

**RELATIONSHIP BETWEEN COST - SHARING AND ACCESS AND EQUITY IN
EDUCATION IN PUBLIC SECONDARY SCHOOLS IN NAKURU DISTRICT, KENYA**

JENNIFER NJERI MBUGUA

**A Thesis Submitted to the Graduate School in Partial Fulfilment of the Requirements for
the Award of Master of Education Degree in Educational Management of Egerton
University**

EGERTON UNIVERSITY

OCTOBER, 2009

DECLARATION AND RECOMMENDATIONS

Declaration

This thesis is my original work and has not been presented for an award of a degree, diploma or certificate in a university.

Signature: _____

Date: _____

Jennifer N. Mbugua

EM15/1292/04

Recommendation

This thesis has been submitted for examination with our approval as University Supervisors.

Signature: _____

Date _____

Dr. Ngesa Fredrick U.
Department of Agricultural Education,
Egerton University

Signature: _____

Date _____

Dr. Mbugua Zachariah K.
Department of Curriculum, Instruction and Educational Management,
Egerton University

COPY RIGHT

© 2009 Jennifer N. Mbugua

All rights are reserved. No part of this work may be reproduced or utilized, in any form or by any means, electronic or mechanical, including photocopying, recording or by any information storage or retrieval system without prior written permission of the author or Egerton University.

DEDICATION

To my late husband John Mbugua and loving children Kabiti, Kiongo and Nyambura, and my late father Evans Chege Njoka.

ACKNOWLEDGEMENT

This thesis was prepared and written under the supervision of Dr. Fredrick U. Ngesa of the Department of Agricultural Education and Dr. Zachariah K. Mbugua of the Department of Curriculum, Instruction and Educational Management, Faculty of Education and Community Studies, Egerton University. I wish to thank these selfless and dedicated lecturers for their guidance, criticisms and encouragement without which this work would not have been accomplished. I am also grateful for the efforts of all the staff members of the Department of Curriculum, Instruction and Educational Management and the Faculty of Education and Community Studies. My sincere thanks also go to all those principals of the sampled public secondary schools who assisted me in administering the instruments and the students who participated in the study.

I wish to register my gratitude to the Ministry of Education Science and Technology for granting me permission to carry out the study. I am also thankful to my employer, Teachers Service Commission (TSC), for granting me a study leave with pay. This enabled me to successfully undertake this daunting task. Special acknowledgement goes to my family members for their support, understanding and encouragement during the entire study. May the almighty God bless all abundantly.

Finally, honour, glory and praise go to God for granting me good health and enabling me to study and carry out this research work.

ABSTRACT

Education is critical for the development of a country. Governments invest in it and prioritize it as a service to its citizens. However, due to the huge resources needed for provision of education, many governments, including the government of Kenya, have introduced the cost-sharing policy to reduce budgetary allocated to the education sector. The average government spending on education , excluding the share by households had risen between 5 and 7 percent of the GDP by 2005 (GOK,2005) According to the policy, parents and the government share the cost-sharing. This has however, placed a heavy burden on parents as they are required to pay school fees and also finance development projects, boarding and personal requirements. This study sought to investigate the relationship between cost sharing and access and equity in public secondary schools in Nakuru district. The study adopted correlational research design. The targeted population was 43,843 students and 125 head teachers in public secondary schools, with an accessible population of 7814 Form four students of the 2004 cohort. The sample consisted of 393 students and 10 head teachers selected from 10 schools. Data were collected using student and head teacher structured questionnaires. The instrument for students had a reliability coefficient of 0.76. Data were analyzed using descriptive and inferential statistics. Descriptive statistics included frequencies and percentages, while inferential statistics entailed chi-square tested at the significance level of 0.05. Analysis was done using Statistical Package for Social Sciences (SPSS) version 11.5 for Windows. The findings indicated that the cost-sharing had a significant relationship with the enrolment rates of public secondary school students according to school category. However, the schools had different enrolment rates regardless of their school type. Cost-sharing had a significant relationship with attendance rates of public secondary school students by school category and type. Flow rates depended on the availability of teaching and learning facilities regardless of cost sharing. There were inequities in access to education between female and male students due to the relatively high cost of education of girls compared to the boys . The study recommends that there is need for the government to produce adequate learning and teaching materials at regional levels. The cost -sharing policy should be reviewed to make it more responsive to the unique and diverse requirements of different categories of schools and the ability of the parents to meet the cost. Further research is recommended on the implementation of the free tuition policy in public secondary school education.

TABLE OF CONTENTS

DECLARATION AND RECOMMENDATIONS.....	ii
COPY RIGHT.....	iii
DEDICATION.....	iv
ACKNOWLEDGEMENT.....	v
ABSTRACT.....	vi
TABLE OF CONTENTS.....	vii
LIST OF TABLES.....	x
LIST OF FIGURES.....	xi
LIST OF ABBREVIATIONS AND ACRONYMS.....	xii
CHAPTER ONE.....	1
INTRODUCTION.....	1
1.1 Background Information.....	1
1.2 Statement of the Problem.....	6
1.3 Purpose of the Study.....	6
1.4 Objectives of the Study.....	6
1.5 Hypotheses of the Study.....	7
1.6 Significance of the Study.....	7
1.7 Scope of the Study.....	8
1.8 Assumptions of the Study.....	8
1.9 Limitations of the Study.....	9
1.10. Definition of Terms.....	9

CHAPTER TWO	12
LITERATURE REVIEW	12
2.1 Introduction.....	12
2.2. Financing of Education.....	12
2.3 Cost - Sharing in Education	17
2.4 Access to Education in Kenya	20
2.5 Equity in Education.....	22
2.6 Gender Disparities in Education	25
2.7 Theoretical Framework.....	28
2.8 Conceptual Framework.....	29
CHAPTER THREE	31
METHODOLOGY	31
3.1 Introduction.....	31
3.2 Research Design.....	31
3.3 Location of the Study.....	31
3.4 Population of the Study.....	32
3.5 Sampling Procedures and Sample Size.....	34
3.6 Instrumentation	36
3.7 Data Collection Procedures.....	37
3.8 Data Analysis	38
CHAPTER FOUR.....	40
RESULTS AND DISCUSSION.....	40
4.1 Introduction.....	40

4.2 Demographic Characteristics of the Respondents	41
4.3 Enrolment Rates and Cost-sharing.....	43
4.4 Attendance Rates and Cost-sharing	52
4.5 Flow Rates and Cost Sharing.....	57
4.6 Influence of Cost-Sharing on Enrolment by Gender	69
4.7 Summary	72
 CHAPTER FIVE	 73
 SUMMARY, CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS	 73
5.1 Introduction.....	73
5.2 Summary of the Findings.....	73
5.3 Conclusions.....	75
5.4 Implications of the Findings to Secondary Education	76
5.5 Recommendations.....	77
 REFERENCES	 78
 APPENDICES	 83
APPENDIX A – Letter of Introduction	83
APPENDIX B: Student Questionnaire	84
APPENDIX C: Head Teacher Questionnaire	89
APPENDIX D: Students’ Flow Rates Proforma	95
APPENDIX E ₁ : Letter of Pilot Study.....	96
APPENDIX E ₂ : Research Authorization	97

LIST OF TABLES

Table 1: Enrolment in Secondary Schools by Form and Gender, 2002– 2006.....	3
Table 2: Government Stipulated Fees Structure for the Year 2003.....	5
Table 3: Distribution of Schools in Nakuru District by Category and Type	32
Table 4: Distribution of the Selected Schools by their Categories	33
Table 5: Distribution of the Sample by Schools Category	33
Table 6: Distribution of the Sample by School Types.....	33
Table 7: Distribution of the Sample Size.....	35
Table 8: Summary of Data Analysis.....	39
Table 9: Number of Streams in Secondary Schools	41
Table 10: Age of Admission in Form One by Gender.....	42
Table 11: Enrolment Rates by School Category for the Years 2004-2007.....	45
Table 12: Relationship between Enrolment Rates and School Category	48
Table 13: Enrolment Rates by School Type for the Years 2004-2007	50
Table 14: Relationship between Enrolment Rates and School Type.....	51
Table 15: Number of days absent from School due to lack of School Fees	52
Table 16: Relationship between Attendance Rates and School Category	55
Table 17: Relationship between Attendance Rate and School Type	56
Table 18: Flow Rates of the 2004 Form One Class Cohort for the Years 2004-2007.....	61
Table 19: Number of Students who Repeated, Dropped Out and Transferred in 2004-2007	62
Table 20: Reasons for Students Repetition, Transfers and Drop Out.....	63
Table 21: Ability of the Parents to meet the Cost-Sharing of their Children	64
Table 22: Reasons for Inability of Parents to Meet the Cost-Sharing	64
Table 23: Relationship between Flow Rates and Cost Sharing –School Fees.....	67
Table 24: Aspects of the Government Policy on Fees that Need Improvements	68
Table 25: Suggestions to Improve Implementation of Cost Sharing Policy.....	69

LIST OF FIGURES

Figure 1: Relationship between the Various Variables Related to Cost-Sharing	30
Figure 2: Lack of School Fees as Reason for Transfer by School Category	46
Figure 3: Financiers of Development Projects in Schools.....	58
Figure 4: Cost Sharing Policy Effective in Constructing Physical Facilities	59
Figure 5: Gender Distribution of the Sampled Students.....	70

LIST OF ABBREVIATIONS AND ACRONYMS

BOG	Board of Governors
ESAC	Education Sector Adjustment Credit
GOB	Government of Botswana
GDP	Gross Domestic Product
GERS	Gross Enrolment Ratios
GNP	Gross National Product
KCSE	Kenya Certificate of Secondary Education
KCPE	Kenya Certificate of Primary Education
IPAR	Institute of Policy and Analysis Research
KNEC	Kenya National Examinations Council
MoE	Ministry of Education
MoEST	Ministry of Education, Science and Technology
NER	Net Enrolment Ratio
PTA	Parent Teachers Association
GOK	Government of Kenya
SAPS	Structural Adjustment Programmes
TIQET	Totally Integrated Quality Education and Training
TSC	Teachers Service Commission
UNESCO	United Nations Educational, Scientific and Cultural organization

CHAPTER ONE

INTRODUCTION

1.1 Background Information

A historical analysis of the patterns and trends of education financing in Kenya reveals the existence of a partnership between the state, households, and communities long before the official enunciation and inauguration of the cost-sharing policy. The cost sharing policy only added a new dimension, depth and breadth to the volume of the community and household expenditure on education services (Abagi & Odipo, 1997). During the colonial era, and immediately after independence the government met the teachers' salaries, constructed physical facilities and provided equipment and other learning and teaching materials. Parents paid statutory fees, which were regulated by the government. (GOK 1999)

The financing of secondary education has, however, become problematic, as parents have to shoulder an increasingly large proportion of the cost-sharing. Nevertheless, investment in education is key to the development process in any country (GOK, 1988). World Bank (1996) adds that increased investment in education results in improved social rate of return and produces a big pay-off for the recipient and by extension, his or her family regardless of the financing source. There is a positive correlation between education and an individual's earnings and the better educated individuals are more productive. They are not only in employment but also in the household. Research has revealed that education's rate of return to individual is greater than to society (World Bank, 1996).

A study by Psacharopoulos and Woodhall (1985) shows that the returns of investment in Education in Africa expressed as social rates of return for primary are 26%, secondary 17% and higher education 13%. At the same time, the individual rates of return for various educational levels were estimated as follows: for primary 45%, secondary 26%, and higher education 32%.

The private rate of return, for all levels of education was thus higher for individuals than for society in general. This has been taken as an argument for cost-sharing in education such that a greater share of the burden of education should be shouldered by those to whom the greater benefits will eventually accrue (Orodho, 2001).

In Kenya, since independence, there has been remarkable improvement in the educational system, due to the large national investment in education (GOK, 1988). Convinced of the role of education in promoting and accelerating economic and social development, GOK devoted the early years of independence to the development and expansion of the education sector (Orodho & Njeru, 2003). Since independence, the nation has encouraged rapid expansion of educational opportunities (GOK, 1986) The Commission of Inquiry into the Education System of Kenya recommended an expanded free basic education from early childhood to secondary school level (GOK, 1999). This is in line with one of the government's guiding philosophies for education that every Kenyan has an inalienable right to free education, no matter his or her socio-economic status (GOK, 1997). Shortly after independence, Kenya Education Commission chaired by Ominde found that resources for education were not sufficient (GOK, 1964).

Secondary education enrolment grew tremendously within the first two decades after independence. The enrolments rose from 30,000 students in 1963 to over 862, 907 students in 2003. The number of public secondary schools also increased from 151 at independence to 3,661 by 2005. Based on the 1999 census data a total of 2.8 million boys and girls aged 14 and 17 years who should have been in secondary schools were not enrolled, policy measures are therefore required to address the poor access to secondary education as a way of supporting the country overall development goals (GOK, 2005).

Table 1 shows that enrolment in secondary schools increased by 10.3 % from 934,149 in 2005 to 1,030,080 in 2006. The number of boys enrolled was higher than that of girls by 62,064 students. Participation at secondary school level is still low with Gross Enrolment Rate (GER) and Net Enrolment Rate (NER) estimated at 32.4 % and 23.2 % in 2006, respectively.

Admission to Form One as a percentage of total KCPE candidates increased from 56.0 % in 2005 to 60.0 % in 2006. The number of KCSE candidates increased by 17.1 % from 222,676 in 2005 to 260,665 in 2006 (GOK, 2007).

Table 1: Enrolment in Secondary Schools by Form and Gender, 2002– 2006

Form	2003		2004		2005		2006	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
One	142,887	134,935	146,645	127,057	139,469	124,384	161,588	137,873
Two	111,279	101,500	124,585	114,053	122,867	109,471	132,015	119,077
Three	106,262	98,239	117,975	105,118	120,912	107,770	120,978	115,443
Four	102,322	85,089	101,301	89,416	110,909	98,367	131,491	111,615
Total	882,513		926,150		934,149		1,030,080	

(GOK, 2007)

To address itself to the ever increasing expenditure on education, in 1986 the government issued Sessional Paper No. 1 on “Economic Management for Renewed Growth”, which saw the introduction of cost-sharing in all sectors of the economy (GOK, 1986). This Sessional Paper was critical of the high recurrent expenditures on education and training, and consequently recommended control measures to be taken to reduce such expenditures. Subsequently, the government appointed a Presidential Working Party on Education and Training in 1988, to study the Education sector and recommended ways of ensuring delivery of education and training services within the limits of the constrained economic conditions. The Report recommended introduction of cost-sharing in education, which was accepted by the government in Sessional Paper No. 6 on “Education and Training for the Next Decade and Beyond” (GOK, 1988).

The emphasis was that on education, parents were to contribute part of the cost-sharing of their children (GOK, 1986). The Government was to continue financing educational administration and professional services, while communities, parents and sponsors were to provide physical facilities, books, stationery and uniforms. Further structural adjustments were introduced in 1991/92 financial year through the “Education Sector Adjustment Credit” (ESAC).

The principal objective of ESAC was the implementation of the Sessional Paper No. 6 which recommended among other things, that the nation reduces the growth rate of education recurrent budget to sustainable levels and improving access to secondary education, especially for the children from disadvantaged areas. This was in response to World Bank recommendation to African countries to consider the idea of cost-sharing instead of relying on public expenditure (World Bank, 1988).

However, charging fees to students at public-funded institutions raises difficult questions concerning equity, access and taxation (World Bank, 1996). Close to 50 % of Kenyans live below the poverty line. In view of this the prohibitive fees and other levies charged by educational institutions have had a negative impact on access and equity in education. A catalogue of items required from pupils when they initially join form one and the cost of text books for numerous subjects under the 8-4-4 system of education have substantially added to the high cost of secondary education. (GOK, 1999). Rono P.K (1998) observes that it is burdensome to parents who have many children in secondary schools when their income is meagre. That is why Ayot and Briggs (1992) indicate that a family might contemplate bearing the cost of sending their children to primary school but may abandon the whole exercise due to the financial sacrifice needed at secondary school level. However, having accepted the rationality of cost-sharing, the Ministry of Education Science and Technology (MoEST) bursary scheme was introduced in 1992 at secondary school level as one of the safety nets to cushion the poor and vulnerable groups against the likely effects (Orodho & Njeru, 2003).

In 2008, the government introduced the policy of free tuition in public secondary schools. Under this programme the Ministry Of Education pays public secondary schools 130 dollars per pupil annually. This amount is paid in lump sums at the start of the three school terms and which is expected to cover tuition and administration costs, school maintenance and improvement costs, and class activities. Parents are still responsible for uniforms and lunches but this subsidy does not cover residence costs for children at boarding schools. Parents continue to provide infrastructure, though the constituency development fund (CDF) is contributing a lot in this area (Kwamboka , 2008).

The MoEST has been publishing fees guidelines for the public secondary schools since the 1990's. The guidelines are based on the prevailing economic situation and the level of poverty. This was in line with the Ministry's policy of making education affordable and increasing access and equity. MoEST fees guidelines for the year 2002 was to be retained in the year 2003 as indicated in Table 2.

Table 2: Government Stipulated Fees Structure for the Year 2003

Vote heads	National schools (Kshs)	Provincial schools (Kshs)	District Day Schools (Kshs)
Tuition (SES)	3,600.00	3,600.00	3,600.00
Boarding (BES)	10,000.00	9,000.00	-
Repairs (RMI)	1,500.00	800.00	500.00
Transport (LT&T)	1,500.00	1,000.00	400.00
Electricity, Water& Conservancy (EWC)	1,200.00	1,000.00	500.00
Contingencies	800.00	700.00	400.00
Medical	500.00	400.00	200.00
Activity	10,000.00	900.00	900.00
Personal emoluments (PE)	6,000.00	3,500.00	2,000.00
Total	35,100.00	20,900.00	8,500.00

This study focused on the secondary school level since this is the stage which forms the second cycle of the education system of education in Kenya and therefore, the transitional stage between primary education and higher education, training, and the world of employment. It is also a preparatory stage for adulthood therefore it needs to be carefully planned and executed in order to ensure that schools produce well adjusted citizens, according to the objective of secondary school education (GOK, 1988). It offers meaningful and gainful educational skills that may provide attractive employment opportunities, prepares people for various professions and lays a firm foundation for further education. On this basis, the study sought to establish the relationship between cost-sharing and access and equity in public secondary schools in Nakuru district.

1.2 Statement of the Problem

There have been attempts in Kenya to ensure that education is accessible and equitable to the citizens. Cost-sharing, which was made a Government policy in 1989 has led to the increase of school fees charged to parents at public secondary school level. As a result, parents are likely not to raise the required fees for their children at secondary school level. The bursary scheme introduced in 1992 and free tuition policy implemented in 2008 in public secondary schools, have contributed immensely to reduce the cost of education. However, the available information is inadequate on the relationship between cost sharing and attendance rates, flow rates, enrolment by gender, enrolment by school category and type in Nakuru district. Indicators of access were enrolment rates, school attendance rates, and flow rates, while indicators of equity were enrolment of girls versus enrolment of boys. This study filled this knowledge gap by investigating the relationship between cost-sharing and access and equity in public secondary schools in Nakuru district.

1.3 Purpose of the Study

This study sought to investigate the influence of cost sharing on access and equity in public secondary schools in Nakuru district. It focused on equity in terms of gender and access in terms of enrolment, attendance and flow rates.

1.4 Objectives of the Study

The following specific objectives guided the study:

- (i) to examine the relationship between the cost-sharing and enrolment rates in public secondary school students by school category;
- (ii) to establish the relationship between the cost-sharing and enrolment rates in public secondary school students by school type;
- (iii) to investigate the relationship between cost-sharing and attendance rates in public secondary school students by school category;
- (iv) to establish the relationship between cost-sharing and attendance rates in public secondary school students by school type;

- (v) to determine the relationship between cost-sharing and the flow rates in public secondary school students;
- (vi) to determine the relationship between cost-sharing and enrolment by gender in public secondary schools.

1.5 Hypotheses of the Study

To achieve the objectives of this study, the following null hypotheses were tested for their validity at 5% level of significance.

HO₁: There is statistically no significant relationship between the cost-sharing and enrolment rates in public secondary school students by school category.

HO₂: There is statistically no significant relationship between the cost-sharing and enrolment rates in public secondary school students by school type.

HO₃: There is statistically no significant relationship between the cost-sharing and attendance rates of public secondary school students by school category.

HO₄: There is statistically no significant relationship between the cost-sharing and attendance rates of public secondary school students by school type.

HO₅: There is statistically no significant relationship between cost-sharing and flow rates in public secondary school students

1.6 Significance of the Study

The study was significant because it provided information on cost-sharing in public secondary schools with regard to allocation of education resources. The government may consider whether to shift these resources to secondary school level with a view to curbing dropouts. Information on the relationship between cost-sharing and access and equity in secondary school education is limited and therefore the results of this study may help to shed light on the strengths and weaknesses of cost sharing policy in relation to increasing secondary school enrolment and improving on attendance and completion rates. The study highlighted about the enrolment rates, attendance rates, flow rates and enrolment by gender in public secondary schools. The findings pointed out that there was no particular pattern used in the distribution of school type in enrolment rates. The findings also can enlighten educational planners and teachers on possible strategies to help improve participation rates in secondary schools.

The findings will be helpful to administrators in formulating policies for improving access and equity in public secondary schools. The findings provide empirical data, which policy makers would use as a basis in formulating policies concerning financing of secondary education, cost sharing and identifying how they can reduce the prevailing cost of secondary education. The study kindles further research in financing secondary education and also in cost-sharing in education. Finally it is hoped that Ministry of Education Science and Technology, school administrators, teachers and parents will find the results of this study significant and useful in financing secondary school education.

1.7 Scope of the Study

This study was conducted within Nakuru district, Rift Valley Province, Kenya. The study covered public secondary schools sampled from Nakuru District because private schools are already paying fees and parents have money. Public schools are open to all qualified students. . It targeted Form Four students and head teachers of ten public secondary schools. The study covered financing of education, cost-sharing in education, access to education, equity in education and gender disparities in education in Kenya. These students were targeted for this study since they were expected to have knowledge and comprehension of enrolment and attendance rates, since they had been in school long enough.

1.8 Assumptions of the Study

The study was based on the following assumptions:

- (i) The students and the head teachers would be willing to respond honestly to the questionnaires.
- (ii) The school management kept proper, detailed and accurate enrolment, absenteeism, dropouts and school fees records.
- (iii) Data concerning income of the parents and the socio-economic factors was available to the students.

1.9 Limitations of the Study

This study was limited to public secondary schools in Nakuru district. Therefore, private secondary schools were not included in this study.

This implied that the results of this study will only be generalized to public secondary schools in Nakuru district and yet education is provided by both public and private schools.

1.10. Definition of Terms

This study adopted the following meanings of the given terms and concepts:

Access: Refers to the possibility of the population that is eligible to take part in public secondary education to actually doing so. The indicators of access are the Gross Enrolment Ratios (GERs) and the transition rates.

Attendance Rates: Taking active part in particular grades in a particular cycle of education. In this study, it refers to taking the active part in particular grades in secondary school level of education.

Co-educational Secondary School: Refers to an institution that provides secondary school education for both boys and girls.

Completion Rate: The number of students who successively complete the secondary school cycle.

Cost-sharing: Paying part of the cost of financing education by the government and the other part by the beneficiaries of education; the students and the community. In this study, it refers to paying part of the cost of financing secondary school level of education by the government and the other part by the beneficiaries of secondary cycle education, the students and the community.

District Secondary School: Refers to a category of government funded institutions that are required to admit secondary school students from within the district.

Dropout: A student who leaves school at a non-terminal point in the cycle of the course. In this study, a dropout will mean any student who quits secondary school level studies voluntarily or is discontinued before the course is completed.

Enrolment Rate: The proportional relationship between those enrolled in a particular cycle of an education system to the defined age when the student should be in school in Kenya. In this

study, it refers to the proportional relationship between the public secondary school system and the defined ages when the student should be in secondary school.

Equity: Refers to giving equal chances to school graduates of different gender to benefit from education. In this study, it refers to an equal opportunity to participate in public secondary education by boys and girls who has met the minimum entry qualification.

Flow Rate: Is the movement of students from one grade to another in public secondary schools.

Form Four: Refers to fourth level of the secondary education in Kenyan education system.

Gender Enrolment: Is the number of males and females in a given level of an educational system. In this study, it refers to numbers of girls and boys in public secondary school level of education in Kenya.

Gross Enrolment Ratio (GER): Is the total enrolment in a specific level of education regardless of age expressed as a percentage of the eligible school age population corresponding to the same level of education in a given school year. In this study, it refers to the number of students enrolled in public secondary schools as a proportion of the total secondary school age population in Nakuru District.

Harambee: (Self-help) is funds raising through voluntary contributions by members of the public for communal development.

National Secondary School: Refers to a category of government funded institution that are required to admit students from the entire nation. Usually these schools are better equipped to admit students than the rest of the government funded schools.

Needy Student: A student who is incapable of independently raising secondary school fees through his own savings, sponsors, guardians and /or parental income.

Net Enrolment Ratio (NER): Is the enrolment of the official age group for a given level of education expressed as a percentage of the corresponding population. In this study it refers to enrolment official age group for the secondary school level of education expressed as a percentage of the corresponding population.

Provincial Secondary Schools: Refers to a category of government funded institutions that is required to admit students from schools located within the province.

School Category: Refers to classification of schools by where the students are admitted from. In this study it refers to national, provincial and district public secondary schools.

School Type: Refers to classification of schools according to gender composition. In this study, it refers to boys', girls', and co-educational public secondary schools.

Student Participation: The action of taking an active part in education by the learners in terms of enrolment, attendance, performance and completion. In this study, it refers to taking an active part in secondary school level of education by the learners in terms of enrolment, attendance, completion and gender.

Tax Finance: The finances that the government receives from taxes for provision of services. In this study it refers to the finance the government receives for provision of secondary school education programmes.

Transition Rate: Number of students who move to the next grade compared to the students who have supposed to have moved to the next grade in public secondary schools.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter contains a review of related literature from books, journals, and past research studies among others, on cost-sharing as a method of financing education in Kenya and other countries. The chapter presents financing of education, access to and equity in education and gender composition in education globally and in Kenya. The chapter concludes with an exposition of the theoretical and conceptual framework that will be used to guide this study. Most of the literature reviewed in this study points to the fact that many governments in developing countries have used the cost-sharing policy as an alternative way of financing education.

2.2. Financing of Education

This section deals with financing of education in a global perspective as well as in Kenya

2.2.1 Financing of education in a global perspective

Financing of education is the process of budgetary allocation, both public and private, on a rational basis to ensure equitable distribution of resources (GOK, 1999). Public financing of education is growing more difficult as enrolments expand. In most countries, both public primary and secondary education is free (World Bank, 1996). During the 1960s and 1970s most developing countries made an ideological commitment to free education. The tuition fees in the public sector tended to be reduced or even abolished. The rapid increase in government expenditure that followed however, some developing countries began to consider reintroducing tuition fees, while others introduced charges for boarding and lodging (Psacharopoulos & Woodhall, 1985).

Tax finance is the most suitable source of finance for services. In most countries the major source of finance for education comes from tax finance (Penrose, 1998). The World Bank recognizes the critical role of secondary education in the economic, social, and human capital development of nations around the world.

Historically, secondary education has often been neglected in developing and financing educational systems, but today its vital importance cannot be ignored (World Bank, 2005). Since World Bank lending for education began in 1962, the Bank has played a prominent role in assisting developing countries in their efforts to expand secondary education and to improve the quality of institutions and programmes. The Bank is now the largest single source of external financing for education in developing countries.

The World Bank is currently assisting 71 countries with the development of their secondary education systems. Lending for secondary education amounted to \$ 2.85 billion between, 1990 and 2004, with \$250 million in new lending for 2004. Additional support for secondary education efforts is included as part of the general education lending each year. In countries with low secondary school enrolments, the Bank interventions have focused amongst other things on improving the social conditions of the poor and reducing inequality by expanding access to secondary education (World Bank, 2005).

The World Bank (1996) estimates indicate that the proportion of GNP devoted to education in developing countries rose on the average from 2.3% in 1960 to 4.5% in 1984 but since then the proportion of the National Government Budget and their GNP devoted to education has began to decline. Early Bank lending for education concentrated on Africa, and the Middle East, but today lending is significant in all regions. Girls' education is at the forefront and increasing attention is being given to education needs of ethnic minorities and indigenous people (World Bank, 1980).

World Bank (2005) notes that since the mid 1990's, four factors have promoted a rapid increase in the share of lending to general secondary education. First, as primary completion rates have risen, the demand for secondary places has grown. Secondly, the equitable and sustainable financing and management of secondary education has become a major challenge, especially in

low income countries. Thirdly, the role of secondary education in economic and social development is being reassessed in the context of globalization and competitiveness in the information age. Fourthly, changes in secondary education are being driven by rapid transformations in technology and labour markets.

Graham-Brown (1998) notes that in financing education, a key question is funding and the role of the state in providing it. The author further says that in many countries, rapid population growth compounds the economic pressures on the state resources and these are likely to intensify unless economic growth and development is restored. In developing countries, the burden of financing formal education both in primary and secondary level is falling increasingly on the family, community and non-state institutions. This trend puts considerable pressure on the poorest families, which are also experiencing falling or stagnating income levels (Graham-Brown, 1998).

Works of financing education indicate that in most countries, education has grown in importance as the concept of human capital has found a wider acceptance as a vital factor in economic growth, or more important, as the idea that education is a human right has been universally recognized (Ayot & Briggs, 1992). Therefore, in most developing countries the state can claim most of the credit for the expansion of the education system. Until the 1980's the state was generally regarded as the main provider for the national education system, equipment, and teachers and curricular would come from the government; even if communities were building schools (Graham-Brown, 1998).

However, Psacharopoulos and Woodhall (1885) indicate that what is the issue is not whether education should be subsidized, but to what extent. They add that educational financing remains a highly controversial subject. World Bank (1996) notes that present systems for financing and managing education are often inappropriate for meeting the challenges. Public financing, moreover is growing more difficult as enrolments expand.

In addition, public intervention in education can be justified on several counts:-

- (i) It can reduce inequality.
- (ii) Open opportunities for the poor and disadvantaged.

- (iii) Compensate for market failures in lending for education.
- (iv) Make information about the benefits and availability of education generally available. But public spending on education is often inefficient and inequitable. It is inefficient when it is misallocated among uses. It is inequitable when qualified potential students are unable to enroll in institutions because educational opportunities are lacking or because of inability to pay.

According to Psacharopoulos and Woodhall (1985), private expenditure on education can be in terms of fees, donations and endowments, and through direct labour. On the other hand, students can also get involved in financing their education by producing goods to sell. While concurring with this, World Bank (1997) notes that expenditure in the world confirms participation in education by poor families is affected by the cost-sharing policies. It shows that the high cost of secondary education reduced the probabilities that the poor parents will enroll their children in schools.

Literature on financing of education has given very limited attention to the issue of effectiveness of public financing of various levels of education. This is especially so in secondary education level focusing on the policy of cost-sharing. This is the knowledge gap that this study intends to fill.

2.2.2 Financing of education in Kenya

Ayodo (2000) observes that increasingly, over the last three decades, concern has been expressed over the amount of resources allocated to the provision of education by the government, families and the private sector. According to the Economic Survey of 2007 GOK (2007), the gross total allocation to the Ministry of Education increased by 71.3 % from Kshs 64.1 billion in 2002/03, to 81.4 billion in 2004/05, to Kshs 109.8 billion in 2006/07. The recurrent expenditure increased by 12.9 % from, 88.4 billion in 2005/06 to 99.8 billion in the year 2006/07. The implementation of free primary education programme further resulted in an increase of the recurrent expenditure by 8.5 % from Kshs 7.1 billion in 2005/06 to 7.7 billion in 2006/07.

The recurrent expenditure on higher education was expected to go up from Kshs 11.9 billion in 2005/06 to Kshs 14.2 billion in 2006/07.

The National Poverty Eradication Plan of 1999-2015 indicates that Kenya spends more than most African countries in education when the expenditure is expressed as a percentage of Gross National Product (GNP). As a proportion of discretionary expenditures education spending in Kenya at 40% is higher than almost all other comparable countries except Ghana. However, the government's real contribution to the financing of secondary education declined by 10% over the period 1991-1994 (GOK, 1995). On the other hand, the contribution of parents in terms of fees increased from 1980 to 1981 by 50%. Indeed the contribution of 'Harambee' secondary schools and 'Harambee' classes in government aided secondary schools saved the government from the pressure of investing more public funds in the secondary education sector (Olembo, 1986).

The major alternative source of funds for schools is the fees paid by the parents who also help in the construction of physical facilities and the provision of instructional materials (GOK, 1999). Despite these efforts by the parents, many secondary schools operate with insufficient funds to meet their boarding and learning material requirements, and adequate physical facilities co-curricula activities (Achola, 1988). How cost-sharing has contributed to this state of affairs is an important area for this study.

Other sources of finance for education in developing countries include donors like UNESCO, World Bank, African Development Bank and governments through grants and loans (GOK, 1997). In Kenya, private sector financial resources invested in education and training is channeled through land, infrastructure, instructional materials and personal emoluments. This occurs mainly through profit making ventures by entrepreneurs and non-profit making humanitarian bodies such as those undertaken by religious bodies (GOK, 1987).

It is however, important to note that though there are a number of sources for funding education in Kenya, both the government and the parents contribute the largest proportion of the resources spent in secondary education. Most of the financing of education by parents and households, except at the university level, is through cost sharing (GOK, 1999).

In addition, the financing pattern over the years indicates a continuing shift of the financial burden to the parents and households, away from the government in public secondary schools. The pressures on the households are even greater in private schools where the households have to bear all the costs charged by schools. Despite heavy investment in education, with 38 percent of total government recurrent budget (8.1% of GDP) going into education and training, all major indicators of education including enrolment, retention, completion and transition rates as well as quality have not been encouraging in the last decade. Besides, the costs of education and training as well as regional and gender disparities have been on the increase (Owino & Abagi 2000). The authors further argued that education costs, however, have been on the increase over time, making it difficult for poor households to invest in their children's education.

2.3 Cost - Sharing in Education

2.3.1 Cost-sharing in education in a global perspective

Penrose (1998) notes that cost-sharing is a term which combines the concepts of direct cost recovery and thus education pricing policies, and indirect contributions from the students, their parents and sponsors, which may be voluntary, quasi compulsory or compulsory. According to Rono P.K (1988), educational policy of cost-sharing is that parents and governments share educational expenses of the students. Parents have to devote more of their income to the education of their children. Apart from paying tuition fees, they also pay boarding expenses, uniforms, reading and writing materials school equipment and personal effects.

Education is both a private and social investment that is shared by individual students, their families, employers and communities and government. (Psacharopoulos & Woodhall, 1985). Cost-sharing arrangements vary considerably from country to country, both in proportions of public and private funds allocated to education and in mechanisms by which the costs of education are financed. During the 1960s, most of the expansion of education was financed by increased public expenditure on education which rose in relation to national income and public expenditure as a whole.

Graham-Brown (1998) indicated that the crises caused by the shortage of public funds for education in most developing countries have reopened the debate about who should pay for education. During the 1980's, many governments in Africa and some Latin America entered what has been described as a "culture of cuts", in which education planning was reduced essentially to crisis management (Graham-Brown, 1998). The author further adds that some governments have chosen, whether out of ideological conviction or political calculation to maintain a proportion of expenditure going to education, while cutting other social sectors. These strategies commonly employed in sub-Saharan Africa, Zambia for example, choose to make a reduction in health expenditure as a proportion of its total budget. Other countries, for example, in most of Latin America have sustained expenditure on health, with education more vulnerable to reductions. Graham-Brown (1998) also states that in Africa some degree of community participation particularly in building schools has been common place.

Eicher (1984) observed that the unit cost-sharing at all levels in African countries were much higher than in other countries in the same range of per capita income. Cost-sharing and fees were recommended if these countries were to reduce the unit cost-sharing. Graham-Brown (1998) posited that in Africa, even with the state financing of education sector, an increasing financial burden falls on parents. Sometimes this takes the form of direct fees, sometimes payments into building funds or school activity funds. As a consequence, in India for example, it is estimated that the parents already pay a substantial part of the cost of state education. This is particularly the case where school fees, examination charges and the cost of books and equipment are high.

In Botswana the cost-sharing policy in education is also in operation. The proposal by the government of Botswana continues to enjoy wide support from the people of Botswana (GOB 2006). In his recent countrywide tour, education minister George Kgoroba said that the high cost of providing education to Botswana children was draining national coffers hence governments' requisition to share the burden with parents.

It should be noted that some parents opposed the cost-sharing concept, arguing that the population of Botswana was too small and the government could still afford free education (GOB, 2006). According to the literature reviewed many countries have been using cost-sharing as an alternative method of financing education.

2.3.2 Cost - sharing in education in Kenya

Cost-sharing is not a new concept in Kenya as evidenced by the self help ('harambee') movement. (Adego, 1991). Cost-sharing in education in Kenya was introduced in 1989 as a government policy stated in the Sessional Paper No. 1 of 1986, which set procedures for rationalization and addressing percentage of government expenditure which is allocated to education to make it 30% of the recurrent through increased cost-sharing in financing education and training (GOK 1986). By the mid 1980s in Kenya, government's expenditure on education had increased enormously since independence, and this meant that parents and local communities would share part of the cost of education hence imposing cost-sharing onto parents and local communities without considering their ability to pay.

Rono P.K (1988) supported the cost-sharing policy as one method of securing additional funds for education so as to ease the burden of financing on the part of the government. This would therefore relieve the government some of the funds that would allow it to extend financial resources to other sectors that were not receiving adequate funding in the past. In order to sustain high investment in education and training in the face of economic and demographic pressures, Kenya instituted certain forms of cost-sharing appropriate to each level of education, while still striving to improve internal efficiency and management of education (GOK, 1998).

According to UNESCO (1990), cost-sharing policy requires that parents should construct classrooms, workshops, laboratories and equip them, since such facilities are a major vehicle of efficiency enhancement.

In his study of current trends in the financing of secondary education, with particular reference to the financial contribution of the government, parents and local communities towards secondary education, Olembo(1986) found that management of secondary school finances is very poor and that Kenyan parents are bearing a major portion of secondary school expenditure.

Most of the parents' contribution, he noted, goes to tuition and boarding fees, development funds, uniform charges and miscellaneous expenses. According to GOK, (1989) the government expenditures on education would reduce, where the government would provide teachers to all public secondary schools, while communities, beneficiaries and parents would provide learning facilities and equipment needed.

2.4 Access to Education in Kenya

Education policies in Kenya are based on the philosophy spelt out in Sessional paper No.10 of 1965 on African socialism and its application to planning in Kenya. This philosophy calls for political equity, human dignity, social justice and equal opportunities for all citizens (Okoiye, 1996). But how has cost-sharing in financing secondary school education contributed to the problems of access to education in education in Kenya?

Access refers to the possibility of the population that is eligible to take part in secondary education actually doing so. The indicators of access are the Gross Enrolment Ratios (GERs). Another indicator of access is the transition rates from secondary level to university; that is the cohort completes form four and enters university, at first year (Olembo, 1986). UNESCO (2004) acknowledges that the learning of all young people and adults must be met through equitable access to appropriate learning and life-skills programmes. If access to secondary education is selective, it undermines the rights of those excluded and its potential to make substantive contribution to national development changing world will be thwarted.

The Commission of Inquiry into the Education System of Kenya concurred with this by noting that access addresses the open-ended nature of education, which is recognized as a basic right of every child, youth and adult. Access assumes availability of opportunities at all levels and sectors of education for all those who are eligible and meet the desired criteria (GOK, 1999).

Odada and Odhiambo (1989) commenting on the impact of cost-sharing in Kenya noted that too high fees have been charged to a level prohibitively costly for the poor causing enrolment rate to fall, due to rising dropouts. Enrolment rates in secondary schools declined from 30% in 1990 to 27% in 1994 with the most declines in Arid Lands.

Dropouts, repetition and failure to pass examinations, is largely a problem of children from poor socio-economic background (GOK, 1995). In line with this, studies done in Africa mainly in primary and secondary schools have identified factors leading to dropout and repetition as poverty, economic activities, cultural values, ethnic background, socio-economic status, pregnancy and early marriages (Ngware, 2000).

According to the World Bank (1997) expenditure in the world confirms that participation in education by poor families is affected by the cost-sharing policies. Within the context of existing poverty levels, the cost-sharing policy has been viewed as the single most hindering or constraining factor to the serious decline in enrolments. Educational costs have affected most Kenyans immensely who are in the first place unemployed and secondly overtaxed are unable to put up with the costs (GOK, 1999). Thus UNESCO (1990) observed that there has been a steady decline in enrolment in secondary schools. There are about 622,000 students in comparison to capacity of over 1.3 million places.

Orodho and Njeru (2003) observed that the cost-sharing strategy has had a negative impact on the poor and vulnerable households. The latter either do not enroll their children in secondary schools, or fail to sustain a continuous participation of those enrolled due to inability to meet cost requirements. This results in inadequate provision of learning facilities to the enrolled, poor quality education, and high dropout rates. Penrose (1998) stated that attendance effects from cost-sharing are important because reduced attendance ratios affect repetition rates and achievement measures. In addition, there is considerable evidence to suggest that the attendance ratios are negatively affected by cost-sharing as children are sent home for non-payment of fees. Whether total expenditure on education rises as a result of cost-sharing measures or not will depend among other things on the relation between enrolments and increased costs.

2.5 Equity in Education

2.5.1 Equity in education in a global perspective

According to Monk (1990), equity refers to fairness in the distribution of some good, service or burden. World Bank Review (1996) observes that the issue of equity mainly affects several overlapping disadvantaged groups, including the poor, linguistic and ethnic minorities, nomads, refugees, street and working children. The aim of equity in education is to improve educational and social outcomes for children and young people, in particular those with additional support needs.

Psacharopoulos and Woodhall (1985) see equity as concerning the way the costs and benefits are distributed among regions and whether males and females, and different social, economic or ethnic groups, have equal access to educational facilities. Applied to this study, equity means the relative opportunity that every secondary school aged student has of participating in secondary education. Giving equal chance to students of different backgrounds and minority groups is seen as treating them in a fair and just manner.

According to McMahon (1982), at least three types of equity can be discerned in the considerable literature on this subject, namely horizontal equity, which is usually taken to mean equal treatment of equals. This principle assumes that all people are equal regardless of their political, social or economic affiliation and thus goes distributing educational resources on the one-for-one basis. Secondly, vertical equity refers to unequal treatment of unequal. This principle argues that when we consider the allocation of any specific advantages say a tax concession, it is preferable to consider the overall advantages enjoyed by an individual or a group rather than simply their income, before deciding on who to receive the concession because there are some such as the blind or the old who would be worse off if they were merely allotted the same amount of advantages as other able bodied groups (Barrow, 1976). Thirdly, intergenerational equity, which is concerned with ensuring inequalities in one generation are not simply perpetuated. This study adopts the vertical equity principle because governments need to ensure that no qualified secondary school students will be denied access to education because of inability to pay. The report of the Commission of Inquiry into the Education system of Kenya

(GOK, 1999) noted that equity recognizes the right of all to education. It introduces the values of fairness and social justice in the way the educational opportunities and resources are allocated or shared. It values the deliberate elimination of all forms of discrimination, whether direct or discrete, based on gender, socio-economic status, geographical location, physical, mental, or any other handicap (GOK, 1999).

Secondary school students from low socio-economic backgrounds, subject to their level of needs require bursaries and grants to facilitate their participation in education. Fields, (1980) found considerable differences in education participation of individuals classified by sex, socio-economic background, urban and rural areas, and also race, language, and religion. He notes that in Malaysia, disparities exist not only between males and females, and between geographical regions but also between those of Malay and Chinese origin (Fields, 1980). Fields also notes that in Sri Lanka ethnic and religious difference play a role in education attainment while in Peru language is a determining factor. World Bank (1997) concurs with this by noting that in Vietnam, for example, the education level reached by individuals rises sharply with the level of income of a family.

The World Bank argues that achieving equity in education is an important goal for many governments. Governments have two fundamental concerns namely: to ensure that everyone has a basic education and to ensure that qualified potential students are not denied access to institutions because they are poor or female or are from ethnic minorities, live in geographical remote regions, or have special education needs World Bank (1996). World Bank further adds that; poor families have difficulty in meeting the direct and indirect costs of children's school attendance.

2.5.2 Equity in education in Kenya

Ghai and Court (1974) observe that access to education is unevenly distributed because most of the communities in the rural areas and urban slums are poor and this has an effect on the level of attainment of their children, which is generally low. The Children's Act (2001) Cap 586 in the Laws of Kenya was enacted to promote the well being of the child in Kenya. The Act which came into force on 1st March 2002 puts this responsibility on the GOK and parents. It spells out the rights of all children and recognizes that education is a human right that every child must enjoy and has to be protected by law (GOK 2001). These rights are in harmony with those contained in the United Nations convention on the Rights of the Child (1989) and the African Charter on the Rights and Welfare of the child (1990) which GOK has committed itself to. Equity is therefore, particularly important for the disadvantaged and poor areas where education needs to be financed to provide access regardless of household ability to pay. Olemba (1986) adds that with a larger share of the cost of post-primary education and training being passed on to the beneficiaries through cost-sharing schemes, secondary education will in the future be largely for the privileged.

In Kenya, government subsidy for Arid and Semi-Arid (ASAL) regions is not as much as it should be. This implies that bursaries, which were introduced in 1994, seem inadequate in addressing equity issues. If administered transparently, the bursary scheme can provide assistance to less than one half of those who qualify under the present criteria (Economic Survey, 2004). The decentralization of the scheme to constituency level is aimed at streamlining disbursement to only those who qualify. The government introduced the policy of free tuition in public secondary schools in 2008, which is expected to cover tuition and administration costs, school maintenance and improvement costs, and class activities. (Kwaboka, 2008). Classification of secondary schools into national, provincial, district, schools have added to regional disparities. Classification means that some children are given preference in the provision of education.

The report of the Presidential Working Party on Education and Manpower Training for the Next Decade and Beyond (1988) recommended that all secondary schools be developed, equipped and provided with staff from public funds and be designated public secondary schools. This was an effort to try and reduce regional inequalities.

2.6 Gender Disparities in Education

2.6.1 Gender disparities in education in a global perspective

One of the major reasons for gender disparities is the mistaken belief that it is more important to educate a boy than a girl. This is strongly held in poor families (Ghai & Court, 1974). World Bank (1996) notes that literate parents are more likely than illiterate ones to enroll their daughters in school.

According to a study on private expenditure on schooling in Tanzania, the cost of schooling, such as books, uniforms and incidental expenses can also be higher for girls than boys (Psacharopoulos & Woodhall, 1995). There are fewer places for girls in school and fewer girls than boys go to school and work their way up the educational ladder. Therefore, the main reason for this is that there is less pressure from parents to have their girls educated. This reluctance has little to do with traditional attitudes towards women, but rather those families who cannot afford to send both sons and daughters to school the financial and social returns on expenditure for girls' education are less than for boys (Ghai & Court, 1974).

The different access that boys and girls have to education system in some parts of the world is very important because it contributes to gender differences in life. The gender gap in expected years of schooling is now very small in most countries in Europe and Central Asia and in Latin America. It remains large in the Middle East, North Africa and in South Asia, where it is not closing at all. (World Bank, 1996). Overcoming the gender gap in school enrolments will require not only providing school places for girls but also overcoming many parents' ignorance of gains that will result from enrolling their female children. Investing in education of girls from poor backgrounds sets off a process of intergenerational poverty reduction; educated women are more likely to send their own children to school (World Bank, 1996).

According to Ghai and Court (1974), as in the case of enrolment in general, gender differences in enrolment vary from region to region. The authors further note that in the case of students of secondary school age, the largest difference is in the Arabian States, Southern Asia and Sub-Saharan Africa. They indicated a number of factors which contribute to the persistence of the gender gap, namely traditional values and beliefs about the roles of females and males in the society, fear for the safety of the girls going to and from school, limited female teachers, monetary costs, and perceptions about the value of schooling for daughters. GOK (1995) observes that limited access to education continues to plague the majority of women and girls in all African countries. Women and girls face economic and cultural barriers in attending school at each level of education (UNESCO, 1990).

In a survey conducted in Highfields Township in Harare just before independence, the main reason given by women for dropping out of education, whether primary or secondary level, was financial since before independence, fees were charged for all levels in black education (Graham-Brown, 1998). Measures which would encourage schooling for girls include setting aside all-girl classrooms and schools, locating schools within easy reach from home, providing separate sanitary facilities, increasing the number of female teachers and adjusting school hours to accommodate girls' work at home (World Bank, 1996).

Different developing countries may not have the same commitment to education of girls, while some have stronger mechanisms for assisting students from poor families, so that they do not drop out of school. For example, Bangladesh and Guatemala have girls' scholarship programmes in which tuition is free and stipends are paid to parents to compensate them for other direct costs such as books and for the loss of their daughters' time. Bank supported projects provide stipends for girls at secondary school in Bangladesh (World Bank, 1996).

2.6.2 Gender disparities in education in Kenya

The disparities in access to education between females and males continue to persist despite many strategies and interventions addressing constraints, both on supply and demand sides. This disparity increases significantly as one climbs the educational ladder (Okoiye, 1996). For instance, in Nakuru district males who registered for KSCE were 6,380 compared to 5,874

females in 2005 (GOK, 2007). Gender disparity is manifested in the declining female enrolment especially as learners' progress up the education pyramid. In Kenya in 1996, the female representation in the three levels of education was 49%, 46% and 28% for primary, secondary and public university respectively (GOK, 1998). Girls have been largely affected by cost-sharing in terms of access to education. The majority of those not enrolled, under achievers, and dropouts are girls (GOK, 1988). In many societies in Kenya, traditional attitudes regarding the status of women and girls prompt families to invest first in the education of male children. If a family is especially resource-poor, female children will be denied the opportunity to go to school. This leads to low participation rate for girls at both primary and secondary level (Monk, 1990).

The Commission of Inquiry into Education system of Kenya noted that the Ominde Report (1964) and all other education reports made reference to the need for accelerating the education of girls. The commission recognized the tremendous efforts made by the Government to improve girls' education including Affirmative Action in the expansion of facilities to enable girls to study science and technical subjects, and a policy to allow girls who drop out due to pregnancy to continue with education. These and other efforts yielded benefits, with girls' participation rate increasing from 41% in 1988 to 46% in 1995 at the secondary school level (GOK, 1999). This study set out to look at the enrolment of girls in secondary schools vis-à-vis the population of secondary school age girls in public secondary schools in Nakuru District. The fact that cost-sharing may be causing high dropout rates in secondary schools in developing countries may not mean that the same applies to Kenyan situation and in particular Nakuru district. Other factors may be responsible for low access and retention of girls in secondary school.

To what extent, therefore, is cost-sharing related to access and retention of girls in public secondary schools in Nakuru district?

2.7 Theoretical Framework

The study was based on classical liberal theory of equal opportunity and social Darwinism in illustrating the relationship between cost-sharing and access and equity. This theory asserts that social mobility is promoted by equal opportunity of education and that each person is born with a given amount of capacity, which to a large extent, is inherited and cannot be substantially changed. Thus the educational system should be designed so as to remove economic, gender and geographical barriers that prevent bright students from lower economic backgrounds from taking advantage of inborn talents, which accelerate them to social promotion. The roots of this theory can be traced to writers such as Rousseau who claimed that in the 'natural' state men were born equal and personal qualities should not jeopardize social equality so long as society rewards people according to their merits. Rosseau also taught that in the original condition of nature all men were free and equal having all things in common, each individual drawing on the general store according to his need.

In developing countries where inequalities of education provision are severe, it may be desirable on equity and efficiency grounds, to pursue the goal of equity in distribution of educational opportunities (Psacharopoulos & Woodhall, 1985). The authors further argue that inequalities of participation mean that the benefits of education are disproportionately enjoyed by upper income families whose children are far more likely to complete secondary schooling or enroll in higher education while poor families may not afford to sustain their children in schools, hence increased dropouts, absenteeism, repetition, and poor performance. These affect access and equity in public secondary schools.

In Kenya the government has been subsidizing education to enable more children participate in education. However, with the introduction of the cost-sharing policy of, many parents may not be able to enroll and sustain their children in public secondary schools given the rising costs. Therefore, for equity consideration, it practically becomes impossible to ignore the fact that unequal participation in education will in the long run worsen the status of the poor or the vulnerable groups (Ambajo, 1977). The findings of this study revealed that some headteachers reported that majority of parents had low incomes levels which could not be effectively

distributed among the numerous family needs and wants. This made it impossible for them to comfortably meet the cost of education of their children.

2.8 Conceptual Framework

The above theoretical framework based on the classical liberal theory of equal opportunity and social Darwinism assisted in developing the conceptual framework of this study. Figure 1 shows the presentation of the relationships among variables which is the conceptual framework. Cost-sharing is the independent variable which was indicated by school fees, PTA fund and Development fund while the dependent variables are access and equity. The dependant variables were measured by determining enrolment rates, school attendance rates and flow rates to determine access. Equity was measured by determining enrolment of girls versus the enrolment of boys. The moderator variables which included school categories, school types and socio-economic background could have an influence on students' enrolment, attendance and flow rates. The researcher controlled the effects of moderator variables by including them in the study and studying them alongside the independent variables and through randomization.

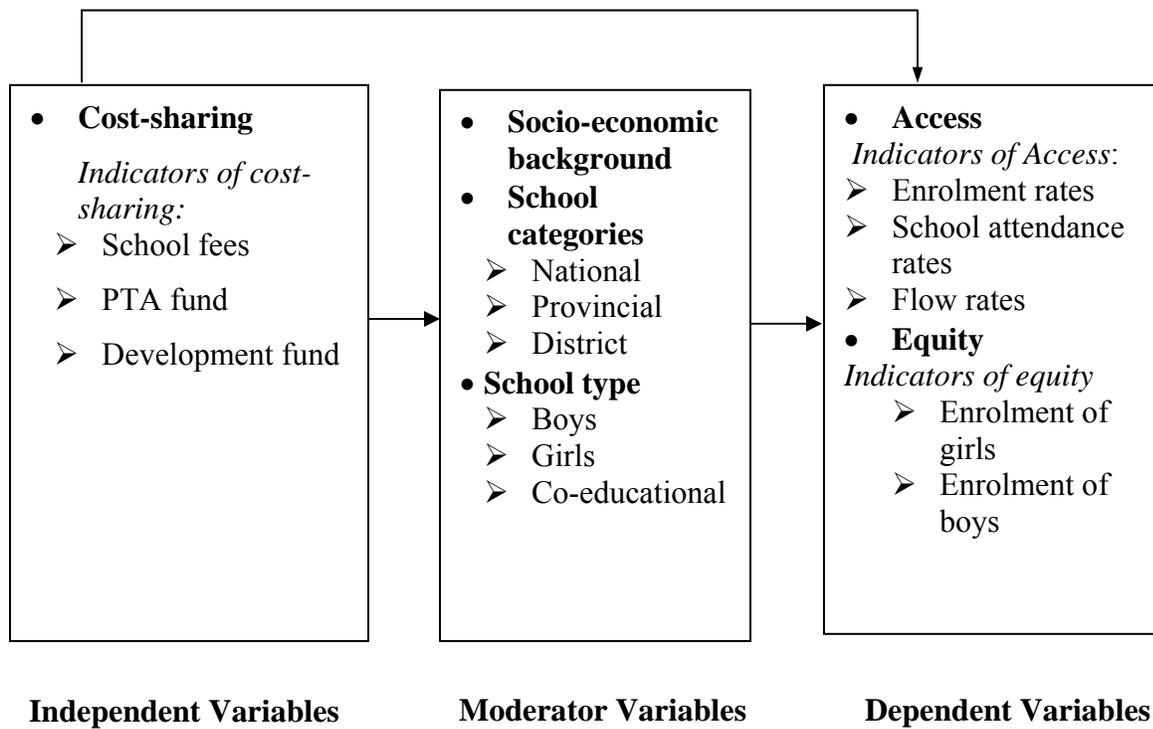


Figure 1: Relationship between the Various Variables Related to Cost-Sharing

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter discusses the methodological procedures used in data collection and analysis. Discussed in detail are the research design; location of the study; population of the study; sampling procedure and sample size; instrumentation; data collection; and data analysis.

3.2 Research Design

Correlational research design guided this study. According to Fraenkel and Wallen (2000) in a correlational research, researchers investigate possible relationships among variables without trying to influence those variables. In this study, the researcher attempted to determine the relationship between cost-sharing and equity and access in public secondary schools. Cost-sharing was the independent variable while equity and access were the dependent variables. Koul (1988) observes that magnitude of the relationship between the variables is determined by the use of coefficient of correlation. This study provided the results in terms of the correlation coefficient.

3.3 Location of the Study

The study was conducted in public secondary schools in Nakuru district, Rift Valley province of Kenya. According to the Nakuru District Education Office (2006), Nakuru district had a total of 136 public secondary schools and out of these only 125 schools had students in Form four classes with a total of 43,843 students and 125 head teachers. Nakuru district was chosen because it incorporated both rural and urban schools hence the results would be more representative. Nakuru being an agricultural and business area had attracted people of diverse cultural, social, education and economic backgrounds.

3.4 Population of the Study

The target population of this study included all 43,843 students and 125 head teachers in public secondary schools within Nakuru district. The accessible population from which the sample included all the Form four students of 2004 cohort, totaling 7814 and 125 head teachers in Nakuru District. The reason for choosing only Form four class was that the students best met the purposes of this study since they were expected to have good background information on enrolment and attendance rates owing to their being long enough in school. The schools were stratified into three categories: National, Provincial and District. Further stratification was based on single sex or co-educational schools. Table 3 shows the distribution of public secondary schools in Nakuru district by category, type, rural and urban schools.

Table 3: Distribution of Schools in Nakuru District by Category and Type

Schools	No.	School Type			Location of schools		Number of students
		Boys	Girls	Co-Educational	Urban	Rural	Total
National	4	2	2	0	2	2	753
Provincial	20	4	5	11	11	9	2244
District	113	-	-	113	13	100	4817
Grand Total							7814

3.4.1 School category and type

Table 4 indicates that there were five district, three provincial and two national schools. The distribution of the schools in the three categories was based on their proportionate representation and distribution in the study area. According to the government fees guidelines, national schools charge the highest fees, followed by provincial and district schools, respectively. In addition, the three categories of public secondary schools are government funded institutions. The national secondary schools are required to admit students from within the province, while district schools are required to admit students from within the district.

Table 4: Distribution of the Selected Schools by their Categories

School category	Frequency	Percent
District	5	50.0
Provincial	3	30.0
National	2	20.0
Total	10	100.0

The 393 sampled students were distributed in the three categories of schools as depicted in Table 5. The table indicates that out of the 393 sampled students, 199 (50.6 %) were from district schools, 116 (29.5 %) from provincial schools and 78 (19.8 %) from national schools. The variation in the sample distribution was based on the number of selected schools from each category. The ten schools were further divided into three types based on the gender of their students including co-educational (mixed), boys' only and girls' only schools.

Table 5: Distribution of the Sample by Schools Category

Category of school	Frequency	Percent
District	199	50.6
Provincial	116	29.5
National	78	19.8
Total	393	100.0

Table 6 shows that co-educational schools had 238 (60.6 %), boys' only had 71 (18.1 %), while girls' only had 84 (21.4 %) of the 393 sampled students. The variation in the sample distribution was based on the number of selected schools from each school types.

Table 6: Distribution of the Sample by School Types

School type	Frequency	Percent
Mixed (co-educational)	238	60.6
Boys only	71	18.1
Girls only	84	21.4
Total	393	100.0

3.5 Sampling Procedures and Sample Size

Purposive, stratified and simple random sampling procedures were used in selecting the required sample for this study. Purposive sampling was used in this study in selecting ten schools out of 125 schools to take care of the three categories and three types of schools in the study area. They included two national schools, three provincial and five district schools. One girl's only and one boy's only national schools were selected. Simple Random Sampling was used to select one school from the provincial boys' category, one school from the provincial girls category, one school from the provincial co-educational. All the five districts schools selected were co-educational. Purposive sampling therefore ensured that all the school categories and types were well catered for in the final sample.

In order to determine the sample size of students to be drawn from the 7,814 in the study area, this study adopted a formula by Kathuri and Pals (1993) for estimating a sample size, n , from a known population size, N .

$$n = \frac{\chi^2 NP (1-P)}{\sigma^2 (N - 1) + \chi^2 P (1 - P)}$$

Where:

n = required sample size

N = the given population size of Form four students, 7,814 in this case

P = Population proportion, assumed to be 0.50

σ = the degree of accuracy whose value is 0.05

χ^2 = Table value of chi-square for one degree of freedom, which is 3.841

Substituting these values in the equation, estimated sample size (n) was:

$$n = \frac{3.841 \times 7814 \times 0.50 (1 - 0.5)}{(0.05)^2 (7814 - 1) + 3.841 \times 0.5 \times (1 - 0.5)}$$
$$n = 367$$

After determining the sample size of 367 students to be selected from the study area, purposive sampling was used to distribute the sample among the ten selected schools. In order to take care of attrition and non-response rate, 33 more students were added to increase the sample size to 400.

The sample size was divided among the ten schools with each getting 40 students as shown in Table 7.

Table 7: Distribution of the Sample Size

School category	School type			Total of students
	Boys	Girls	Co-educational	
National	1	1	0	80
Provincial	1	1	1	120
District	0	0	5	200
Total	2	2	6	400

Proportionate stratified sampling was used in selecting the male and female students from each of the six co-educational schools selected. This ensured that the sample of 40 questionnaires assigned to each school was proportionately and adequately distributed according to the population of each gender in Form four class. This was done by dividing the number of students of each gender in a particular selected school by the total number of all form Four students in that school and then multiplying it by 40 (assigned sample for that school). Lastly, simple random sampling using random numbers table was used to select the specific number of students of each gender to be included in the sample from each of the ten selected schools. The students corresponding to the number picked from the random numbers table were included in the sample.

Purposive sampling was also used to select the head teacher from each of the ten selected schools. From the above sampling procedures, 400 students and 10 head teachers formed the sample size for this study. However, only 393 students managed to correctly complete the questionnaires. The remaining 7 returned incomplete and incorrectly filled questionnaires which were not used in the analysis.

3.6 Instrumentation

Two questionnaires were used for data collection in this study and comprised of both open-ended and closed-ended questions. According to Nkapa (1997), a questionnaire is a carefully designed instrument for collecting data in accordance with the specification of the research questions. Mugenda and Mugenda (1999), note that questionnaires are commonly used to obtain information about the population. In this study, students' Questionnaires (SQ) and Headteachers Questionnaires (HQ) were used. Each item in the two questionnaires was developed to address a specific objective of the study. The questionnaire was preferred because all those who took part were literate and capable of responding to the items on their own. The questionnaires had background information of the respondents and items that sought to determine the relationship between cost-sharing and access and equity in public secondary schools in Nakuru district.

The SQ was used to establish the size of school-going age children in households, the secondary school entry age, occupation of parents, expenditure on students' needs, student transfers, and repetition. HQ encompassed all aspects of the financing and costs of running the school. It sought to collect all the general information about the school: date of establishment, number of streams, whether the school is for boys, girls or co-educational, national, provincial or district, student enrolment and gender. It also collected information on finances, such as the financing of development and recurrent expenditure. Finally, it addressed issues of dropouts, repetition, transfers and the effects of cost-sharing. Responses to the questions in the questionnaires were recorded and the frequencies of each response determined. These were then summarized in form of means and percentages.

3.6.1 Validity of instruments

The content and face validity of the research instruments were then established in order to make sure that they reflected the content of the concepts, namely access and equity in question. First, the researcher went through the instruments in relation to the set objectives and ensured that they contained all the information that addressed the set objectives. Secondly, three experts/specialists, one independent, and two supervisors with training in educational

administration, planning and economics were consulted for their opinion on the instruments. Their comments were incorporated in the final instruments as suggested by Mugenda and Mugenda (1999).

3.6.2 Reliability of the instruments

The final instruments were then taken for piloting on a population that was similar to the target population; one school chosen at random outside the study area. The piloting included 40 students and the head teacher from the selected school. The objective of piloting was to allow the researcher to make modifications on various items in order to rephrase, clarify and clear up any ambiguities in the questionnaires. Piloting also assisted in testing the reliability of the instrument. Cronbach's Coefficient Alpha was computed for instruments. According to Mugenda and Mugenda (1999), this is a method of testing reliability of test items by the use of a single administration of an instrument to a sample of subjects. A Cronbach reliability coefficient of 0.7654 was obtained for the student questionnaire. Such reliability coefficient was considered to be sufficient enough to confirm and reflect the internal consistency of the instruments (Koul, Selltiz, Wrightsman, & Cook, 1990).

3.7 Data Collection Procedures

The researcher proceeded to collect data from the selected respondents after receiving permission from the Department of Curriculum, Instruction and Educational Management and Faculty of Education and Community Studies in the University, and research permit from the Ministry of Education, Science and Technology (MoEST) and the District Education offices in Nakuru. Permission was also sought from the head teachers of the ten selected schools. The researcher visited the schools before the actual data collection for reconnaissance study to familiarize herself with the school management, especially the head teacher. During this preliminary period, the researcher clarified the purpose of the visit and the intended study. After familiarization, data were then collected from the respondents. The head teachers assisted in the distribution and collection of the questionnaires from the sampled students. The completed instruments were collected from the head teacher by the researcher within a period of one week. The response rate was 98.25 percent.

3.8 Data Analysis

Data collected were processed, coded and analyzed to facilitate addressing the research objectives and testing the null hypotheses. This was done using both descriptive and inferential statistics. Percentages, frequencies, and means presented in tables, pie charts, bar graphs and cross-tabulations were used to summarize and organize data and to describe the characteristics of the sample population (Nassiuma, 2000). Descriptive statistics were used in addressing objective four. Chi-square and contingency were used in Hypotheses one, two, three, four and five to make deductions and generalizations about the whole population.

Chi-square (χ^2) is a non-parametric technique used to compare the frequency of cases found in one variable in two or more unrelated samples or categories of another variable. However, chi-square only indicates the significance of a relationship between two variables, but does not provide an estimate of the magnitude of association (strength and direction) between two attributes (Nassiuma & Mwangi, 2004). Therefore, in order to estimate the magnitude of association between two attributes, the chi-square (χ^2) value was converted into Contingency coefficient(c). It is calculated by obtaining the square root of the product of chi-square (χ^2) value divided by the sample size. The ϕ value varies between 0 and +1, and the closer it is to +1, the stronger the relationship, while the closer it is to 0 (zero), the weaker the relationship (Bryman & Cramer, 2001). The chi-square (χ^2) and contingency coefficient (c) values were used in testing the stated null hypotheses at 5% level of significance. This was done with the aid of a computer programme - Statistical Package for Social Sciences (SPSS) version 11.5.

A summary of the data analysis procedures for each research Hypothesis is contained in Table 8.

Table 8: Summary of Data Analysis

Research Hypotheses	Independent Variable	Dependent Variable	Statistic technique
HO ₁ : There is statistically no significant relationship between the cost-sharing and enrolment rates of public secondary school students by school category.	Cost-sharing	Enrolment rates by school category	Chi square, Frequencies, Percentages
HO ₂ : There is statistically no significant relationship between the cost-sharing and enrolment rates of public secondary school students by school type.	Cost-sharing	Enrolment rates by school types	Chi square, Frequencies, Percentages
HO ₃ : There is statistically no significant relationship between the cost-sharing and attendance rates of secondary school students by school category.	Cost-sharing	Attendance rates by school category	Chi square, Frequencies, Percentages
HO ₄ : There is statistically no significant relationship between the cost-sharing and attendance rates of public secondary school students by school type.	Cost-sharing	Attendance rates by school type	Chi square, Frequencies, Percentages
HO ₅ : There is statistically no significant relationship between cost-sharing and flow rates of public secondary school students.	Cost sharing	Flow rates	Chi square, Frequencies, Percentages

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Introduction

This chapter presents the research findings on “the relationship between cost- sharing and access and equity in education in public secondary schools in Nakuru district”. In investigating the relationship between cost sharing and access and equity in public secondary schools, the study highlights the successes and challenges facing the cost- sharing policy and its impact on school enrolment, attendance and flow rates. It also illustrates the need to involve all the key stakeholders, which include the government, parents and schools, in formulation and implementation of any policy in the educational sectors.

The chapter covers demographic characteristics, enrolment rates and cost-sharing by school category and school type, attendance rates and cost-sharing by school category and school type, flow rates and cost-sharing in public secondary schools, and relationship between cost-sharing and enrolment by gender. The collected data were analyzed using descriptive and inferential statistics with the aid of SPSS version 11.5 for Windows. Data in this study was gathered before the introduction of secondary school free tuition policy in 2008. The discussion addresses the research objectives of the study from which the following null hypotheses were tested:

- HO₁: There is no statistically significant relationship between the cost-sharing and enrolment rates of public secondary school students by school category.
- HO₂: There is statistically no significant relationship between the cost-sharing and enrolment rates of public secondary school students by school type.
- HO₃: There is statistically no significant relationship between the cost-sharing and attendance rates of public secondary school students by school category.
- HO₄: There is statistically no significant relationship between the cost-sharing and attendance rates of public secondary school students by school type.
- HO₅: There is statistically no significant relationship between cost-sharing and flow rates of public secondary school students

The results of each of the four hypotheses of the study were presented in tabular form and finally tested at alpha is equal to 0.05 significance level.

4.2 Demographic Characteristics of the Respondents

This section describes the demographic characteristics of the respondents in the study area. Such a description is important in providing a clear understanding of the respondents included in the study and influences the results based on the objectives of the study. The demographic characteristics covered in this section include: number of streams and age of the students.

4.2.1 Number of streams in secondary schools

The population of students, the adequacy and availability of teaching and learning resources in a school determines the number of students per class and thus the number of streams. This is also determined and based on the Ministry of Education guidelines on the optimum class sizes for effective service delivery by the teachers and conducive learning environment for the students. The head teachers were therefore asked about the number of streams that their schools had and their responses are highlighted in Table 9. The table indicates that there were four schools with two streams per class, three schools with three streams per class, and three schools with four streams per class. Out of the five district schools, four had two streams, while the other one had three streams. For the provincial schools, two had three streams and the other one had four streams. All the two national schools had four streams each.

Table 9: Number of Streams in Secondary Schools

Number of streams	Frequency	Percent
2	4	40.0
3	3	30.0
4	3	30.0
Total	10	100.0

4.2.2 Age of secondary school students

The study also established a slight variation in the age at which boys and girls were admitted to secondary schools. Age of students is important because it reflects on the years of schooling of the responding students. Table 10 shows the age of admission in Form one by the gender of the students. The table shows that 81.5 percent of the sampled students were admitted in Form one at the age of between 14 and 15 years. This is the common age brackets among most students joining secondary schools from the 8-4-4 system of education in the country. The conventional age for secondary education is between 14 and 17 years as stipulated in GOK (2002).

For those who were above 14 and 15 years (16.5 %), this was an indication of late secondary school entry which is usually caused by either delays in primary schools, cultural practices or the high cost of education. Age plays an important role in students' academic performance. Students who attend school at the right age and with peers are more likely to focus on education than cases of late entries which often make one feel out of place. Therefore, age may influence attendance and flow rates of secondary school students.

Table 10: Age of Admission in Form One by Gender

Age	Male	Female	Total	Percent
12	1	0	1	.3
13	4	3	7	1.8
14	85	89	174	44.3
15	80	66	146	37.2
16	30	11	41	10.4
17	16	8	24	6.1
Total	216	177	393	100.0

4.3 Enrolment Rates and Cost-sharing

In this study, the cost-sharing was measured by following the fees guidelines released by the government in the year 2003. The fees structure indicates that national schools were expected to charge a total Kshs 35,100, provincial schools at Kshs. 20,900 and district day schools at Kshs 8,500 per year (Ministry of Education, Science and Technology, 2003). Enrolment rates were measured using the actual number of students who enrolled in the schools each year. The study focused the enrolment rates and cost-sharing in school categories and school types.

4.3.1 Enrolment rates and cost-sharing by school category

The first objective sought to establish the relationship between the cost-sharing and enrolment rates in public secondary school students by school category. The objective was based on the fact that school categories have different costs of education reflected in the amount of school fees and other charges as stipulated in the government fees guidelines. Therefore, the cost-sharing was expected to influence the enrolment rate of students in the three categories of schools. In this study, the enrolment rate in each school category was compared with the school capacity to determine if it was below, same or above the expected optimal school capacity.

Table 11 illustrates the enrolment rate and school capacity by school category for the years 2004-2007. The table indicates that all the five district schools had below capacity school enrolment; two of the provincial schools have above capacity enrolment, while one had below capacity. One national school had below capacity while the other had equal to capacity enrolment. For the district schools, the table suggests that enrolment rates were below the school capacity. This was contrary to the expectations as district schools had lower school fees with regard to the government school fees structure compared to other school categories.

Such a situation was attributed to the fact that majority of the district schools were located in relatively poor rural areas where parents were unable to afford even the low amount of fees charged. The schools were also limited in terms of school teaching and learning facilities and registered students whose academic achievements were low.

This could have deterred parents from enrolling their children in such ill-equipped and poor performing schools. Therefore, the parents considered other factors like availability and adequacy of teaching and learning facilities and academic performance than the relatively low government stipulated fees in enrolling their children in district schools. Psacharopoulos and Woodhall (1985) support these findings by commenting that provided that additional income derived from increased fees is used to expand education in rural areas and thus increase access in remote villages or increase the quality of schools in these areas, an increase in fees may actually increase demand for education among poor households previously denied access or confined to low quality schools.

Two of the three provincial schools had above capacity while the third had below capacity. This suggests that majority of the provincial schools enrolled more students than their school capacity. It can also be observed that even for the provincial school that had below capacity enrolment, the difference with the optimal school capacity was very small. Compared to the stipulated government stipulated fees in this school category, this was also contrary to the expectations as provincial schools had a relatively higher total school fees compared to district schools. This was attributed to the fact that provincial schools in the study area had adequate facilities and also registered better academic achievement. This was what could have attracted more students as parents based enrolment of their children on availability and adequacy of teaching and learning facilities and academic performance other than the government stipulated fees in enrolment.

For the two national schools, one had equal to capacity, while the other had below capacity enrolment. It can also be observed that even in the school that had below capacity enrolment, the enrolment rate was increasing over the years. For the school that had equal capacity, it was established that its admission was pegged on the national selection. The school also had no drop out and never allowed any new admission once the national selection was done. Compared to the government stipulated fees in this school category, this was also contrary to the expectations as national schools had the highest fees compared to other categories. However, the availability and adequacy of teaching and learning facilities in these schools and their academic history played a big role in attracting more students regardless of the cost.

Table 11: Enrolment Rates by School Category for the Years 2004-2007

Category of school	Students in 2004	Students in 2005	Students in 2006	Students in 2007	School capacity	Difference
District	407	409	404	423	480	Below capacity
	407	419	415	423	427	Below capacity
	287	257	275	266	294	Below capacity
	348	332	337	306	360	Below capacity
	408	338	394	364	480	Below capacity
Provincial	308	344	320	310	340	Below capacity
	675	693	685	646	640	Above capacity
	588	543	543	555	480	Above capacity
National	803	800	807	800	800	Equal to capacity
	540	620	670	695	720	Below capacity

The study sought to establish the reasons for the variations in the enrolment rates over the years in the nine schools that had either below or above capacities. Out of the nine schools that had variations in enrolment, two of them had above capacity, while seven had below capacity. For the two schools with above capacity enrolment rates, their head teachers indicated that the situation was caused by new admissions as a result of transfers from other schools. For the seven schools that had below capacity enrolment, the head teachers attributed it to lack of school fees, transfers to other schools and drop out.

These findings were in line with observations by Rono, P.K (2006) that school fees are a major bottleneck in many secondary schools in the country. He observed in the past decade, about 40,000 students had dropped out of secondary schools for lack of school fees. Odada and Odhiambo (1989) add that high cost-sharing leads to low enrolment rate due to rising dropouts. Enrolment rates in secondary schools in the country declined from 30% in 1990 to 27% in 1994 with the most declines in arid lands.

Dropouts, repetition and failure to pass examinations, is largely a problem of children from poor socio-economic background. In support of the observations by the head teachers, 79.9 percent (314) of the sampled 393 students reported that they had been in the same school since Form One, while 20.1 percent (79) had transferred from one school to another. The 79 students who had transferred varied in their school category with 59.5 percent (47) of them coming from district schools, 29.1 percent (23) from provincial schools, while 11.4 percent (9) from national schools. This indicates that district schools were highly affected by transfers compared to other categories. However, when asked whether lack of school fees was the reason for their transfer, the 79 respondents differed in their response according to school category as illustrated in Figure 2.

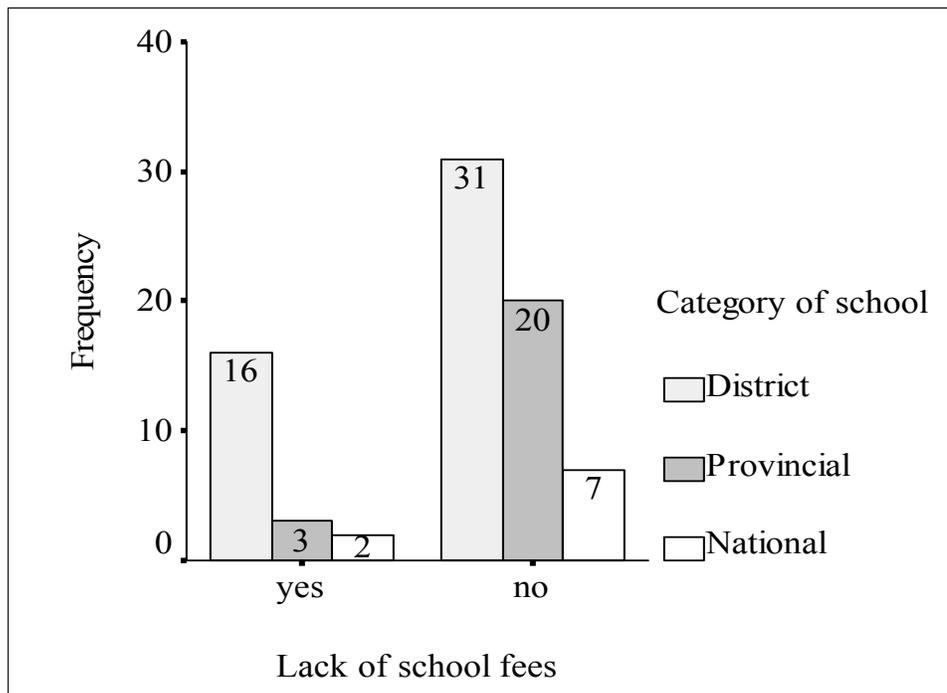


Figure 2: Lack of School Fees as Reason for Transfer by School Category

Figure 2 indicates that 21 (26.6 %) of the 79 respondents transferred due to lack of school fees; while 58 (73.4 %) transferred because of other reasons other than school fees. This indicates that transfers are not necessarily a response to cost-sharing. However, it can also be observed that 16 (76.2 %) of the 21 respondents who transferred due to lack of school fees were from district schools with the remaining 3 (14.3 %) and 2 (9.5 %) coming from provincial and national

schools, respectively. This showed that district schools were affected by transfers much more than the other categories of schools.

The first objective was accompanied by null hypothesis one which stated that “there is statistically no significant relationship between the cost-sharing and enrolment rates in public secondary school students by school category”. Chi square statistical test using cross tabulations was used to establish the difference and whether it was significant or not. In this case, Chi-square was used to compare the frequency of cases found in one variable (school category) in two or more unrelated samples or categories of another variable (enrolment rates). It is preferred when dealing with variables that had been categorized, difference in enrolment rates compared to school capacity (below, equal, and above); and school categories (national, provincial and district). However, chi-square (χ^2) only indicates the significance of a relationship between two variables, but does not provide an estimate of the magnitude of association (strength and direction) between two attributes.

Therefore, in order to estimate the magnitude of association between two attributes, the chi-square (χ^2) value was converted into contingency coefficient. Contingency coefficient is calculated by obtaining the square root of the product of chi-square (χ^2) value divided by the sample size. The value varies between 0 and +1, and the closer it is to +1, the stronger the relationship, while the closer it is to 0 (zero), the weaker the relationship (Bryman & Cramer, 2001). The chi-square (χ^2) and Contingency coefficient (c) were tested at alpha is equal to 0.05 significance level. In order to calculate the Chi-square statistic, difference in enrolment rates compared to school capacity were cross tabulated by school categories.

Table 12 shows a cross tabulation of difference in enrolment rates compared to school capacity by school category. The table indicates that there was a significant relationship between the enrolment rates and school category in secondary school students. It was observed that all district schools enrolment rates were below the school capacity; two of the provincial schools had enrolment rate above school capacity; national school, had below and the other was equal to school capacity. This suggests that even though enrolment rates varied among the school categories, district schools were more affected with all of them having below capacity enrolment

rates compared to other categories. Enrolment rates were therefore indirectly related to the cost-sharing (school fees). Schools charging low school fees were more likely to be ill-equipped in terms of facilities and academic performance compared to those charging higher school fees. Parents prefer and consider schools with sufficient facilities and academic performance (national and provincial schools) regardless of the cost of education.

This was further supported by the chi-square value ($\chi^2 = 10.000$), whereby $p (0.040) < 0.05$ significance level. This means that we reject the null hypothesis and conclude that there was a significant relationship between cost-sharing and enrolment rates of public secondary school students by school category. Contingency coefficient value (0.707) indicates a strong relationship between school category and enrolment rates. This was attributed to the fact that all parents and students prefer schools with adequate facilities and better academic performance regardless of the cost involved. National and provincial schools tend to record higher academic performance and had better learning and teaching facilities compared to district schools.

Table 12: Relationship between Enrolment Rates and School Category

			Category of school			
			District	Provincial	National	<u>Total</u>
Enrolment rate	Below school capacity	Count	5	1	1	7
		%	100.0%	33.3%	50.0%	70.0%
	Equal to school capacity	Count	0	0	1	1
		%	.0%	.0%	50.0%	10.0%
	Above school capacity	Count	0	2	0	2
		%	.0%	66.7%	.0%	20.0%
Total		Count	5	3	2	10

$$\chi^2 = 10.00 \quad df = 4 \quad p = 0.040 \quad c = 0.707$$

4.3.2 Enrolment rates and cost-sharing by school type

The second objective sought to establish the relationship between the cost-sharing and enrolment rates in public secondary school students by school type. The objective was also based on the fact that school types have different costs of education reflected in the amount of school fees and other charges as stipulated in the government fees guidelines. Therefore, the cost-sharing was expected to influence the enrolment rate of students in the three school types. In this study, the enrolment rate of each school types was compared by the school capacity to determine if it was below, the same or above the expected optimal school capacity.

Table 13 illustrates the enrolment rate and school capacity by school type for the years 2004-2007. The table indicates that there were six co-educational, two boys' only and two girls' only schools. Out of the six co-educational schools, five had below capacity enrolment, while one had above capacity enrolment. The five co-educational schools with below capacity enrolment were all district schools, while the one with above capacity was a provincial school. From the two boys' only schools, one had below capacity and the other had equal to capacity enrolment. For the girls' only schools, one had above capacity and the other had below capacity enrolment.

This suggests that even though there were variations in enrolment in all school types, majority of the co-educational schools had below capacity enrolment rates compared to other school types. This means that single sex schools were relatively more attractive to parents and schools than co-educational schools which have limited resources that at times do not facilitate effective learning and academic achievement.

Table 13: Enrolment Rates by School Type for the Years 2004-2007

<i>School type</i>	<i>Students in 2004</i>	<i>Students in 2005</i>	<i>Students in 2006</i>	<i>Students in 2007</i>	<i>School capacity</i>	<i>Difference</i>
Co-educational (mixed)	407	409	404	423	480	Below capacity
	407	419	415	423	427	Below capacity
	287	257	275	266	294	Below capacity
	348	332	337	306	360	Below capacity
	408	338	394	364	480	Below capacity
	675	693	685	646	640	Above capacity
Boys' only	308	344	320	310	340	Below capacity
	803	800	807	800	800	Equal to capacity
Girls' only	588	543	543	555	480	Above capacity
	540	620	670	695	720	Below capacity

The second objective was accompanied by null hypothesis two which stated that “there is statistically no significant relationship between the cost-sharing and enrolment rates in public secondary to school students by school type”. Chi square statistical test using cross tabulations was also used to establish the difference and whether it was significant or not. In this case, chi-square was used to compare the frequency of cases found in one variable (school type) in two or more unrelated samples or categories of another variable (enrolment rates). The chi-square (χ^2) and contingency coefficient were tested at alpha is equal to 0.05 significance level. In order to calculate the Chi- square statistic, difference in enrolment rates compared to school capacity were cross tabulated by school types.

Table 14 shows a cross tabulation of difference in enrolment rates compared to school capacity by school type. The table suggests that there was no significant relationship between the enrolment rates and school type in public secondary school students by school type. It was observed that even though more co-educational schools had below capacity enrolment rate, there

was no particular pattern in the distribution of the school type in the enrolment rates. This suggests that schools had different enrolment rates regardless of their school type. Both boys and girls were offered equal educational opportunities in different school types regardless of whether they were co-educational, boys' only or girls' only. This was further supported by the chi-square value ($\chi^2 = 5.714$), whereby $p (0.22) > 0.05$ at significance level. This means that the study fails to reject the null hypothesis and conclude that there was no significant relationship between cost-sharing an enrolment rates of public secondary school students by school type.

However, contingency coefficient value (0.603) indicates a strong but non-significant relationship between school type and enrolment rates. This would be attributed to the fact that availability and adequacy of learning and teaching facilities, academic performance and location of a school were influential determinants of enrolment rate and not just the school type. The cost-sharing in the country was also first and foremost determined by the school categories regardless of their types according to gender of the students.

Table 14: Relationship between Enrolment Rates and School Type

		<i>School type</i>				
			Co-Educational	Boys	Girls	<i>Total</i>
Enrolment rate	Below school capacity	Count	5	1	1	7
		%	83.3%	50.0%	50.0%	70.0%
	Equal to school capacity	Count	0	1	0	1
		%	.0%	50.0%	.0%	10.0%
	Above school capacity	Count	1	0	1	2
		%	16.7%	.0%	50.0%	20.0%
Total		Count	6	2	2	10
$\chi^2 = 5.714$		df = 4	$p = 0.222$	c = 0.603		

4.4 Attendance Rates and Cost-sharing

The third objective of the study sought to establish the relationship between cost-sharing and attendance rates of public secondary school students. This was based on the assumption that the higher the cost-sharing of students, the lower was their school attendance rate due to affordability, and vice versa. Therefore, schools with higher cost-sharing (school fees) were expected to have lower attendance rate compared to those with lower cost.

Table 15 highlights the number of days that students were absent from school. The table indicates that 59.9 percent (173) of the 289 respondents had been absent from school for between one and five days that particular term as a result of lack of school fees. In total, 78.6 percent (227) of the respondents were absent for up to 10 days in the term due to lack of school fees. This suggests that majority of the students who lacked school fees were absent for less than two weeks. The parents were able to solve the fees problem within a relatively short period of time to enable their children to adjust and catch up with others.

However, the remaining 20.4 percent (62) were absent from school for more than 11 days. Such a long period of time was likely to affect the academic progress and performance of the students.

Table 15: Number of days absent from School due to lack of School Fees

<i>Days absent</i>	<i>Frequency</i>	<i>Percent</i>
1-5	173	59.9
6-10	54	18.7
11-15	16	5.5
16-20	21	7.3
21-25	10	3.5
26-30	8	2.8
31 and more	7	2.4
Total	289	100.0

4.4.1 Attendance rates and cost-sharing by school category

The third objective sought to establish the relationship between cost-sharing and attendance rates in public secondary school students by school category. The objective was based on the assumption that the higher the cost-sharing of students, the lower their school attendance rate due to affordability, and vice versa. This was expected to vary according to the school categories given their fees differentials. The objective was accompanied by null hypothesis three which stated that “there is statistically no significant relationship between the cost-sharing and attendance rates of public secondary school students by school category”

In order to test this relationship, the study compared attendance rates across the school categories and types. Chi- square statistical test using cross tabulations was also used to establish the difference in attendance rate and whether it was significant or not. In this case, chi-square was used to compare the frequency of cases found in one variable (school category) in two or more unrelated samples or categories of another variable (attendance rates). It is preferred when dealing with variables that have been categorized, attendance rate (Yes or No) due to lack of school fees, and school categories (national, provincial and district). In order to calculate the chi-square statistic, attendance rates were cross tabulated by school categories.

Table 16 shows a cross tabulation of difference in attendance rates by school category. The table suggests that there was a significant relationship between the attendance rates and school category by public secondary school students. It was observed that a bigger proportion (88.4 %) of students from district schools were absent from school due to lack of school fees compared to those from provincial and national schools. In national schools, a smaller proportion (39.7 %) of students was absent from school, while majority were always present. This suggests that majority of students from district secondary schools had more school fees related problems than their counterparts in provincial and national schools which, in contrast had a higher cost-sharing than the former. This seems to be contrary to the expectations where the higher cost-sharing, the lower the attendance rate, and vice versa.

However, as discussed earlier, parents preferred provincial and national schools which had adequate teaching and learning facilities, good academic performance history and accessible locations compared to district schools. While concurring with these findings, Graham – Brown (1998) indicated that in Sudan there was unequal distribution of educational opportunity. The author adds that wealthy people can afford to pay for their children’s education and the poor cannot. With the inability of the state to spend enough on general education, and the deterioration of schools, richer families with fewer children are increasingly resulting to the burgeoning of private fee-paying schools.

This was further supported by the chi-square value ($\chi^2 = 68.975$), whereby $p (0.000) < 0.05$ at significance level. This means that the research rejects the null hypothesis and concludes that there was a significant relationship between cost-sharing an attendance rates of public secondary school students by school category. However, contingency coefficient value (0.386) indicates a weaker but significant relationship between the cost-sharing on attendance rates.

While supporting the influence of cost-sharing on attendance rate, Penrose (1998) stated that attendance effects from cost-sharing are important because reduced attendance rates affect repetition rates and achievement measures. In addition, there is considerable evidence to suggest that the attendance rates are negatively affected by cost-sharing as children are sent home for non-payment of fees. Whether total expenditure on education rises as a result of cost-sharing measures or not will depend, among other things, on the relationship between enrolment rates and increased costs.

Table 16: Relationship between Attendance Rates and School Category

			<i>Category of school</i>			
			National	Provincial	District	<i>Total</i>
Attendance rate (ever been absent due to lack of school fees)	Yes	Count	31	82	176	289
		%	39.7%	70.7%	88.4%	73.5%
	No	Count	47	34	23	104
		%	60.3%	29.3%	11.6%	26.5%
Total		Count	78	78	78	393

$$\chi^2 = 68.975 \quad df = 2 \quad p = 0.000 \quad c = 0.386$$

4.4.2 Attendance rates and cost-sharing by school type

The fourth objective sought to establish the relationship between the cost-sharing and attendance rates in public secondary school students by school type. The objective was based on the assumption that the higher the cost-sharing of public secondary students, the lower was their school attendance rate due to affordability, and vice versa. This was expected to vary according to the school types given their fees differentials. The objective was accompanied by null hypothesis four which stated that “there is statistically no significant relationship between the cost-sharing and attendance rates of public secondary school students by school type”. Chi square statistical test using cross tabulations was used to establish the difference in attendance rate and whether it was significant or not. In this case, chi-square was used to compare the frequency of cases found in one variable, namely school type in two or more unrelated samples or categories of another variable, namely attendance rates. It is preferred when dealing with variables that have been categorized, attendance rate (Yes or No) due to lack of school fees and school categories. To calculate the chi- square statistic, attendance rates were cross tabulated by school types.

Table 17 shows a cross tabulation of difference in attendance rates by school types. The table suggests that there was a significant relationship between attendance rates and school type in public secondary school students. It was observed that a bigger proportion (86.1 %) of students from co-educational schools were absent from school due to lack of school fees compared to those from boys' only and girls' only schools. For the single sex schools, more than a half of the boys were never absent, while majority (58.3 %) of the girls were absent from school. This suggests that the gender of the students in a school influenced their attendance rate with more girls likely to be away from school due to the cost-sharing.

Table 17: Relationship between Attendance Rate and School Type

		<i>School type</i>				
		Co-Educational	Boys	Girls	Total	
Attendance rate (ever been absent due to lack of school fees)	Yes	Count	205	35	49	289
		%	86.1%	49.3%	58.3%	73.5%
	No	Count	33	36	35	104
		%	13.9%	50.7%	41.7%	26.5%
Total		Count	238	71	84	393

$$\chi^2 = 50.826 \quad df = 2 \quad p = 0.000 \quad c = 0.338$$

While conducting a survey in Zimbabwe on social attitudes towards female education, Graham – Brown (1998) observed that parents admitted that when it came to choice in poor families as to which children should go through secondary school the boys tended to be chosen. She adds that parents sometimes made heavy demands on girls to do domestic and farm work as well as going to school. They were expected to fetch water, which can mean walking miles, or to work in the fields. Girls are also withdrawn from school to make early marriages, sometimes under economic pressure from their families.

Female students have higher education costs than their male counterparts due to the cost of extra requirements in addition to the school fees. Male students incur lesser additional cost to school fees.

This was further supported by the chi-square value ($\chi^2 = 50.826$), whereby $p (0.000) < 0.05$ at significance level. This means that the study rejects the null hypothesis and concludes that there was a significant relationship between cost-sharing and attendance rates of public secondary school students by school type. However, contingency coefficient value (0.338) indicates a weaker but significant influence on cost-sharing on attendance rates.

4.5 Flow Rates and Cost Sharing

The fifth objective sought to determine the relationship between cost-sharing and the flow rates in public secondary school students. The objective was based on the fact that the introduction of cost sharing in education meant that parents are supposed to meet part of the cost of educating their children through the fees charged. This in effect influences the flow rate of students from Form one to Form four depending on the ability of the parents to afford the fees and other charges levied by the school. Parents who have the ability of meeting the cost-sharing of their children are more likely to enable their children to smoothly finish their education as opposed to those who cannot afford.

These findings can be supported by Orodho and Njeru (2003) who recognized that the cost-sharing strategy has had a negative impact on the poor and vulnerable households. They further add that the vulnerable households either do not enroll their children in public secondary schools, or fail to sustain continuous participation of those enrolled. The amount of school fees and other charges that the parents are expected to meet have been specified by the government in the fees guidelines based on school category. The current fees guidelines used by public secondary schools were stipulated by the Ministry of Education, Science and Technology in 2003.

4.5.1 Responsibilities of financing secondary education

The study started by enquiring about the person responsible for buying textbooks in the schools. Out of the ten head teachers, six reported that their schools were responsible for buying textbooks. However, the six head teachers noted that their schools bought textbooks through the fees levies charged per student. The remaining four head teachers noted that parents of students in their schools directly bought textbooks as specified by the schools. This suggests that in all

cases, it was the parents who shoulder the responsibility of buying textbooks either directly or through the fees paid to the school. But when asked about the adequacy of the textbooks in their schools, 30.0 percent (3) of the head teachers reported that they were adequate while 70.0 percent considered them to be inadequate. In addition to textbooks, schools are required by the cost-sharing policy to undertake various development projects funded by parents and other sources. The ten head teachers used various sources of development projects in their schools as indicated in Figure 3.

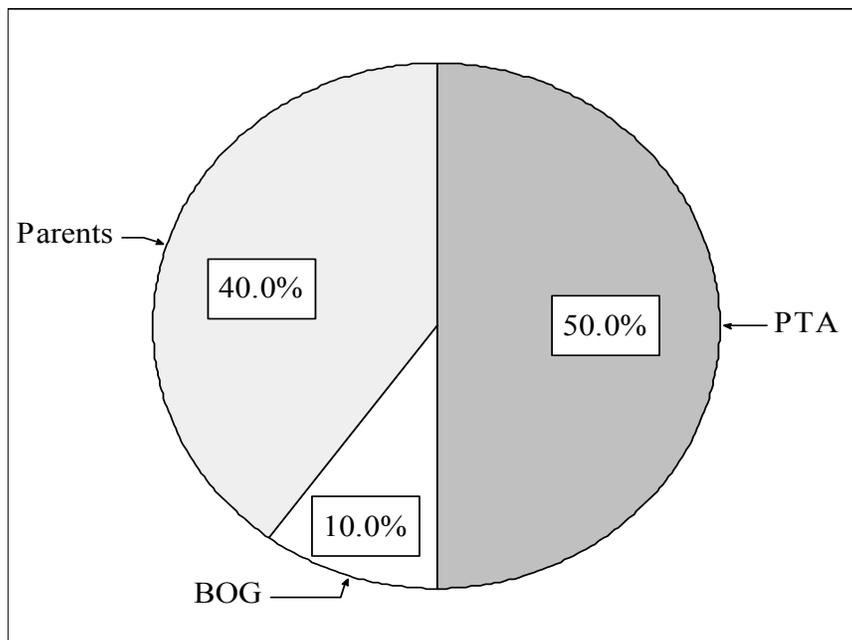


Figure 3: Financiers of Development Projects in Schools

Figure 3 indicates that in 50.0 percent (5) of the ten schools, it was the Parents and Teachers Association (PTA) that financed development projects. The parents and teachers through their annual meeting identified, prioritized and financed development of specific projects in schools. In 40.0 percent (4) of the schools, the parents alone financed development, while in the remaining 10.0 percent (1) it was done by the Board of Governors of the school. Overall, in nine out of the ten schools, it was parents, either through PTA or directly, who financed development projects in addition to the fees that they paid.

This increased the burden and cost-sharing to parents. These findings support GOK (1999) which observed that the major alternative source of funds for schools is the fees paid by the parents through the PTA.

4.5.2 Cost sharing policy and its objectives

The head teachers differed when asked whether the cost-sharing policy had achieved its aim in constructing physical facilities in schools. Figure 4 captures their responses.

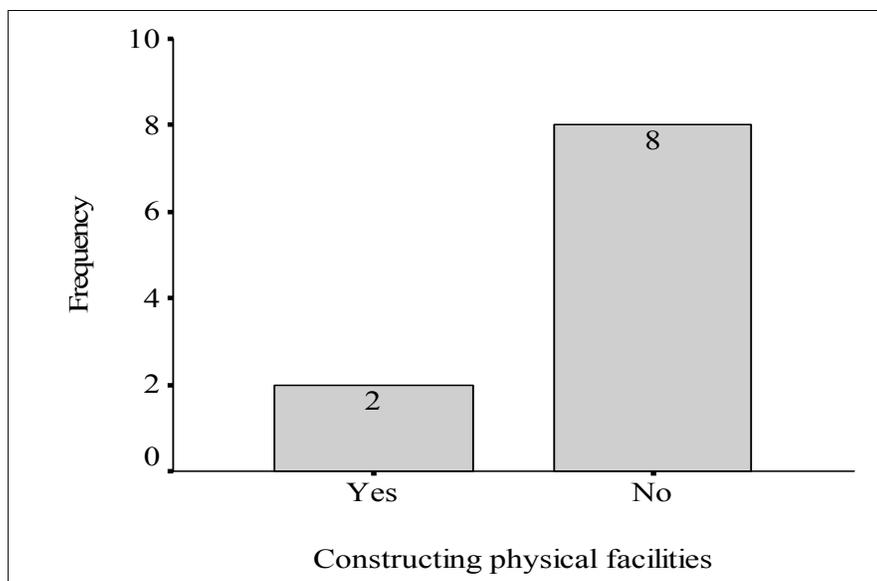


Figure 4: Cost Sharing Policy Effective in Constructing Physical Facilities

According to Figure 4, only two (20.0 %) of the head teachers considered the cost-sharing policy to have achieved its objective in constructing physical facilities in schools. They observed that with better coordination and cooperation between the school and the parents, the policy was a better way of facilitating construction of physical facilities in schools. However, eighty (80.0 %) of them differed and saw the policy as having failed in construction of these facilities. They reported that the policy did not take into consideration the dynamics and poverty levels among parents. Some of the parents were genuinely poor to effectively pay school fees for their children and also finance development projects. The policy was demanding too much from already

overburdened and poor parents. This is in agreement with Rono (1988) who observes that cost-sharing is burdensome to parents who have many children in secondary school when their income is meager.

Apart from textbooks, school fees and financing development projects, newly admitted students were requested to come with other items which increased the cost-sharing. These items included: caution money, uniforms, boarding items, stationery, jembe, and hockey sticks. These findings were in line with GOK (1986) which emphasized that through cost-sharing; parents were encouraged to meet part of the cost-sharing of their children including paying school fees and providing physical facilities, books, stationery and uniforms. These findings were also supported by The Commission of Inquiry into the Education System in Kenya (GOK, 1999) which found out that a catalogue of items required from pupils when they initially joined Form one and the cost of textbooks for numerous subjects under the 8-4-4 system of education had substantially added to the high cost of secondary education. The Government would only continue to finance the provision of educational administration and professional services.

4.5.3 Influence of cost-sharing on flow rates in public secondary schools

Given the above charges that parents were supposed to meet in a school, cost sharing was expected to influence the flow rate of students in the study area. In this study, the flow rate of the 2004 Form one class cohorts for each school was computed by comparing the number of those students from 2004 to 2007 with the expected optimal class size to determine if it was below, same or above.

Table 18 illustrates the flow of the 2003 Form one class cohort by the school category for the years 2004-2007. The table indicates that all the five district schools had varying 2004 Form one class cohort flow rates. In all the years, the class sizes were below the expected optimal size. In four out of the five schools, the number of students from Form four classes in 2007 was lower than that admitted in Form one in 2004. This suggests that there was high attrition rate in the schools as the number of students admitted in Form one continuously decreased as they progressed to higher classes. A study conducted in Sudan by Graham – Brown (1998) revealed that drop-out rates primarily for financial reasons, were said to be much higher for children of

poor families. The author further noted that many drop out before their education can give any benefits in terms of income and employment.

Table 18: Flow Rates of the 2004 Form One Class Cohort for the Years 2004-2007

<i>Category</i>	<i>F1</i>	<i>F2</i>	<i>F3</i>	<i>F4</i>	<i>Average</i>	<i>Optimum size</i>	<i>Difference</i>
<i>of school</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>			
District	79	104	99	94	94	120	Below optimum size
	110	98	96	92	99	105	Below optimum size
	69	65	63	59	64	75	Below optimum size
	82	87	78	68	79	90	Below optimum size
	103	108	93	89	97	120	Below optimum size
Provincial	77	86	80	70	78	90	Below optimum size
	179	173	164	152	167	180	Below optimum size
	170	150	147	147	154	135	Above optimum size
National	200	200	200	200	200	200	Equal to optimum size
	168	168	166	166	167	180	Below optimum size

For the provincial schools, there were also varying 2004 Form one class cohort flow rates. From 2004 to 2007, the class sizes varied with two out of the three provincial schools having below the expected optimal size. For the two schools with below optimal class sizes, it is a likely indication that there was high attrition rate in the schools as the number of students admitted in Form one continuously decreased as they progressed to higher classes. However, the remaining school had higher class size than the expected optimal class size. This meant more parents were able to effectively meet the cost-sharing of their children in the school. The school therefore had admitted more students in a class than it could possibly handle and this was likely to put a lot of strain on the existing school teaching and learning facilities.

One of the two national schools had equal to optimum class size capacity, while the other had below optimum class size capacity. Nevertheless, even in the school with below optimum class size, there was no big variation in the flow rates as the difference in class size between Form one

and Form three and four was only two. This situation may be attributed to the high level of demand for admission in national schools countrywide and the strict admission criteria. Parents in such schools do whatever it is possible to retain their children in school and do not easily pull their children out of national schools even when they are not very much able to meet the cost of education in such schools. Therefore, the cost-sharing has no great influence on the flow rates in national schools. The ten head teachers also reported that flow rates in their schools had been affected by repetition, transfers and drop outs.

Table 19 illustrates the trend in the number of students who had repeated, transferred and dropped out from 2004 to 2007 in the ten schools. The table shows that between 2004 and 2007, there were 393 students who had either repeated, dropped out of school or transferred. However, more students were transferred and dropped out of school than those who repeated. The low number of repeaters was attributed to government policy which is against deliberate repetition of students in a class. Repetition, drop out and transfers affected the smooth flow rate of students from one class to another. Coombs and Hallak (1972) concur with these findings by noting that the high rate of dropouts and repeaters results in sharply higher costs and a heavy wastage of scarce education resources. The authors further added that the phenomenon of rising educational costs and declining effectiveness is best evidenced by the sharp rise in dropouts and repeaters that goes on in many educational systems.

Table 19: Number of Students who Repeated, Dropped Out and Transferred in 2004-2007

	<i>Students in 2004</i>	<i>Students in 2005</i>	<i>Students in 2006</i>	<i>Students in 2007</i>	<i>Total</i>
Repeaters	13	4	5	14	36
Drop outs	25	40	18	32	115
Transfers	48	54	75	65	242
Total	86	98	98	111	393

The head teachers attributed repetition, drop out and transfer to the following reasons highlighted in Table 20. The table shows that the head teachers attributed transfers, repetition and drop out to lack of school fees, poor academic performance, poor and inadequate facilities, indiscipline and cases of pregnancy. Those students whose parents were unable to pay school fees were forced to repeat classes to cater for what they missed while away looking for fees, transferred to schools charging relatively lower school fees, or dropped out of school altogether. Stringent academic and disciplinary standards in some schools compelled poor academic performing and indiscipline students to repeat classes, transfer or drop out of school. Some of the schools had poor teaching and learning facilities which affected the academic performance of their students. Parents of students in such schools frequently transferred them to better and well facilitated schools. Cases of pregnancy among female students also caused transfers, repetition and drop out. The findings were in line with Ngware (2000) who observed that dropout and repetition in many African countries is caused by poverty, economic activities, cultural values, ethnic background, socio-economic status, pregnancy and early marriages.

Table 20: Reasons for Students Repetition, Transfers and Drop Out

<i>Reason</i>	<i>Frequency</i>	<i>Percentage of 10</i>
Lack of fees	5	50.0
Poor academic performance	3	30.0
Poor and inadequate facilities	3	30.0
Indiscipline	2	20.0
Pregnancy	1	10.0

Having assessed the flow rates, the study also sought to establish whether parents of the students were able to meet the cost of education of their children given the cost-sharing policy. The head teachers were therefore asked whether majority of the parents in their schools were able to comfortably meet the cost of education of their children. Table 21 captures their responses. The table indicates that a half of the head teachers considered parents of their students to be able to meet the cost of education of their children, while the other half thought the parents could not meet the cost.

This suggests that in five of the ten schools, majority of the parents were able to embrace cost-sharing policy and meet the required cost of educating their children. Such a situation was likely to ensure a smooth flow rate of students from Form one to four without disruption, if the parents actually met the required cost. However, for the other five schools, majority of the parents were not able to adequately meet the cost-sharing of their children. In such cases, the education of the affected students was likely to be interrupted frequently as they were sent home for fees. The study sought to establish the reasons why majority of the parents in five schools were unable to meet the cost of education of their children. Table 21 highlights the responses of five head teachers in these schools.

Table 21: Ability of the Parents to meet the Cost-Sharing of their Children

<i>Ability</i>	<i>Frequency</i>	<i>Percent</i>
Yes	5	50.0
No	5	50.0
Total	10	100.0

As indicated in Table 22, four of the five head teachers reported that majority of the parents had low levels of incomes which could not be effectively distributed among the numerous family needs and wants. This made it impossible for them to comfortably meet the cost of education of their children. According to a report of the Commission of Inquiring into Education System in Kenya (GOK, 1999), close to 50% of Kenyans live below the poverty line and they view cost-sharing policy as the single most critical factor which hinders access and equity in education.

Table 22: Reasons for Inability of Parents to Meet the Cost-Sharing

<i>Reason</i>	<i>Frequency</i>	<i>Percent</i>
Most have low incomes	4	80.0
Most have large families	1	20.0
Total	5	100.0

One of the head teachers indicated that majority of the parents had large family sizes which increased the demand from the limited amount of incomes. Such parents were either educating more children or had high family demands to meet. All the ten head teachers reported that students in their schools had fees arrears for the past four years. The total fees arrears in the ten schools ranged between Kshs. 364,558 and Kshs. 5,687,133 with a mean of Kshs. 2,044,607.70 over the last four years. The head teachers observed that these fees arrears had negatively impacted on the core functions of the schools and their ability to effectively meet the required needs. This was in line with Rono P.K. (2006) who had observed that in the past decade about 400,000 students had dropped out of secondary schools in the country for lack of school fees. The secondary schools are owed Kshs. 12 billion by the current and past students. The author attributed the amount of fees arrears to inability by many parents to afford and pay.

The head teachers had a lot of reservations about the effectiveness of the government policies regarding fees payment. When asked about the limitations of the policies, 80.0 percent noted that they were so stringent and had made it hard for schools to raise money. The policies had limited and regulated avenues that schools used in collecting and raising money like 'harambees'. In enabling needy students to afford secondary school education, only 40.0 percent of the head teachers agreed while the rest disagreed. They observed that school fees stipulated by the government at times never took into consideration the ability of the parents to pay but at the same time sought to increase access to education. The needy students were supposed to be facilitated by the government through access to bursaries. Orodho and Njeru (2003) concurred with this by noting that having accepted the rationality of cost-sharing, MOEST bursary scheme was introduced at secondary school level in 1994, as one of the safety nets to cushion the poor and vulnerable groups against the possible or likely effects. However, all head teachers reported that not all deserving needy students received bursaries in their schools. This therefore limited their access to secondary school education.

The third objective was accompanied by null hypothesis five which stated that "there is statistically no significant relationship between cost-sharing and flow rates of public secondary school students."

Chi-square statistical test using cross tabulations was also used to establish the difference in flow rates as a result of variations in the ability of the parents to meet the cost-sharing of their children and whether this was significant or not. In this case, chi-square was used to compare the frequency of cases found in one variable (flow rates) in two or more unrelated samples or categories of another variable (ability to meet cost-sharing). In order to calculate the chi-square statistic, difference in flow rates were cross tabulated by ability of the parents to meet the cost-sharing of their children.

Table 23 shows a cross tabulation of flow rates by ability of parents to meet the cost-sharing of their children. The table suggests that there was no significant relationship between cost-sharing and flow rates of public secondary school students. It was observed that even in five schools where parents were able to meet the cost of education of their children, three of them had flow rates below optimum size. This suggests that other than school optimum size, there were other factors, such as school category and availability of learning and teaching resources, which influenced the flow rates in public secondary schools. Majority of the head teachers indicated that textbooks in the schools were not adequate and this implied an increase in the cost of education. This was further supported by the chi-square value ($\chi^2 = 2.500$), whereby p (0.287) is > 0.05 at significance level. This means the null hypothesis three is not rejected and concludes that there was no significant relationship between cost-sharing and flow rates of public secondary school students. However, contingency coefficient value (0.447) indicates a moderate relationship between cost-sharing and flow rates.

Table 23: Relationship between Flow Rates and Cost Sharing –School Fees

		<i>Ability to pay school fees</i>			
			Yes	No	<i>Total</i>
Flow rate	Below optimum size	Count	3	5	8
		%	60.0%	100.0%	80.0%
	Equal to optimum size	Count	1	0	1
		%	20.0%	.0%	10.0%
	Above optimum size	Count	1	0	1
		%	20.0%	.0%	10.0%
Total		Count	5	5	10

$$\chi^2 = 2.500 \quad df = 2 \quad p = 0.287 \quad c = 0.447$$

The head teachers reported that they were at times limited from effective discharge of their duties and responsibilities in schools due to the shortcomings of the cost sharing policy. Charging fees to students at public funded institutions raises difficult questions concerning equity, access, and taxation (World Bank, 1996). Headteachers therefore highlighted a number of specific aspects in the policy that needed improvements for it to be effective.

Table 24 highlights these aspects. The table indicates that the head teachers preferred student bursaries to be school-based, fees guidelines be based on specific school requirements, and government to subsidize school fees. They observed that de-linking students' bursaries from schools had limited the role of the head teachers in recommending genuine needy cases to benefit. The constituency bursaries committees were at times politicized and thus denying genuine needy cases access to bursaries.

Table 24: Aspects of the Government Policy on Fees that Need Improvements

<i>Suggested improvement</i>	<i>Frequency</i>	<i>% of 10</i>
Student bursaries be school-based	8	80.0
School fees guidelines based on school requirements	8	80.0
Government to subsidize school fees	5	50.0

In their study on an effective bursary scheme Orodho and Njeru (2003), observed that the bursary scheme has remained inefficient and ineffective. These authors also argued that other characteristics that contribute to bottlenecks in its implementation the secondary school education level include limited access and participation due to poor quality of service, and participation due to poor quality of services, bad governance and management weaknesses. MOEST report of the National Conference on Education and Training (GOK 2003) recommended that a new method or system of allocating bursary funds to deserving students should be devised as the current arrangement involving the constituency development fund takes too long to reach the students and their respective schools. The current arrangement may also be prone to political abuse.

Unilateral development of fees guidelines did not take into account the unique requirements of schools as they were grouped and generalized together. Thus both developed and poor schools in the same category were required to charge the same school fees regardless of the unique and varying needs. The government was also requested to subsidize the fees that they were fixing in order to enable all parents to pay. The head teachers made a number of suggestions that could ensure proper implementation of the cost-sharing policy in schools.

These recommendations are as illustrated in Table 25. According to the table, the head teachers suggested that in order for the cost-sharing policy to succeed, the government should assist schools in paying for the BOG employees, employ more teachers and subsidize or supply textbooks; and the policy be pegged on the ability of the parents to meet the cost.

The head teachers observed that the policy had increased the cost burden of the parents and limited the financial resources of the schools without coming up with effective measures.

This had therefore, made it hard for the schools to mobilize resources needed for their various requirements and parents to effectively afford the cost.

Table 25: Suggestions to Improve Implementation of Cost Sharing Policy

<i>Suggestions</i>	<i>Frequency</i>	<i>% of 10</i>
Government to reduce school expenses by paying BOG employees and teachers	9	90.0
Be pegged on the ability of the parents to meet the cost	7	70.0
Government to subsidize or supply textbooks	5	50.0

4.6 Influence of Cost-Sharing on Enrolment by Gender

The last objective sought to determine the relationship between cost-sharing and enrolment by gender in public secondary schools. The objective was premised on the fact that access and equity to educational opportunities in the country had been influenced by the gender of the children. Female children have been disproportionately discriminated in terms of access and equity to the available educational opportunities compared to their male counterparts. This study started by assessing equity in gender enrolment in the selected schools based on the distribution of the sample size as illustrated in Figure 5.

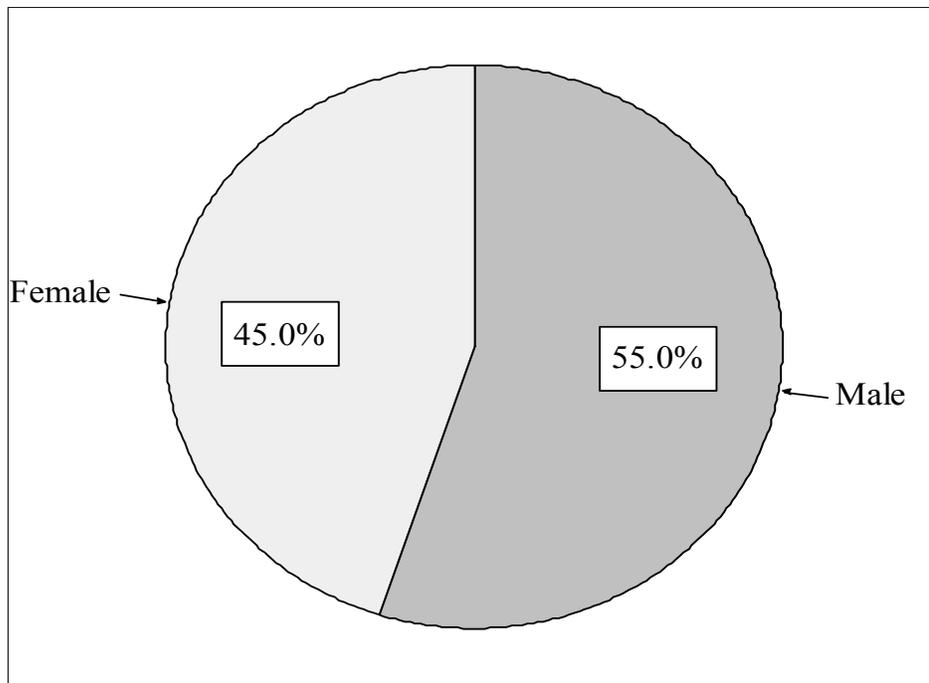


Figure 5: Gender Distribution of the Sampled Students

Figure 5, shows that 55% (216) of the students were males (boys), while 45% (177) were females (girls). The variation in gender distribution of the selected students in the ten schools could be attributed to the general gender imbalance in access and equity to education between male and female children. Female students have a relatively high cost of education in terms of their demands and personal effects compared to their male counterparts. This suggests that the gender of the students influenced access and equity to educational opportunities with more girls likely to be away from school due to cost-sharing. While observing the same gender imbalance in access and equity to education, GOK (1995) indicated that lack of access to education continues to plague the majority of women and girls in all African countries.

Gender disparity is manifested in the declining female enrolment especially as learners' progress up the education pyramid. In Kenya in 1996, the female representation in the three levels of education was 49%, 46% and 28% for primary, secondary and public university, respectively (GOK, 1998). Ghai and Court (1974) add that one of the major reasons for gender disparities is the mistaken belief that it is more important to educate a boy than a girl. This is strongly held in poor families.

Poverty is the most pervasive reason for the low participation rates. It also causes dropout of girls, affecting their access to and retention in school especially in families where resources are limited because secondary education in Kenya is becoming increasingly unaffordable to the poor who cannot cost-share what they do not have (GOK, 1999). However, the head teachers observed that the government fees guidelines does not take into consideration the gender disparities in access and equity to educational opportunities. The fees guidelines and benchmarks are usually the same for male and female students regardless of their unique differences in terms of demands. The optimal school sizes also did not take into consideration these differences. Therefore, there were no specific optimal sizes for girls and boys that could be used to gauge the extent to which boys and girls were able to meet or not meet their expected capacity.

Girls and boys were enrolled on performance basis and/or come-first service basis. Possible explanations may be economic like the perceived low return from education of a girl as opposed to other opportunities, educational, such as lack of girls' exposure, ignorance of expected educational opportunities, particularly in the rural areas and the opportunity cost of girls' labour or early marriage. According to the findings of the National Poverty eradication (GOK 1999), low income households find it increasingly difficult to keep girls in schools and they are asked to drop out so that their brothers can continue with education.

4.7 Summary

In this study the first objective sought to establish the relationship between the cost-sharing and enrolment rates in public secondary schools students by category. It was analyzed using chi-square χ^2 and contingency coefficient (c) tests to establish any significant relationship between variables. The results were that cost-sharing had a significant relationship with enrolment rates.

The second objective aimed at establishing the relationship between cost-sharing and enrolment rates in public secondary school students by school type. After analyzing using chi-square χ^2 and contingency coefficient (c) it was established that cost-sharing and enrolment rates had no relationship.

The third objective sought to establish the relationship between cost-sharing and attendance rates in public secondary school students by school category. Findings were that there is considerable evidence to suggest that the attendance rates were negatively affected by cost-sharing as students were sent home for non payment of school fees.

The fourth objective sought to establish the relationship between cost-sharing and attendance rates in public secondary school students by school type. The study showed that for the co-educational schools, more than half of the boys were absent from school, while the majority of the girls were absent from the school.

The fifth objective sought to determine the relationship between cost-sharing and the flow rates in public secondary school students. The results were that there was a high rate in the attrition rate in the categories of schools, especially district schools, as the number of student admitted in form one continuously decreased as they progressed to higher classes.

Finally, the sixth objective sought to determine the relationship between cost-sharing and enrolment by gender in public secondary schools. The findings indicated that there were variations in gender distribution in access and equity in education between male and female children.

CHAPTER FIVE

SUMMARY, CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents a summary of the major research findings based on research objectives, conclusions from the findings and recommendations drawn from the conclusions.

5.2 Summary of the Findings

The study sought to investigate the relationship between cost sharing and access and equity in public secondary schools in Nakuru district. It focused on equity in terms of gender enrolment and access in terms of enrolment, attendance and flow rates. This broad objective was guided by the following specific objectives:

- (i) to examine the relationship between the cost-sharing and enrolment rates in public secondary school students by school category;
- (ii) to establish the relationship between the cost-sharing and enrolment rates in public secondary school students by school type;
- (iii) to investigate the relationship between cost-sharing and attendance rates in public secondary school students by school category;
- (iv) to establish the relationship between cost-sharing and attendance rates in public secondary school students by school type;
- (v) to determine the relationship between cost-sharing and the flow rates in public secondary school students;
- (vi) to determine the relationship between cost-sharing and enrolment by gender in public secondary schools.

Both primary and secondary data were used to elucidate cost-sharing and its relationship with school enrolment, attendance and flow rates. Primary data was collected using two sets of questionnaires (students and head teachers) administered to the selected respondents. A sample of 393 students and 10 head teachers were drawn from ten public secondary schools in Nakuru district.

Secondary data was collected from documented information such as Economic Survey to show enrolment in secondary school by form and gender, World Bank Publications and papers which indicated Bank lending to secondary education and participation education by poor families as well as cost-sharing policies .Unpublished theses and discussion papers like IPAR provided important information about cost sharing in education. Other documented information in this study was gathered from Government Education Commissions such as Education and Manpower Training for the Next Decade and Beyond (1988), which saw the official introduction of cost-sharing in education. Total Integrated Quality Education and Training for Unity, Equity and Development (1999) had important information on access, equity and relevance in education and particularly focused on education for girls. Development plans and Sessional Papers had information on government policies in education. UNESCO publication focused on education for all hence access and equity. The collected data were analyzed using descriptive and inferential statistics with the aid of SPSS version 11.5 for Windows.

Based on the objectives, research hypotheses, and the analysis of this study in chapters one, two, three and four, the following findings were established:

- (i) The study established a slight variation in the age at which boys and girls were admitted to public secondary schools. 81.5 percent of the sampled students were admitted in Form one at the age of between 14 and 15 years. This is the common age bracket among most students joining public secondary schools from the 8-4-4 system of education in the country.
- (ii) Parents prefer and consider schools with adequate teaching and learning facilities regardless of the cost of education. Therefore, national and provincial schools tended to have enrolment rates above or at school capacity as compared to district schools which had below capacity enrolments rates though they charged lower schools fees. District schools were affected by transfers much more than the other categories due to lack of school fees. 76.2 % of the 21 respondents who transferred due to lack of school fees were from district schools.
- (iii) Public secondary schools had different enrolments rates regardless of whether they were co-educational, boys' only, or girls' only. Both boys and girls were offered equal educational opportunities regardless of school type.

- (iv) Majority of the public secondary school students had been absent from school as a result of lack of school fees. 88.4 % of students from district schools are absent from school due to lack of school fees as compared to those from national and provincial schools .
- (v) There was a high rate in the attrition rate in the three categories of schools, especially district schools, as the number of students admitted in Form one continuously decreased as they progressed to higher classes. This could be attributed to factors like transfers, repetition and dropouts as well as the inability to meet the cost of education. However, cost-sharing had no great influence on the flow rates in national schools owing to high academic performance and sufficient teaching and learning facilities. The findings suggest that other than school optimum size, other factors such as school category and availability of teaching and learning resources also influenced the flows rates in public secondary schools.
- (vi) There were variations in gender distribution in access and equity in public secondary education between boys and girls which were attributed to the perceived differences in the cost of education between girls and boys. This variation in gender distribution of the selected students from the ten schools could be reflected in the fact that female students have a relatively high cost of education in terms of their personal effects compared to their male counterparts. This suggests that the gender of the students influenced access and equity to educational opportunities with more girls likely to be away from school due to ignorance of expected educational opportunities and cost of education. In gender enrolment in the selected schools based on the distribution of the sample size, 55.0 per cent of the students were boys while 45.0 per cent were girls.

5.3 Conclusions

The following conclusions were drawn from the analysis of this study in chapter four.

- (i) Cost-sharing had no relationship with enrolment rates according to the school category with parents preferring schools with sufficient teaching and learning facilities and academic performance regardless of the cost of education. However, the schools had different enrolment rates depending on their school type, namely co-education boys only and girls' only.

- (ii) Cost-sharing had a significant relationship with attendance rates by school type.
- (iii) Flow rates in public secondary schools depended on the availability of teaching and learning facilities regardless of the cost of education.
- (iv) There were inequities in access to educational opportunities between female and male students due cost of education.

5.4 Implications of the Findings to Secondary Education

- (i) Cost-sharing policy in education seems to contradict government commitment to achieving the goal of providing quality basic education for all. With the increased level of poverty and the current system of secondary education, cost-sharing seems not to produce positive results or achieve its intended objectives in education.
- (ii) By declaring free tuition in public secondary education, the government has shown that it is ready to increase educational opportunities to all.
- (iii) This study helped in providing information that could be useful to the government, society and individual families in understanding the weaknesses and strengths of cost-sharing in secondary education. The study revealed that schools charging low fees were more likely be ill-equipped in terms of facilities and academic performance compared to those charging higher fees. Parents prefer and consider schools with sufficient facilities and academic performance regardless of the cost of education.
- (iv) When students have access to public secondary schools, there is better use made of all the resources invested in education and the direct and indirect opportunity costs borne by learners and their families.
- (v) The different access that boys and girls have to the education systems in some parts of the world is also very important because it contributes to variation in gender differences later in life. This study indicated variation in gender distribution of the selected students in the ten schools.

5.5 Recommendations

5.5.1 Recommendations for policy

The study makes the following recommendations based on the above conclusions:

- (i) Cost-sharing would provide financial relief on the over all government budget and enable the government to provide additional facilities to the needy areas in other sectors.
- (ii) A new method of allocating bursary by MoE funds to deserving students should be devised as the current arrangement involving the constituency takes too long to reach the students and their respective schools. The current arrangement may also be prone to political abuse.
- (iii) The government should ensure that the provision of instructional materials such as textbooks and access to learning by students are assured as these have a direct bearing on the quality of public secondary education.
- (iv) In view of the cost-sharing policy, there's need for the government to bring down poverty levels. Some parents prefer to send their children to work or look after their siblings while their parents work, so as to supplement family incomes.
- (v) There's need for the government to maintain uniform fees and other requirements in all public secondary schools in order to increase enrolment rates. This can be done through review of costs incurred in the school in order to reduce fees.
- (vi) To achieve equity, the government needs to ensure that no qualified student is denied access to public secondary education because of inability to pay.
- (vii) There's need for the government to develop more day schools as a means of expanding access and reducing the cost to parents. This can be done by converting some of the boarding schools into day schools.

5.5.2 Recommendations for further research

This study makes the following suggestions for further research:

- (i) The influence of cost-sharing on access and equity to education in urban and rural public secondary schools.
- (ii) Influence of financial management on quality of education in public secondary schools.
- (iii) Effects of free tuition policy on equity and quality of education in public secondary schools.

REFERENCES

- Abagi ,O, & Odipo, O. (1997). *Efficiency of education in Kenya: Situation analysis and implication for educational reform*: Discussion Paper No. 004/97. Nairobi: Institute of Policy and Analysis Research.
- Achola, P.W. (1988). *Mobilizing additional funds for secondary and higher education in Kenya*. Nairobi: Bureau of Education Research, Kenyatta University
- Ambajo, A. A. (1977): *Parental socio-economic status and its influence in the standard one enrolment in primary schools: A case study of Migori District*. Nairobi: Kenyatta University.
- Ayodo, T.M. (2000). *Educational financing in Kenya: Practices and issues since the Ominde Commission*. Nairobi: Government Printers.
- Ayot, H.O, & Briggs, H. (1992). *Economics of education*. Nairobi: University Research and Publication.
- Barrow, R. (1976). *Plato utilitarianism and education*. London: Routledger & Kegan Paul.
- Bryman ,A. & Cramer, D. (2001). *Quantitative data analysis with SPSS for Windows: A guide for social science*. New York: Routledge
- Coombs, P.H,& Hallak J. (1972). *Managing educational costs*. New York: Oxford University Press
- Eicher, J.C. (1984). *Educational costing and financing in developing countries: Focus on Sub-Saharan Africa*. Washington: World Bank.
- Fields, G. (1980). *Education and income distribution in developing countries: A review of the literature in education and income*: World Bank Staff Working Paper No. 402. Washington: World Bank.
- Fraenkel, J.R. & Wallen, N.E. (2000). *How to design and evaluate research in education*. New York: McGraw Hill Companies.

- Ghai, D. & Court, D. (1974). *Education society and development: New perspective from Kenya*. Nairobi: Oxford University Press.
- Government of Botswana. (2006). *Cost-sharing in education enjoys wide support*. Gaborone: Botswana Press Agency
- Government of Kenya, (1964). *Kenya education commission report*. Nairobi: Government Printers.
- Government of Kenya. (1964). *Economic Survey*. Nairobi: Government Printers.
- Government of Kenya. (1965). *Sessional paper No. 10 of 1965 on African socialism and its application to planning in Kenya*. Nairobi: Government Printers.
- Government of Kenya. (1976). *Economic survey, 1976*. Nairobi: Government Printers.
- Government of Kenya. (1986). *Sessional paper No. 1 on economic management for renewed growth*. Nairobi: Government Printers.
- Government of Kenya. (1988). *Report of the presidential working party on education and manpower. training for the next decade and beyond*. Nairobi: Government Printers.
- Government of Kenya, (1989). S.O. *Report of the proceedings on cost-sharing, 29th March – 2nd April. 1989*. Nairobi: Government Printers
- Government of Kenya (1995). *Cost and financing of education in Kenya, study 2: Access, quality and equity in secondary education. Research Paper for Ministry of Education and World Bank*. Nairobi: Government Printers.
- Government of Kenya. (1997). *Economic survey, 1997*. Nairobi: Government Printers.
- Government of Kenya. (1997). *Draft master plan on education and training, (1997-2010)* Nairobi: Government Printers.
- Government of Kenya. (1998). *Master plan on education and training*. Nairobi: Government Printers

- Government of Kenya. (1999). *Totally integrated quality education and training for unity, equity and development: Report of the commission of inquiry into the education system in Kenya*. Nairobi: Government Printers.
- Government of Kenya. (1999). *National poverty eradication plan*. Nairobi: Government Printers.
- Government of Kenya. (1997-2001). *Development Plan*. Nairobi: Government Printers.
- Government of Kenya. (2001). *The Child Act Cap 586 Laws of Kenya*. Nairobi: Government Printer.
- Government of Kenya. (2002). *National report for the special session of the United Nations General Assemblies on follow-up to the world summit for children. The Challenge of Educating Girls in Kenya*. Nairobi: Government Printers.
- Government of Kenya. (2004). *Economic survey, 2004*. Nairobi: Government Printers.
- Government of Kenya. (2005). *Sessional paper No. 1 of 2005: A policy framework for education, training and research*. Nairobi: Government Printers.
- Government of Kenya. (2007). *Economic survey, 2007*. Nairobi: Government Printers.
- Graham-Brown, S. (1998). *Education in the developing world: Conflict and crisis*. New York: Addison Wesley Longman Inc.
- Kathuri, J.K. & Pals, D.A. (1993). *Introduction to educational research*. Njoro, Kenya: Egerton University Educational Media Centre.
- Koul, L. (1988) *Methodology of educational research*. New Delhi: Vikas Publishing House.
- Koul, L., Selltiz M., Wrightsman J & Cook, G. (1990). *Methodology of educational research*. New Delhi: Vikas Publishing House.
- Kwamboka, O. (2008). *Kenya free secondary school policy faces testing times*. Nairobi: International Press Services News Agency.
- McMahon, W. (1982). *Efficiency and equity criteria for educational budgeting and finance, in financing education for overcoming inefficiency and inequity*. Chicago: University of Illinois Press.
- Monk, D.H. (1990). *Educational finance. An economic approach*. New York: McGraw-Hill Publishing Company.

- Mugenda, M.O. & Mugenda, G.A. (1999). *Research methods: Quantitative and qualitative approaches*. Nairobi: Central Graphics Services.
- Nassiuma, D. K. (2000). *Survey sampling: Theory and methods in social sciences*. London: St. Martin's Press Inc.
- Nassiuma, D. K. and Mwangi, J. W (2004). *Statistical methods for information analysis. An Introduction*. Njoro: Egerton University Press
- Ngware, M.W. (2000). *Internal efficiency and its relationship to equity in institutes of technology in Kenya (Unpublished PhD Thesis)*. Njoro, Kenya: Egerton University.
- Nkapa, M. (1997). *Educational research for modern scholars*. Emigu: Dimension Publisher
- Odada, J. & Odhiambo, L.O (1989). *Cost-sharing in Kenya*. Nairobi: United Nations Children's Fund
- Okoiye, C.E. (1996). *Gender gap in access to education in Nigeria*. Nairobi: Academy of Science Publishers.
- Olembo, J.O. (1986). *Financing secondary education. KERA Research Report No. 22*. Nairobi: Kenyatta University, Bureau of Educational Research.
- Orodho, J.A. (2001). *The impact of cost-sharing on primary education in Kenya*. Nairobi: Institute of Policy and Analysis Research.
- Orodho, J.A. & Njeru, H.N. (2003). *Access and participation in secondary school education in Kenya: emerging issues and policy implications*. Nairobi: Institute of Policy and Analysis Research.
- Owino, O. & Abagi, O. (2000). *Cost-sharing in education and health in Kenya*. Nairobi: Institute of Policy and Analysis Research.
- Penrose, P. (1998). *Cost sharing in education-public finance, school and household perspectives-education research No. 27. Dar-es-Salam: Department for International Development (DFID)*.
- Psacharopoulos, G. & Woodhall, M. (1985). *Education for development: An analysis for investment choices*. Washington: McGraw-Hill Company.

Rono, P. K. (1988). *“Cost-sharing in education.”* Nairobi: Kenyatta University Press .

United Nations Educational, Social and Cultural Organisation.(1990). *African thoughts for prospects of education for all. selection from papers commissioned for regional consultations on education for all.* Dakar: United Nations Educational, Social and Cultural Organisation

United Nations Educational, Social and Cultural Organisation. (2004). *Access and equity:* Dakar: United Nations Educational, Social and Cultural Organisation

World Bank (1980). *Poverty and development of human resources: Regional perspectives.* Washington: World Bank.

World Bank. (1986). *Financing education in developing countries, an exploration of policy options.* Washington: World Bank.

World Bank. (1988). *Study and recommendations to education in Sub-Saharan Africa: policies and adjustment.* Washington: World Bank.

World Bank .(1996). *Development in practice. Priorities and strategies for education.* Washington: World Bank.

World Bank. (1997). *Education financing.* Washington: World Bank.

World Bank. (1999). *Education sector strategy.* Washington: World Bank.

World Bank. (2005). *Expanding opportunities and building competencies for young people: A new agenda for secondary education.* Washington: World Bank.

World Bank. (2009). *Education for all.* Washington: World Bank.

APPENDICES

APPENDIX A – Letter Of Introduction

I am currently a Masters candidate at Egerton University carrying out a field research. The research is on the relationship between cost-sharing and access and equity in education in public secondary schools in Nakuru District, Kenya. Do not write your name on the questionnaire since the information you shall give will be treated confidentially and will be used only for the purpose of this research.

Kindly write your honest response to each question.

Yours sincerely,

Mbugua, J. Njeri.

(Researcher)

APPENDIX B: Student Questionnaire

All your responses and information obtained will be treated with utmost confidentiality and will be used for the purposes of this study only. Please read the instructions for each questions carefully and give the appropriate responses. You are requested to complete this questionnaire by ticking (✓) in the appropriate places or filling the blank spaces.

Section A

1. Name of the school _____
2. Type of the school
 - Co-educational
 - Boys only
 - Girls only
3. Category of the school
 - District
 - Provincial
 - National
4. At what age did you join the current secondary school? _____
5. How many schools have you learnt in since you joined form one? _____
6. Was lack of school fees the reason for your school transfer?
 - Yes
 - No

SECTION B

1. State the actual amount of pocket money you receive per term.
 - a. Kshs 0 – 200
 - b. Kshs 201 – 400
 - c. Kshs 401 – 600
 - d. Kshs 601 – 800

- e. Kshs 801 – 1000
 - f. Over Kshs 1000
 - g. No pocket money
2. Who pays your secondary school fees?
- a. Mother
 - b. Father
 - c. Guardian
 - d. Charitable organization and well-wishers
3. State if your parents are alive or deceased (you could tick more than one).
- a) Father is alive
 - b) Father deceased
 - c) Mother is alive
 - d) Mother deceased
4. What is the occupation of the person(s) who pays your school fees?
- a. Self employed
 - b. Government employee
 - c. Private sector employee
 - d. State corporation employee
 - e. Not employed
5. What is the highest level of education reached by your
- a) Father**
- a. Primary
 - b. Secondary
 - c. Middle-level college
 - d. University
 - e. None

b) Mother

- a. Primary
- b. Secondary
- c. Middle-level college
- d. University
- e. None

c) Guardian

- a. Primary
- b. Secondary
- c. Middle-level college
- d. University
- e. None

6. Apart from fees, how much money do you require to spend on traveling, personal effects, books and subsistence?

- a. Personal effects _____ Kshs
- b. Books _____ Kshs
- c. Traveling _____ Kshs.

7. State the various fee related problems that you experience in your school. (You can tick more than one)

- a. Late payment of fees
- b. Going home for fees frequently
- c. Staying at home due to fees
- d. Dropping out of school due to fees
- e. Repeating classes.
- f. None

8. Give the average number of days you are absent from school per term due to lack of school fees?

- | | | | |
|-----------------|--------------------------|-----------------|--------------------------|
| a. 1 – 5 days | <input type="checkbox"/> | f. 26 – 30 days | <input type="checkbox"/> |
| b. 6 – 10 days | <input type="checkbox"/> | g. 31 and above | <input type="checkbox"/> |
| c. 11 – 17 days | <input type="checkbox"/> | h. None | <input type="checkbox"/> |
| d. 16 – 20 days | <input type="checkbox"/> | | |
| e. 21 – 25 days | <input type="checkbox"/> | | |

9. Do you have brothers or sisters who have dropped out of school due to lack of fees?

- a. Yes
- b. No

10. What would you recommend in terms of fee payment?

- a. Reduce fees
- b. Offer free secondary education
- c. Increase bursary fund to students

11. Do you receive any bursary to substitute your fees?

- a. Yes
- b. No.

12. State the number of brothers you have? _____

13. State the number of sisters you have? _____

14. How many of your sisters are in secondary school? _____

15. How many of your brothers are in secondary school? _____

16. Indicate the total annual fees paid by all your siblings in school (secondary and University).

a. Kshs. 20,000

b. Kshs. 30,000

c. Kshs. 40,000

d. Above Kshs 50,000

17. Had you been admitted to another category of school in form one but failed to report due to fees?

a. Yes

b. No

Thank you for your contribution

APPENDIX C: Head Teacher Questionnaire

All your responses and information obtained will be treated with utmost confidentiality and will be used for the purposes of this study only. Please read the instructions for each question carefully before you give the required responses. You are requested to complete this questionnaire by ticking (✓) in the appropriate places or filling the blank spaces.

Section A

1. Name of the school _____
2. Type of the school
 - a. Mixed (co-educational)
 - b. Boys only
 - c. Girls only
3. Category of the school
 - a. District
 - b. Provincial
 - c. National
4. Please indicate the number of years you have been a head teacher.
 - a. Less than 5 years
 - b. 5-10 years
 - c. Above 10 years
5. Please indicate your level of training.
 - a. Diploma
 - b. Degree
 - c. Masters
6. When was the school established? _____
7. State the number of streams the school has? _____

8. Who started the school?

- a. Church
- b. Government
- c. Community ('Harambee')
- d. Any other (specify) _____

9. In which year did you join your current school as a head teacher? _____

10. State the number of students per class for the last four years

Form	Number of students												
	Optimum class size	2004		Total	2005		Total	2006		Total	2007		Total
		B	G		B	G		B	G		B	G	
One													
Two													
Three													
Four													
Total													

11. What is the school capacity? _____

12. Give reasons for variation.

- a. Lack of school fees
- b. Transfer
- c. Dropouts
- d. New comers

13. How long have you served in this school?

- a. 1-5 years
- b. 6-11 years
- c. 12-20 years
- d. Above 20 years

14. In your school are the following facilities well equipped?

- | | | | | |
|-----------------|-----|--------------------------|-----|--------------------------|
| a. Workshops | Yes | <input type="checkbox"/> | No. | <input type="checkbox"/> |
| b. Laboratories | Yes | <input type="checkbox"/> | No | <input type="checkbox"/> |
| c. Library | Yes | <input type="checkbox"/> | No | <input type="checkbox"/> |
| d. Home science | Yes | <input type="checkbox"/> | No. | <input type="checkbox"/> |

Section B

1. Specify who buys textbooks in your school. You can tick more than one.

- | | |
|--------------------------|--------------------------|
| a. School | <input type="checkbox"/> |
| b. Parents | <input type="checkbox"/> |
| c. Government | <input type="checkbox"/> |
| d. Other (specify) _____ | - |

2. Are the class text books adequate or the students have to share?

- | | |
|--------|--------------------------|
| a. Yes | <input type="checkbox"/> |
| b. No | <input type="checkbox"/> |

3. Who is the major financier of development projects in your school?

- | | |
|--------------------------------------|--------------------------|
| a. Parent Teachers Association (PTA) | <input type="checkbox"/> |
| b. Board of Governors (B.O.G) | <input type="checkbox"/> |
| c. Government | <input type="checkbox"/> |
| d. Community | <input type="checkbox"/> |
| e. Parents | <input type="checkbox"/> |

4. Kindly tick all the items you normally request new students to come with other than fees.

- | | | | |
|------------------------|--------------------------|--------------------------|--------------------------|
| a. Caution money | <input type="checkbox"/> | i. Bible | <input type="checkbox"/> |
| b. Uniforms | <input type="checkbox"/> | j. Kamusi | <input type="checkbox"/> |
| c. Boarding items | <input type="checkbox"/> | k. Dictionary | <input type="checkbox"/> |
| d. Foolscaps | <input type="checkbox"/> | l. Assorted textbooks | <input type="checkbox"/> |
| e. Duplicating paper | <input type="checkbox"/> | m. Exercise books | <input type="checkbox"/> |
| f. Mathematical tables | <input type="checkbox"/> | n. Hockey stick | <input type="checkbox"/> |
| g. Jembe | <input type="checkbox"/> | o. Other (specify) _____ | |
| h. Slasher | <input type="checkbox"/> | | |

5. What is the major source of income of parents in your school?
- a. Salaries
- b. Businesses
- c. Farming
6. Are the majority of parents in your school able to meet the cost of educating their children?
- a. Yes
- b. No.
7. If no, what is the major reason?
- a. Most parents are single sex
- b. Most parents are unemployed
- c. Most parents have low incomes
- d. Most parents have large families
- e. None of the above (specify) _____
8. Do all the deserving students receive bursaries in your school?
- a. Yes
- b. No.
9. State the number of students in your school who failed to pay full school fees for the last four years and the fees arrears

Year	No. of students	Fees arrears
2004		
2005		
2006		
2007		

10. How has the inability to collect this money affected the running of the school?
- a. Very much
- b. Much
- c. Not much
- d. None

Section C

1. State the number of students who repeated, dropped out, or transferred from your school for the years 2004-2007.

Years	Repeaters	B	G	Drop outs	B	G	Transfers	B	G
2004									
2005									
2006									
2007									
Total									

2. Which is the major reason for repetition, dropout, and transferring of students in your school?

- a. Pregnancy/Early marriages
- b. Indiscipline in class
- c. Weaknesses in class
- d. Lack of fees
- e. Sickness
- f. Movement between schools

3. Do the existing government policies regarding fee payment

- a) make it easier for schools to raise money?

Yes

No

- b) enable the needy students to afford secondary education?

Yes

No.

4. Has the cost sharing policy fully achieved its aim in constructing physical facilities in the school?

Yes

No.

5. What are the most important aspects of government policy on fees at secondary school level that require improvement? _____

6. From your experience as an administrator, how best do you think cost sharing policy could be well implemented in secondary schools in Kenya? Indicate three best ways of implementing cost-sharing policy _____

Thank you for your contribution

APPENDIX D: Students' Flow Rates Proforma

Please indicate enrolment per class per year and optimum school size.

Name of school _____

Year/class	Boys	Girls	Total	Optimum school size
2004 Form 1				
2005 Form 2				
2006 Form 3				
2007 Form 4				

Thank you for your contribution

APPENDIX E₁ : Letter of Pilot Study



EGERTON

Telephone: Nakuru 62481/91/92
Telegrams: UNIVERSITY, Njoro
Kenya

UNIVERSITY

P. O. Box 536
Njoro,

January 31, 2007

In reply quote Ref:

Date:

**DEPARTMENT OF CURRICULUM, INSTRUCTION AND EDUCATIONAL
MANAGEMENT**

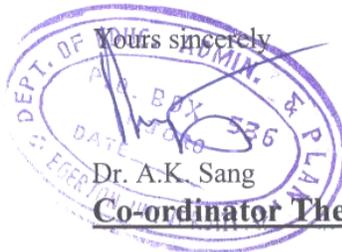
TO WHOM IT MAY CONCERN:

REF: JENNIFER MBUGUA: REG. EM15/1292/04

This is to confirm that the above subject is a registered Master of Education (Educational Management) student in the Faculty of Education, Egerton University.

Mbugua has successfully completed her Coursework, written and defended Research Proposal at the department and Faculty levels. She is now planning to conduct a pilot study for the purpose of validation and establishing reliability of her research tool. To this effect, she has sampled a few schools in the district for the purpose of getting relevant information for strengthening the quality of her research instruments.

Any assistance accorded to her in this stage of her research process will be highly appreciated.



Dr. A.K. Sang

Co-ordinator Thesis/Project Research

APPENDIX E₂: Research Authorization

MINISTRY OF SCIENCE & TECHNOLOGY

Telegrams: SCIENCE TEC", Nairobi

Fax No.
Telephone: 318581
When replying please quote



JOGOO HOUSE
HARAMBEE AVENUE
P. O. Box 60209-00200
NAIROBI
KENYA

MOST 13/001/37C 59/2

9th February 2007

Jennifer Njeri Mbugua
Egerton University
P.O. Box 536
NJORO

Dear Madam,

RE: RESEARCH AUTHORIZATION

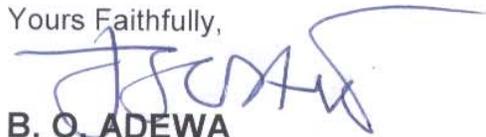
Following your application for authority to carry out research on, *'Effects of Cost Sharing on access and Equity in Education in Public Secondary Schools in Nakuru District, Kenya'*

I am pleased to inform you that you have been authorized to carry out research in Nakuru District for a period ending 30th July 2007.

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

On completion of your research, you are expected to submit two copies of your research report to this office.

Yours Faithfully,

A handwritten signature in blue ink, appearing to read 'B. O. ADEWA', written over a horizontal line.

B. O. ADEWA
FOR: PERMANENT SECRETARY

Copy to:

The District Commissioner
Nakuru District

The District Education Officer
Nakuru District