal with more boys than girls repeating a class especially in form four, when their performance in KCSE is dismal this is triggered
by high competition of limited chances in institutions of higher learning especially universities. The male students are also influenced by societal expectations regarding the role of boys in the society which compels them to seek better grades for career advancement. 80.7% of the students attribute repetition to poor performance in examinations.

The study revealed that school drop out is still experienced. The main cause of school dropout according to 90.6% of the student respondents is teenage pregnancy, followed by lack of school fees at 84.4%: family problems and peer pressure at 76.6%. Some students also drop out due to poor performance in education and the fear of commuting daily due to long distances from home to school.

In terms of completion rates, the research revealed that there are more boys who complete the secondary school cycle of education than girls. This is supported by the high incidences of teenage pregnancies among girls who are day scholars. Dropout contributes to the internal inefficiency in the schools under study.

The study revealed that there is low transition rate from secondary schools to universities with the major cause cited being poor performance in KCSE. Apparently, students with quality grades who would qualify for module (ii) university programmes are unlikely to join the institutions due to household poverty which makes it difficult to afford the high tuition fee and other maintenance charges.
5.3 Conclusion

From the findings, the following were arrived at:

Most public day secondary schools have inadequate teaching and learning resources and this could be a factor contributing to high repetitions and dropouts which cause internal inefficiency in schools under study. Household poverty still contributes to wastage as day-scholars students are still absent and have to repeat a class in order to improve their performance in KCSE. Despite the huge investment by the government in support of day public secondary schools, access and equity in education are yet to be fully realized.

Absenteeism is a serious problem which has negatively affected day-scholar students. This has reduced teacher-student contact hours and leaves the students out when new content is being covered leading to poor performance in examinations. It is this poor performance that eventually discourages poor performing students from smoothly graduating from one class to another hence leading to repetition and dropout.

Despite the efforts made to discourage grade repetition, society still appears to accept the second chance provided to improve performance in KCSE and thereby improve chances to secure a place in universities or get a better chance to compete in the job market. This is supported by the numbers of students repeating in form four and their reasons for repeating.

Completion rates are higher for boys than girls. This is an indication that most dropouts are actually girls whose reasons are mainly gender based. There is a good
reason to conclude that most girls would wish to be in boarding schools if it were not for their disadvantaged economic backgrounds. As a matter of fact, there are more boys than girls enrolling in all the public day secondary schools as per the results of this study.

Low transition rates continue making public day secondary schools unattractive to a majority of students and parents. This has lead to apathy in the communities where these schools that are found and which form their enrolment catchment's area. Poor performance in KCSE makes students persistently wish to transfer to schools that are better equipped and which have developed a long history of good performance. It is clear that whenever this happens, day schools occasionally 'clear and forward' their high performing students in form one, two and three mainly to boarding single-sex schools. This perpetuates apathy which is sometimes evident among principals, teachers and students who know too well the prestige associated with being in performing schools.

In conclusion, it is important to note that public day secondary schools have enhanced access and they need to be equipped to bring about equitable distribution of national resources. They have come a long way to benefit the rural poor and the urban disadvantaged groups who could otherwise be left out of secondary school education. It is just a matter of time and keen investment in physical and human resources that they are likely to become performing schools, which will be more productive in producing graduates who transit to universities in larger numbers. This way they can contain internal inefficiency.
5.4 Recommendations

The researcher recommends the following:

The rates of enrolment, retention and completion in boarding/ day schools are relatively higher than those in day schools. This is because students have an option of being boarders. The increase of the number of boarding schools could be significant in raising participation rates. This should also be subsidized by the government because the cost of lunch programmes, school uniform and PTA projects being funded directly by parents are still costly and hence lead to absenteeism, drop out and poor performance.

Pertaining to absenteeism, the community needs to be sensitized on the importance of education so that they can give education the first priority. Since absenteeism is a major contribution to internal inefficiency needy students can be assisted with bursary in order to retain them in school all the days hence improving their performance in KCSE. This is because teacher – student contact hours are increased.

Where absenteeism is due to long distance between home and school, boarding facilities can be expanded and subsidized. This will enhance the efforts that are already being made to introduce many public day secondary schools through the constituency development fund. (CDF)

To curb dropouts, guidance and counseling departments need to be strengthened to deal with problems unique to student’s characteristics such as intellectual ability and institutional factors that push out students causing internal inefficiency.
Since the schools under study have persistently recorded a dwindling performance in KCSE, there is an urgent need to strengthen guidance and counseling and embrace rigorous continuous assessment tests to keep students abreast with academic work. This could be in line with the individual student's target towards improved performance. This should constantly be reviewed alongside teacher's expectations.

The entry behavior of students in most public day schools is lower than that of national and provincial schools. Since this status seems to be determined largely by KCPE performance, a cut-off mark need to be established preferably 250 marks which reflect an average performance. A constant review by students and teachers will enhance the targets set in the schools strategic plans and the high societal expectations of secondary school students. This will keep in focus the production of quality grades leading to high transition rates.

5.5 Suggestions for further research.

Based on the findings of the study, the following proposals have been put forward if institutional internal inefficiency is to be increased.

There is need to investigate qualitative efficiency of all public district schools based on achievement of the graduates of these schools. This may highlight the causes of low achievement in KCSE and could assist eradicate wastage.
There is great need to investigate methods of identifying household poverty to ensure equity, as opposed to the current system where all students in public secondary schools are awarded Ksh.10, 265. Such a method would subsidize the cost of providing education in poor households and eliminate dropouts due to lack of funds while at the same time increasing overall enrolment and aim at attaining the goals of education.

There is need to investigate the influence of the community towards education and the secondary schools within them. This would in the long term create an enabling environment for learning and raise participation rates through social and economic contributions.

A replication of this study in other divisions and various levels of education can be done in order to generate generalization that could assist policy making and sustain debate on internal efficiency of learning institutions.

There is need to investigate external efficiency of public day secondary schools in order to assess the returns of the huge economic investments made by the government, society and families.
BIBLIOGRAPHY


Alexander, L. and Simmons, J. (1975). The determinants of School Achievement in Developing Countries: The Education Production Function, World Bank Staff Working Paper Number 201, Washington D.C


Rumberger R.W (1983) *Dropping out of high school. The influence of race, sex and family background*


APPENDICES
APPENDIX I

Letter of introduction to respondents to conduct research

MWANGI ALICE W.
KENYATTA UNIVERSITY,
C/O
P.O. BOX 543,
MACHAKOS.

To ..........................................

Dear Sir/ Madam,

RE: RESEARCH QUESTIONNAIRE

I am a Postgraduate student at Kenyatta University and a teacher by profession. I am undertaking research in Central Division – Machakos District to help me compile a research project for my degree course.

Kindly provide relevant information by responding appropriately to the questionnaire.

All information provided will be treated confidentially.

I am looking forward to your co-operation. Thank you in advance.

Yours faithfully,

Mwangi A.W.
APPENDIX II

Head teachers’ questionnaire

Introduction

The aim of this questionnaire is to enable the researcher study internal efficiency in Public day secondary schools. All information provided was treated as confidential. Please answer the following questions.

PART A: General Information

1. Status of the school – Kindly tick ☑
   - Mixed Day [ ]
   - Mixed Day and Boarding [ ]

2. How many streams do you have? _______________________

3. How many teachers do you have? Male [ ] Female[ ]

PART B: Factors affecting internal efficiency

1. Enrolment trend

<table>
<thead>
<tr>
<th></th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boys</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Girls</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. Absenteeism

Do you consider absenteeism as a problem in your school?

   Yes [ ]  No [ ]
3. If yes how many students may be absent on average per week? Tick one

<table>
<thead>
<tr>
<th></th>
<th>50 – 40</th>
<th>39 – 30</th>
<th>29 – 20</th>
<th>19 – 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any other</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4. Repetition rate

Kindly indicate the number of students who have repeated a class

<table>
<thead>
<tr>
<th></th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boys</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Girls</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5. Dropout rate

Kindly indicate the number of students who have dropped out of school.

<table>
<thead>
<tr>
<th></th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boys</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Girls</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

6. Completion/ Graduation rate.

Kindly indicate the number of students who completed school.

<table>
<thead>
<tr>
<th></th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boys</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Girls</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
7. Transition rates.

How many students qualified to join university for the years shown below (Grade C+ and above)

<table>
<thead>
<tr>
<th></th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boys</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Girls</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

PART C: What are the causes of the following:

i) Absenteeism

ii) Repetition

iii) Drop out: Below are some of the factors that cause students to dropout of school.

Please tick (✓) the reason(s) that might have led to dropout in your school.

i) Distance from school – home

ii) Poor performance in academics

iii) Lack of interest in schooling

iv) Peer pressure

69
v) Indiscipline [ ]
vi) Teenage pregnancy [ ]
vii) Due to effects of drug abuse [ ]
iii) Early marriages [ ]
x) Family problems [ ]
ix) Due to illness [ ]
xi) Lack of school fees [ ]

xi) Lack of support from family members [ ]

xii) Any other, Please explain ________________________________

4. Low quality grades (C Plain and below) at KCSE.

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

PART D:

Strategies for containing the factors, which affect internal efficiency

1. As an administrator what do you recommend should be done about the following?

1) Absenteeism ________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
2) Repetition

3) Drop out

4) Few quality grades

5) Low transition rates

Thank you.
APPENDIX III

Class teachers’ questionnaire

The aim of this questionnaire is to enable the researcher study internal efficiency in Public day secondary schools. All information provided was treated with confidentiality and was used only for this research.

Please answer the following questions

PART A:

General Information

1. Status of the school – Kindly tick ✓
   Mixed Day [ ]
   Mixed Day and Boarding [ ]

2. How many streams do you have? ____________________

3. Class ____________________

PART B:

Factors affecting internal efficiency

1. Enrolment

How many students were enrolled in your class from Form I?
   Boys [ ] Girls [ ]

2. Absenteeism

Do you consider absenteeism as a problem in your class?
   Yes [ ] No [ ]
3. If yes, how many students may be absent on average per week? Tick

10 – 8 [ ]  7 – 5 [ ]  4 – 3 [ ]  2 – 1 [ ]

4. Repetition

Give the number of students who have repeated in your class

Boys [ ]  Girls [ ]

5. Dropout rate

Kindly indicate the number of students who have dropped out in your class.

Boys [ ]  Girls [ ]

6. How many students qualified to Join University for the years shown below (Grade C+ and above)

<table>
<thead>
<tr>
<th></th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boys</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Girls</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

PART C:

What are the causes of the following?

1) Absenteeism

2) Repetition
3) Drop out:

Below are some of the factors that cause students to dropout of school. Please tick (✓) the reason(s) that might have led to dropout in your school.

| i) Distance from school – home       [ ] |
| ii) Poor performance in academics    [ ] |
| iii) Lack of interest in schooling   [ ] |
| iv) Peer pressure                    [ ] |
| v) Indiscipline                      [ ] |
| vi) Teenage pregnancy                [ ] |
| vii) Due to effects of drug abuse     [ ] |
| viii) Early marriages                 [ ] |
| ix) Family problems                  [ ] |
| x) Lack of school fees                [ ] |
| xi) Due to illness                    [ ] |
| xii) Lack of support from family members [ ] |
| xiii) Any other, Please explain       |  

4. Low quality grades (C Plain and below) at KCSE.
PART D:

Strategies for containing the factors, which affect internal efficiency

1. What do you recommend should be done about the following?
   i) Absenteeism

   ii) Repetition

   iii) Drop out

   iv) Poor academic performance
v) Low transition rates
APPENDIX IV

Students' questionnaire

Please answer the following questions as honestly as you can. All information provided was treated as confidential. Do not write your name.

PART A:

General Information

1. Name of your school ____________________________

2. What is your gender
   Male [ ]    Female [ ]

3. How old are you? [ ]

4. What class are you in?
   Form 1 [ ]    Form 2 [ ]
   Form 3 [ ]    Form 4 [ ]

PART B:

Factors affecting internal efficiency

1. Enrolment
   How many students were enrolled in your class from Form 1?
   Boys [ ]    Girls [ ]

2. Absenteeism
   Do you consider absenteeism as a problem in your class?
   Yes [ ]    No [ ]

3. If yes, how many students may be absent on average per week? Tick
   10 – 8 [ ]    7 – 5 [ ]
   4 – 3 [ ]    2 – 1 [ ]
4. Repetition

Give the number of students who have repeated in your class

Boys [ ]  Girls [ ]

5. Dropout rate

Kindly indicate the number of students who have dropped out in your class.

Boys [ ]  Girls [ ]

Below are some of the factors that cause students to dropout of school. Please tick (✓) the reason(s) that might have led to dropout in your school

i) Distance from school – home [ ]

ii) Poor performance in academics [ ]

iii) Lack of interest in schooling [ ]

iv) Peer pressure [ ]

v) Indiscipline [ ]

vi) Teenage pregnancy [ ]

vii) Due to effects of drug abuse [ ]

viii) Early marriages [ ]

ix) Family problems [ ]

x) Lack of school fees [ ]

xi) Due to illness [ ]

xii) Lack of support from family members [ ]

xiii) Any other, Please explain __________________________________________

________________________________________________________________________

________________________________________________________________________
6. How many students qualified to Join University for the years shown below (Grade C+ and above)

<table>
<thead>
<tr>
<th></th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boys</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Girls</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**PART C:**

What are the causes of the following?

1) Absenteeism
   __________________________________________________
   __________________________________________________
   __________________________________________________
   __________________________________________________
   __________________________________________________

2) Repetition
   __________________________________________________
   __________________________________________________
   __________________________________________________
   __________________________________________________
   __________________________________________________

3) Drop out
   __________________________________________________
   __________________________________________________
   __________________________________________________
   __________________________________________________

79
4. Poor academic performance

5. Many students failing to qualify to join universities and colleges?

Thank you