INFLUENCE OF GOVERNMENT SUBSIDIZED SECONDARY EDUCATION ON QUALITY OF INSTRUCTION AND INTERNAL EFFICIENCY OF PUBLIC SECONDARY SCHOOLS IN KITUI COUNTY, KENYA

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DECLARATION AND RECOMMENDATION

Declaration

This Project Report is my original work and has not been presented for an award of a Diploma or Degree in this or any other university.

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Recommendation

The project report has been submitted for examination with my approval as the University Supervisor.

Signed_____ Date:_____

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DEDICATION

I dedicate this project to my late father Kituli Makau.

ACKNOWLEDGEMENT

I thank the Almighty God for giving me good health, patience and inspiration to carry out this study. I am grateful to Egerton University for the opportunity accorded to me to do my study in the university. The completion of this project report was made possible owing to the support of various persons. I am greatly indebted to my supervisor Prof. Joseph Wamutitu for his invaluable commitment, support and dedication to this work. He spared much of his time and energy to make this work a success. I am deeply grateful once again to my supervisor for helping me shape my research topic in the initial stages. Many thanks go to the lecturers of the Faculty of Education for the units taught that helped in the development and preparation of this report. I cannot forget the assistance accorded to me during data analysis by Mr Leo Ogola.I sincerely thank my loving husband Onesmus and children Richard, Lenah and Esther for their inspiration, concern, financial and moral support during the course of my study. At the same time I wish to thank my course mates who were truly instrumental to me throughout the course. Their constant encouragement, moral support and constructive criticisms helped to shape my work. To all friends who were a source of inspiration and motivation, your efforts can not go unnoticed.

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ABSTRACT

Secondary education is regarded as the most important stage in the educational cycle of a child because it is the foundation for further education, training and work. The quality of instruction and internal efficiency of institutions providing it should be high if secondary school education is to achieve its objectives. However, the quality of instruction and internal efficiency of public secondary schools in Kitui county has been poor. Literature shows that the implementation of SSE led to increase in students' enrolment in many schools. This may have negatively affected both quality of instruction and internal efficiency of schools in Kitui county. This study examined the influence of subsidized secondary education on quality of instruction and internal efficiency of public secondary schools in Kitui County Kenya. The study adopted the descriptive survey research design. A sample of fifty nine (59) headteachers and two hundred and seventeen (217) teachers selected using purposive, proportionate and simple random sampling techniques participated in the study. Two data collection instruments namely; the headteacher questionnaire (HTQ) and teacher questionnaire (TQ) were used to collect data. The construct and content validity of the two instruments were examined by a team of five (5) experts from the Department of Curriculum, Instruction and Educational Management, Egerton University. The two data collection tools were also piloted for reliability using a sample of 15 teachers in 4 schools which did not take part in the actual study. The reliability coefficients were estimated using the Cronbach Alpha formulae. The reliability coefficients of HTQ and TQ were 0.71 and 0.83 respectively. The collected data was analyzed with the aid of the Statistical Package for Social Science (SPSS). The analyzed data was presented in the form of frequencies, percentages, means standard deviations and t-test. The results of the study indicated that subsidized secondary education (SSE) was fairly implemented in Kitui county, had significant positive influence on the quality of instruction in schools but had no significant influence on the internal efficiency of schools. The findings of the study may be used by school administrators to optimize on use of subsidized secondary education resources to enhance quality of instruction and internal efficiency in their respective schools. The results may also assist the government to evaluate and improve on the implementation and allocation of subsidized secondary programme.

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LIST OF ABBREVIATIONS AND ACRONYMS

ASAL:	Arid and Semi Arid Lands
CBS:	Central Bureau of Statistics
DEO:	District Education Officer
GDP:	Gross Domestic Product
GER:	Gross Enrolment Ratio
GoK:	Government of Kenya
HTQ:	Head teacher's Questionnaire
IPAR:	Institute of Policy Analysis and Research
JICA:	Japan International Corporation Agency
KNEC:	Kenya National Examinations Council
KCSE:	Kenya Certificate of Secondary Examinations
KIPPRA:	Kenya Institute for Public Policy Research and Analysis
NER:	Net Enrolment Ratio
KNBS:	Kenya National Bureau of Statistics
MDGS:	Millennium Development Goals
MOE:	Ministry of Education
RoK:	Republic of Kenya
SPSS:	Statistical Package for Social Science
SSE:	Subsidized Secondary Education
UNESCO:	United Nations Education Science, Culture and Organization
UNICEF:	United Nations Children's Fund

CHAPTER ONE
INTRODUCTION

1.1 Background of the Study

Education is not only a human right, but also a means of empowering society socially and economically. It enhances the ability of society to preserve and utilize the environment for productive gain and sustainable livelihood (European Union, 2013). Provision of education and training to all is fundamental to the success of the government's development strategy (Kenya National Bureau of Statistics [KNBS], 2009). Studies by Psacharapoulos and Woodhall (1985) established that investment in education guaranteed higher individual returns than investment in alternative sectors of the economy. Maiyo (2006) noted that education is the root source of human, social, cultural, and economic capital and is perceived as legitimate in terms of both the individual and collective good. IBED (2005) observes that education results into explosive growth both at the national level and the global arena. KIPPRA (2008) points out that quality of instruction and efficiency in education is important in generating the opportunities and benefits of social and economic development. Since independence the government of Kenya (GoK) has placed a lot of emphasis on education as a way of empowering its citizens economically and socially (Republic of Kenya [RoK], 2005) the increased budgetary allocation to education over the last couple of years is an indication of the importance attached to education. The budgetary allocation to education rose from Kenya Shillings (Kshs) 73.48 million in 1963/1964 financial year to Kshs. 151.00 billion in 2009/2010 financial year (Republic of Kenya [RoK], 2011).

Secondary education is viewed as a critical level in the overall development of a country (Mingat, 2004). It plays a major role in creating the country's human resource capital at a level higher than the primary level of education (Central Bureau of Statistics [CBS], 2004). Secondary school education is the foundation for further education, training and work (RoK, 2007). It is a transitional level between primary and tertiary education, and it provides a base for acquiring insights, skills and competencies required at the higher levels of education as well as in the labour market (Nicolai, Prizzon & Hine, 2014). According to World Bank (2008) financing secondary education is important as it constitutes an investment in education that yields considerable social and private returns. Lewin and Stuart (2003), points out that investment in secondary education in sub-Saharan Africa, Kenya included provides countries with critical higher-level skills and knowledge for advanced learning and training of

technicians, scientists, entrepreneurs and yields considerable social and private returns. Secondary education further plays a crucial role in preparing individuals for life-long learning and work (World Bank, 2007).

The main source of finance to secondary school education in Kenya since independence has been the government and fees paid by parents (Orodho & Njeru, 2003). However, access to secondary school education in developing countries has been low due to high levels of poverty (World Bank, 2005). In Kenya, the situation was aggravated by the implementation of cost sharing policy adopted by the government in 1988 (RoK, 1988). This policy led to a reduction in government budgetary allocation to secondary school education and a partial shift in financing secondary school education from the government to parents (RoK, 1999). Under the cost sharing policy, the government continued to pay teachers salaries while communities, sponsors and parents provided for physical facilities as well as teaching and learning materials (RoK, 1988). The provision of physical facilities and teaching–learning materials under the cost sharing programme was faced by limited finances. Secondary schools relied on fees paid by students as the main source of financing their operations, but many of the parents were either not able to pay fees at all or paid it irregularly (Mwangi, 2002). This led to low enrolment, low transition rates, low completion rates, high repetition and high dropouts' rates.

The rationale for subsidizing secondary education in Kenya, has its basis in the development of primary education and low participation rates in the secondary level of education. Most third world countries appreciate the fact that the strength of secondary education is the primary education. Consequently most third world countries, Kenya included have subsidized primary education with the long term goal for developing secondary education. To this end, as early as 1964, the government established the Ominde Commission to chart the course of the development of the education sector. The Commission emphasized the need for universal primary education (KIPPRA, 2008). Partial implementation of this recommendation started in 1974 covering standards 1-4 and in 1978 was extended to standards 5-7. The intervention resulted in massive enrolments in primary schools; the gross enrolment rate (GER) level increased from 50 percent in 1963 to a peak of 105.4 percent in 1989.

However, the high enrolments were negatively affected by the cost sharing policy introduced in Kenya in 1988 (RoK, 1988). The policy hindered many children, especially those from

economically marginalized groups, from accessing primary education (RoK, 2005). Education therefore became the preserve of the well-to-do members of Kenyan society. By December 2002, GER had fallen to 88.2 percent, compared with the 1989 level of 105 percent. Declining enrolment heightened concern among leaders; thus**,** the provision of free primary education became the main agenda during the general election of December 2002 in Kenya (UNESCO, 2008). Public subsidization of education all over the world is motivated by governments desire to address the social problems of access, equity and poverty (World Bank, 2002). Several studies done both in the developed and developing countries all point out to the fact that a subsidy influences, among other things, educational indices of equity and enrolment (Rono, 2005).

The government in an attempt to support the massive enrolments as a result of the free primary education initiative of 2003 and address the declining secondary enrolments introduced a government subsidy, subsidized secondary education (SSE) in 2008 to further subsidize secondary education to increase participation in the secondary level of education. The government subsidy of 2008, allocated Kshs 10,265.00 to each student yearly to take care of tuition materials, salaries of support staff, water and electricity in public schools (Ministry of Education [MOE], 2008), besides an existing government subsidy of paying teachers' salaries since independence in 1963. The parents were only left with payment of levies to cater for boarding expenses, lunch for day schools, transport, infrastructure which is lower than what they used to pay before the advent of subsidized education (KNBS, 2009). The implementation of subsidized secondary school education resulted to a significant increase in enrolment, retention and transition rates (Verpoor, 2008; Barasa & Tsisiga, 2014). SSE also enhanced schools ability to purchase teaching–learning materials (Gogo, Ayodo & Othuon, 2010). A study conducted by Onyango (2012) in Kyuso district, Kitui County, Kenya revealed that SSE enhanced the completion rates of students in public secondary schools.

Despite the benefits associated with SSE, it has faced a number of challenges since its inception in 2008. Mauliko and Muhasi (2013) noted that increased enrolment has seriously overstretched the physical facilities in most schools especially boarding schools. Delays in release of funds to school have also been identified as a challenge in the implementation of the programme (Aboka, 2008). Late disbursements of funds have a negative effect on learning as schools reach levels where crucial learning materials lack in the schools. A study by Khamati and Nyongesa (2013) revealed that most of the school heads felt that they did not

have adequate skills to implement and manage the SSE programe. The study also found out that a number of socioeconomic factors were leading to school drop outs and therefore reversing the gains made by SSE towards increasing enrolment, retention and completion rates. Mukua (2013) noted that most parents do not want to pay anything as they argue that secondary education is free. This poses a challenge to the schools administration as they try to collect other funds such as lunch in case of day schools, boarding fee in boarding schools, activity and building funds.

Besides enhancing access to education, subsidized education also affects quality of education and efficiency of schools (Chareonwongsak, 2005). According to UNESCO (2005), quality of education is concerned with health of the learners in school, safe environment, relevant curricula, instruction process and outcomes that link to national educational goals. Mulkeen, Chapman and Dejaegher (2005) point out that the determinants of quality education include expenditure per pupil, material inputs, teaching practices, teacher quality, school management and instructional materials. Instruction process which is the way content is delivered to the learners has also a major influence on education quality (Chareonwongsak, 2005). The World Bank (2009) identified methodology, student-teacher ratio, student-textbook ratio, teaching assignments as the main factors affecting quality of instruction. It was further observed that high student-teacher ratio, low student-textbook ratio, few teaching assignments and poor curricula delivery methodology compromise quality of education (UNESCO, 2005).

An education system is said to be efficient if maximum output is obtained from a given input or if a given output is obtained with minimum possible inputs (Chareonwongsak, 2005). Efficiency as such refers to the relationship between what is invested in education and the results coming from the system (Chiuri & Kiumi, 2005). The inputs in secondary education include teaching-learning resources, curriculum delivery process, students, teachers, support from the government, community and other stakeholders. On the other hand outputs refer to acquired attitudes and capabilities that students gain from an education system (Meier & Rauch, 2000). There are two types of efficiencies; external and internal efficiencies. External efficiency is concerned with learners' ability to be productive in society upon completion of school.

Internal efficiency can be defined by a school performing well in examinations, well managed or give good results at reasonable cost (UNESCO, 2005). According to Rao (2007) determinants of internal efficiency in a school include dropout rates, repetition rates, transition rates, completion rates, utilization of school resources, adoption of new technology and class size. Subsidized secondary school education provides schools with funds which can be used to purchase inputs such as tuition materials which in turn affect internal efficiency of schools (Nyakeri, 2007). Provision of SSE funds is based on user fees of Kshs.10, 265.00 per student per year (MOE, 2008). However school managers regard the amount as inadequate to meet the school's requirement to cope with increased enrolments (Kwamboka, 2009). This might have affected the quality of instruction and internal efficiency of schools.

Kitui County is one of the counties in Kenya that experienced high fee default rates and irregular fees payments before the implementation of subsidized secondary school education (CEO's Office Kitui County, 2009). Low fees payment was mainly attributed to high poverty levels in the County (CBS, 2004). With the implementation of subsidized secondary school education in 2008, enrolment in the secondary level of education increased in the County from 46,100 in 2007 to 53,937 in 2008 (CEO's Office Kitui County, 2012). As result of the increase in enrolment issues of overcrowded classrooms, high student-teacher ratio, less teaching assignments, overstretched physical facilities, inadequate equipment and wastage of limited resources emerged. The increased enrolment may have negatively affected the quality of instruction and internal efficiency of public secondary schools in the County. There was therefore need to examine the influence of the subsidized secondary education on quality of instruction and internal efficiency in public secondary schools in the County.

1.2 Statement of the Problem

Secondary education is regarded as the most important stage in the educational cycle of a child because it is the level at which learners are expected to acquire proficiency in both academic and applied subjects. It is also the foundation for further education, training and work. The quality of instruction and internal efficiency of institutions providing it should be high if secondary school education is to achieve its objectives. However, the quality of instruction and internal efficiency of public secondary schools in Kitui County has been poor as evidenced by emerging issues of overcrowded classrooms, high student-teacher ratio, less teaching assignments, overstretched physical facilities, inadequate equipment and wastage of limited resources. The low quality of instruction and internal efficiency in secondary schools

has been of concern to parents and educators as they lead to wastage and poor performance in examinations. Literature shows that the implementation of SSE led to increase in students' enrolment in many schools. This may have negatively affected both quality of instruction and internal efficiency of schools in Kitui County. However, there has been no empirical evidence to support this. There was therefore need to examine the influence of the SSE on quality of instruction and internal efficiency in public secondary schools in the county.

1.3 Purpose of the Study

The purpose of the study was to investigate the influence of subsidized secondary education on quality of instruction and internal efficiency of public secondary schools in Kitui County.

1.3.1 Objectives of the Study

The study was guided by the following objectives;

i) To establish the success levels of subsidized secondary school education programme implementation of public secondary schools in Kitui County.

ii) To determine the influence of subsidized secondary school education on quality of instruction in public secondary schools in Kitui County.

iii) To find out the influence of subsidized secondary school education on internal efficiency in public secondary schools in Kitui County.

1.4 Research Questions

The study attempted to answer the following research questions:

i) What were the success levels of subsidized secondary school education programme implementation in public secondary schools in Kitui County?

ii) What was the influence of subsidized secondary school education on quality of instruction in public secondary schools in Kitui County?

iii) What was the influence of subsidized secondary education on the internal efficiency of public secondary schools in Kitui County?

1.5 Significance of the Study

The findings of the study may be used by school managers to enhance proper management of SSE programme which may lead to students being provided with adequate learning materials on time which in turn may lead to better performance. Teachers may also enhance optimal utilization of resources provided by SSE programme to enhance proper curriculum delivery.

The government may too use it to improve the SSE funds allocation criteria and evaluation of the programme. It may also be used to address the challenges facing SSE programme. Headteachers may use it to improve on how they manage resources provided by the SSE programme. Other researchers' interested in quality of instruction and internal efficiency in schools under the SSE programme may also find the study useful.

1.6 Scope of the Study

The study covered all public secondary schools in Kitui County and involved fifty nine (59) headteachers and two hundred and seventeen (217) teachers. The study examined how subsidized secondary education was implemented, its' influence on quality of instruction and internal efficiency.

1.7 Limitations of the Study

The records at the county education office were not up to date as the County was fairly new. This compromised quality of data. Kitui County being an Arid and Semi Lands (ASAL) area is sparsely populated hence schools were far apart and this consumed a lot of time in data collection. To address this problem the researcher used private means. Non response was also a limitation to study. To address the problem of non response more than the sampled respondents at each school were given questionnaires to fill depending on the number sampled. The researcher also allowed more time to the respondents who requested.

1.8 Assumptions of the Study

The following assumptions were made by the study:-

i) That the information provided by the respondents was a true reflection of what was on the ground.

ii) That all the teachers had the right qualification to teach in secondary schools.

1.9 Definition of Terms

The following are the operational definition of terms used in this study:

Implementation of subsidized secondary education (SSE): Refers to the process of putting into practice an idea, programme or a set of activities new to the people attempting to bring change (Fullan, 1982). In this study, it meant the introduction of of free day secondary education (SSE) by the government in public secondary schools in Kenya in 2008.

Influence: Refers to a change produced in a person or thing by another (Hornby, 2010). In this study, it meant the change in quality of instruction and internal efficiency brought about by the introduction of SSE in public secondary schools.

Internal efficiency: Is an indicator of the school system's capacity to retain enrolled students to the course completion level with minimum wastage of resources such as time, finance and labour (Ndabazinhle, 2004). In this study, it meant the ability of an individual school to utilize its resources fully to educate the greatest number of students in the shortest time with the least use of financial and human resources. Internal efficiency was measured by school dropouts' rates, repetition rates, transition rates, retention rates, completion rates and enrolment.

Public secondary education: Refer to the education received after the primary education cycle from form one to form four which is controlled and funded by the government (Mibei, 2010). In this study, it meant post primary schools that receive funds and teachers from the government.

Quality of instruction: Is a measure of excellence in delivery of the curriculum by the teachers to the students (Lee, et al, 2012). In this study, it refers to the student's performance or the standards of student's attainment in different subjects of study. indicators of quality of instruction include, number of teaching assignments, number of textbooks, students-teachers ratio, method of curriculum delivery and availability of teaching materials.

Subsidized secondary education: Refers to the financial and or support given by the government to producers or service providers to reduce the cost of production so that the prices of these goods and services can be kept low (Shovel, 2011). In this study, it will mean a situation where by the government pays part of the cost of secondary education at a rate of kshs: 10,265, per student per year in public secondary schools to make education affordable to the public.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

This chapter reviewed related work done in this area of study. Reviewed work was drawn from Kenya and other parts of the World. It covered financing of education in the developed and developing countries, financing of secondary education in Kenya, subsidized secondary education, challenges facing subsidized secondary education**,** quality of instruction, internal efficiency, theoretical and conceptual framework.

2.2 Education Financing in Developed Countries

In most developed countries the policy allows public expenditure on education alongside private expenditure. Where the Government spends more compared to private sector or household expenditures, it exercises more control on revenue and expenditure. The sources of finance and control depends on the system of Governments whether unitary or federal. In the United States of America, the Government is federal in nature and has three major levels involved in education financing namely; the federal, the state and local authorities. At the three levels there are taxes levied to finance education Nyaga (2005). The state issues schools with expenditure ceiling and incase the school exceeds the ceilings the school funds the extra cost by use of local taxes. From a case study of France education Kaiser (2007) pointed out that the mid 19th century onwards the state intervention in education in France became necessary to ease the financial burden of the local authorities. Grants are made available to Municipal authorities to build more schools and for the payment of teacher salaries, scholarships to assist the less fortunate families. Education in France is mainly financed by the state, local authorities, education establishment's, private institutions, movements, commercial and industrial firms (European /Commission/ EACEA/Eurydice, 2013).

In Switzerland, the main sources of finance to public education are communities, large firms, public organizations and fees paid by parents in private schools (European /Commission/ EACEA/Eurydice, 2013). In Japan, after the World War II the Government invested heavily in education, made education free and compulsory at all levels. The Government strictly monitors private investment in education (Japan International Corporation Agency [JICA], 2004). In China, education law enacted in 1986 made primary and secondary education free and compulsory (Lewin, 2012). Funding comes mainly from the central Government, District

Governments and the local authorities. Extra funding is sourced from the school investments and fees paid by students outside the school catchment areas (Liu, 2004).

2.3 Education Financing in Developing Countries

Finances for education in developing countries are mainly from the exchequer. For example, in Sri–Lanka education is mainly financed from the exchequer and accounts for 3% of the countries' GDP (GIZ, 2010). A significant percentage (30%) of the education budget in the country is met through external funding by organizations such as UNESCO and JICA. Both primary and secondary education is subsidized as parents of pupils/students are charged only a small levy for use of school facilities. Secondary education is highly subsidized to the extent that enrolment in secondary schools (2.3 million) in the mid 1980s surpassed the enrolment (1.8 million) in primary school (Jean, 2010). In Costa Rica, education is free from primary to secondary. However, at secondary level, households meet some of the direct costs of education such as uniform, text books, stationery, supplies and transport. By 1998, GER for primary education in the country reached over 100% while the secondary GER was at 32% (Carnoy & Torres, 1992). The low transition rate was attributed to the levies charged at the secondary level of education (Lewin & Francoise, 2001).

Before the economic crisis in Zimbabwe which started in 2001, the country's per capita income was US $ 540 and the Government allocated 8 – 9 % of its GDP to education. As a result, GER in primary schools was 130% while GER was 42% in secondary schools (Lewin & Moyo, 2001). The Government was the biggest financier of education while the households contributed the out of budget fees and levies which were charged in line with the government guidelines (Coclough, 2012). In Mauritius, education in public institutions, from primary level to the University is fully funded by the Government (Republic of Mauritius, 2012). Between 1996 and 1997, the total Government expenditure in education was slightly below 3% of GNP which was low compared with countries of similar levels of development like Botswana and Zimbabwe. Private schools are subsidized by the Government through payment of staff salaries and loans at a preferential interest rate through the development bank of Mauritius. There is an authority to channel the assistance and exercise control over private schools and as a result 80% of schools in the country are privately owned (Sudhoo *et al*, 2001).

Tanzania embarked on rapid expansion of education immediately after independence. Education was mainly funded through tax revenue and donor support. Expansion in primary education was rapid but was regulated at secondary school level by manpower requirements. In 1988 the Government of Tanzania adopted the cost sharing policy in her schools (World Bank, 1988). The private schools co-exist with the public ones and by 1993 there were 260 private schools outnumbering the 177 public secondary schools. In the 1990s the Government of Tanzania reduced education budget by 21% in 1990/1991 and 1993/1994 financial years (Maliyamkono & Ogbu, 2002). In 1990/1991 the Government spent 6.13% of its budget on education and this dropped to 3.3 in the financial year 1993/1994.

From the above reviewed studies, it is evident that education is highly subsidized in many Countries due to its immense social economic benefits such as creation of human capital, income distribution, controlled population growth, improved health care, social consciousness and inter-generational transfers (Psacharopolous & Woodhall, 1985). If on the other hand, education is left in the hands of private investors, there may be under investment due to the inherent capital market imperfections, the poor may be disadvantaged in accessing credit to finance education in the existing financial institutions (Anderson & Keys, 2007).

2.4 Financing of Public Secondary Education in Kenya

An examination of the patterns and trends of education financing in Kenya reveals an existence of a partnership between the state and households, communities and private sector long before the official enunciation and inauguration of the cost sharing policy by government (Odada & Odhiambo, 1989). At independence in 1963, the government of Kenya allocated 15% of the recurrent expenditure to education even though the government could not meet the pervasive demand for education. Local communities took the initiative of building schools which were later taken over by the government once they became viable. The government took the responsibility of paying teachers' salaries, providing instructional materials and equipment (Orodho & Njeru, 2003).

This highly subsidized education was pegged on the then good economic growth rate of 6.6% between 1964-1973, however this trend changed between 1974-1979 when the GDP growth rate declined to 5.2% and further plugged to 4.1% between 1980 to 1989 (Bray, 2001). The situation was worsened by the onset of the social economic crisis of 1980s in African Countries which made the unit cost of education at all levels in Kenya to be much higher than

other Countries in the same range of per capita income (UNESCO, 2003). This formed the basis of World Bank to recommend user fee in education in African Countries Kenya included (World Bank, 1988).

In response to the socio-economic crises of the 1980s, the government of Kenya put in place policies to bring about economic recovery, trigger, accelerate and sustain development (RoK, 1988). Thus in 1986, the Government came up with the Sessional Paper No. 1 on economic Management for renewed growth which recommended the introduction of cost sharing in all service sectors. The aim was to reduce government financial support to sectors that should otherwise be self-sustaining (RoK, 1986). The Sessional Paper was critical of the high government recurrent expenditure on education and training and consequently recommended control measures to be taken to reduce such expenditures to manageable levels.

In order to deal with the socio-economic challenges of the 1980s, the government appointed a presidential working party on education and training in 1988. The mandate of the party was to study the education sector and recommend ways of ensuring the delivery of education and training services were within the limits of the constrained economic conditions. This report recommended the introduction of cost sharing in education. The recommendation was accepted by the government in the session Paper No. 6 on education and training for the next decade and beyond (RoK, 1988). Under the cost sharing policy the government was to meet the cost of teachers' salaries and education administration. The parents on the other hand were to provide tuition materials, text books, activity fees, examination fees and other direct and indirect costs of education, while the communities were to provide physical facilities and ensure their maintenance at the Secondary level of education (Koskei & Rono, 2004).

Under the cost sharing policy introduced by the government, recurrent expenditure per student in the form of grant in aid and development fund per school declined sharply from Kshs. 824 and Kshs: 7,523 in 1996/97 fiscal year to Kshs. 163.4 and Kshs. 450 in 1999/2000 fiscal year. This policy was based on the premise that education expenditure was very high and that the government could not shoulder the whole burden as it had other sectors to cater for. Moreover, it was argued that since individuals were the greatest beneficiaries of education, they had a moral obligation to meet part of the cost (Chiuri & Kiumi, 2005). With the reduced government spending on schools as part of the cost-sharing strategy, the onus of raising additional funds was left in the hands of school management. This gave a leeway to

headteachers and Boards of Governors' to decide on the type and educational levy to impose on parents (RoK, 1999). The cost sharing policy led to an escalation of secondary school fees making secondary education unaffordable to many households in Kenya (Onsomu et.al, 2006). According to the Ministry of Finance and Planning (2000) the monthly household expenditure on education rose to between 30-44% of the household total income in urban areas and more than 50% to households' expenditures on education in the ASAL areas. As a result Kenya was one of the Countries with the highest household expenditure in education and training in relation to GNP in Sub-Saharan African (IPAR, 2003).

The increased cost of education was a heavy burden to households forcing many students to drop out of secondary school education due to the inability of their parents to pay fees (Njoroge, 2003). In a study conducted in Embu and Mbere districts in Kenya, Chandi (2002) observed that the cost sharing policy reduced access to secondary education significantly. Okemwa (2002) and Nyaronge (2005) noted that cost sharing limited access and increased wastage in secondary school level of education. Kirangu (2002) also pointed out that cost sharing reduced access to university education and lowered students' academic performance.

In an attempt to reduce wastage caused by the cost-sharing policy, the government came up with policy guidelines to control the fees charged in secondary schools in 1996 (Kioko, 2008). The purpose of the fee guidelines was to remove from school management the power to arbitrarily set high amounts of fees which deny the poor access to education (Mitha, 1995). The fee policy guidelines achieved very little and were criticized as being unrealistic. They did not reflect real unit cost of education at both national and specific school levels and the basis upon which the costs were determined were not known or established (Orodho & Njeru, 2003). Further, the school fees guidelines lacked specific policy guidelines and proper modalities for cost- sharing in education which made the cost of education vary by regions and schools as schools defied the government directives (Owino & Obagi, 2000).

The governments on the other hand through the MOE continued giving bursaries to needy students to subsidize the amount of fees paid by the parents but the amounts were low and allocation criteria and procedures said to be flawed Orodho and Njeru, (2003). Maisory (2006) pointed out that the impact of bursary schemes on participation rates was insignificant. This view is also shared by Barat (2007) who further observed that the bursary scheme did not have adequate funds to meet the demand and that the allocation criteria were open to

abuse. Kirunjah (2002) in his study on non-governmental organization participation in financing secondary education for quality education in Kenya established that non-governmental organizations participation in financing secondary education was unreliable, very political and thus recommended additional government funding in secondary education. It was necessary that the government identified a sustainable financing option that maximized cost effectiveness in resource utilization (Onsomu et. al, 2006).

It was against this backdrop that the Kenya government introduced the SSE in public secondary schools. The programme intended to reduce the household financial burden on education, make education affordable and increase demand and participation in public secondary level of education. The move led to massive enrolments in secondary schools, bringing with it overcrowded classrooms, high student teacher ratio, overstretched physical facilities, inadequate textbooks and fewer teaching assignments These issues could have had effects on quality of instruction and internal efficiency of schools and therefore the concern of the study to investigate and suggest possible remedies.

2.5 Subsidized Secondary Education (SSE) in Kenya

Since the 1980s many governments especially the developing countries have been unable to shoulder the total burden of financing education (Psacharopolous & Woodhall, 1985). Consequently cost – sharing in the financing of education especially at the post primary level became the norm rather than the exception. Though, this helps to ease pressure on the government budget, it is a major drawback in that it increases the private costs of the students education and an increase in the private costs of households expenditure on education leads to a reduction in demand for education by the poor (World Bank, 2005). In regions which could not cost share, the schools lacked essential facilities such as classrooms, libraries, laboratories, toilets and teacher houses. This compromised quality and internal efficiency of education in the country. This concurs with Studies done in Latin America and East Asia which revealed that lack of private resources as the major obstacles to access and completion of secondary education (Gropello, 2006).

In order to cushion the poor from the effects of cost sharing which reduced the households demand for education and afford the poor a chance to access educational opportunity and self advancement to become productive members of the society, the government of Kenya in 2008 introduced SSE to ensure equity in access, increase retention and reduce wastage in the

secondary education (KNBS, 2009). Under this programme the government is to meet part of cost of secondary education at the rate of Ksh.10, 265/= (Ten Thousand, Two Hundred and Sixty Five) for every student in public secondary school (Ministry of Education [MOE], 2008). It was expected that with the Government provision of SSE funds, the cost of education met by the households would reduce hence, increase their demand for secondary education. The increase in access will ensure optimal utilization of school resources to maximize retention, transition rates and completion rates and minimize dropouts and repetition. The SSE funds were also to be used to purchase teaching and learning materials and textbooks, to enhance curriculum delivery. This would ensure quality of instruction and high internal efficiency in secondary education (KNBS, 2009). The parents were expected to meet costs such as boarding, uniform, examination, food and development fees (MOE, 2008). Table 1 gives a summary of funding breakdown by the government of Kenya to public secondary schools.

Table 1

Government Funding Breakdown 2008 for Public Secondary Schools

Vote Head	**Amount (Kshs)**
Tuition	3,600.00
Activity	600.00
Administration cost	500.00
Electricity, water and conservancy	500.00
Repairs, maintenance & improvement	400.00
Administrative cost	400.00
Personal emoluments	3,965.00
Medical	300.00
Total	**10,265.00**

Source: Ministry of Education, (2008)

The implementation of subsidized secondary education increased the total enrolment in secondary schools by 17.10%, up from 1,189,300 in 2007 to 1,382,200 in 2008. The increase was mainly in day secondary schools. The gross enrolment rates (GER) increased from 38.0 percent in 2007 to 42.5 percent in 2008. Net enrolment rate (NER) improved from 24.2% in 2007 to 28.9% in 2008 and the KCSE candidates increased by 10.4% from 276.2 thousand in 2007 to 305.3 thousand in 2008 (KNBS, 2009).

The government expenditure trend reflects government commitment in implementing the subsidized secondary education. The government gross expenditure increased from Kshs.122.0 billion in 2007/2008 financial year to Kshs.136.8 billion in 2008/2009 financial year in total allocation. Secondary education registered the highest recurrent expenditure of Kshs.12.5 billion in 2008/2009 as compared to Kshs.3.9 billion in 2007/2008 financial year to cater for subsidized secondary education (KNBS, 2009). In the long run the Government targets to increase the quantity and improve the quality of labour force, raise the standard of living for the citizens, enhance cultural and political awareness (Adigun & Adu, 2012). Studies done both in the developed and developing countries all point out to the fact that a subsidy influences, among other things, educational indices of equity and enrolment (Rono, 2005). It was expected that, with the government massive investment in education, the school inefficiencies such as dropout rates and repetition will decline as well as increase the access, transition rates and completion rates (Ndabazinhle, 2004).

However, Kwamboka (2009) states that the SSE programme was faced with challenges among them shortage of teachers, scarcity of textbooks inadequate physical facilities, overcrowded classrooms, less teaching assignments and reported cases of drop outs. With all these reported challenges, it was not clear how the SSE programme affected the quality of instruction and internal efficiency of public secondary schools. Thus the study intends to document the influence of SSE on quality of instruction and internal efficiency in public secondary schools.

2.6 Challenges Facing Subsidized Secondary Education (SSE) in Kenya

Recent trends of Governments in Sub Saharan Africa have made expansion of secondary education a policy priority for a number of reasons among them, pressure to achieve universal primary education, desire to address the social problems of access, equity and poverty (World Bank, 2007) and need for knowledgeable and skilled people in knowledge based sector of the economy (lewin, 2007, IDEA, 2008). To achieve this, Rwanda and Uganda for instance abolished lower secondary education fees in 2006 and 2007 respectively (Patton, 2012). Kenya also launched the SSE in 2008 to address among other things; low quality education, low completion rates, low transition rates, high cost of education, meet the millennium development goals and education for all convention (Ohba, 2009). This move resulted to increased enrolments as pointed out by (Rono, 2005) that government subsidy influences positively among other things, educational indices of equity and enrolment. The same

view is shared by Muhindi (2012) who observed that the objective of subsidized secondary education (SSE) intervention introduced in 2008 was to ensure that all children who were academically qualified for secondary education were given an opportunity to continue with education.

However, Kwamboka (2009) states that shortage of teachers, scarcity of textbooks and inadequate physical facilities were amongst the problems that faced secondary schools in Kenya under the subsidized secondary programme. Teachers deal with over large classes in high schools. Lack of facilities at schools and busier teachers will almost certainly compromise the quality of education in Kenya Secondary schools (Barasa & Kiplangat, 2008). Turano (2010) further notes that limited physical facilities, over enrolled classes, shortage of physical facilities, inadequate number of trained teachers, financial constraints and delayed Government disbursement of the subsidy were likely to affect sustained provision of quality and efficient subsidized secondary education (SSE). However it was not clear how these emerging issues affected the quality of instruction and internal efficiency in public secondary schools. This was the concern that the study sought to investigate and suggest possible solutions.

2.7 Quality of Instruction in Public Secondary Schools in Kenya

Increasing access in secondary schools is crucial, but in itself, it is not enough. Students must learn the content contained within the curriculum (UNESCO, 2005). All aspects of quality in education should be improved to ensure recognized and measurable learning outcomes are achieved by the students in literacy, numeracy and cognitive achievements (Hanushek, 2005). A poor system of education compromises the entire system of human capital development and it develops students who are poorly prepared for tertiary level of education and adults who are illiterate (Chimombo, 2005). Cox (2004) notes that there is substantial evidence of serious decline in education quality in many developing countries even at a time when the government in those countries and donors are directing massive funds towards education improvement. This clearly indicates that, though a lot of emphasis has been put to increase access in education various aspects that determine quality of education need to be addressed.

For effective teaching and learning process, instructional materials are crucial, (RoK (2007). The same view is upheld by Linda (2004) who noted that instructional materials are critical ingredients in learning and the intended curriculum cannot be implemented well without

them. The teacher/pupil ratio is key in the teaching/learning process as teachers are more effective in small classes because teacher-student interaction is possible (Ochenje, 2008). She further asserts that classroom management becomes difficult when a teacher has to handle a large number of students. Kilel (2007) upholds the view that Students in large classes spend less time on tasks than students in smaller classes. Ncube (2004) points out that students in class of 5, students spend 90 per cent of their time on tasks that figure drops to 61 per cent for students in a class of 20, and only 12 percent in a class of 100. Increased time on task is responsible for the improved achievement that has been documented in classes of twenty or fewer students Lockheed and Verspoor (1991). The same view is shared by Betts and Shallock (1999) that learners who attend smaller classes were rated as having superior modes of participation than learners from large classes. Chimombo (2005) observes that monitoring performance at the classroom level to ensure quality of instruction is particularly important and should be distinguished from national examinations that select students for admission to the next level of education. He further notes that teachers discover what students already know by monitoring students work through essays, quizzes, tests, homework, classroom questions and standardized tests.

According to the Republic of Kenya (1965), the Government of Kenya put much emphasis on education expansion to provide access to the growing population. This saw the emergency of Harambee schools to provide secondary education. These schools had no facilities or teachers. Many argued that they were better than nothing. However, without provision of quality education the expected outcome is illiterate adults with ineffective education that cannot achieve the goals of development. The policy challenge, in education facing countries in the 21st Century especially developing countries are the ones to do with quality rather than quantity (Hanushek, 2005). In order for education to benefit the citizens of a nation, educational quality particularly inputs and processes should be analyzed and necessary interventions put in place.

The quality of education provided by a school system to learners is dependent on the quality of instruction processes experienced by them. Factors associated with quality instruction are material inputs such as textbooks, teaching practices, teacher's quality, classroom organization, and length of instructional programme, frequency of homework, teachers and pupil's exercise books (Reche et al, 2012). UNESCO (2005) view the determinants of quality as the teacher/learner relationship, resource availability, curriculum objectives, teaching

practices, provision of textbooks, Pedagogic materials, reduced class size and student friendly learning environment.

Lockheed *et al*. (1991) observes that although poor quality education exists at all levels, improvement must begin at the foundation where students develop basic attitudes and approaches to learning. There's need to improve all aspects of quality in education and guarantee its excellence in order to ensure that the recognized and measurable learning outcomes are achieved by all especially in literacy, numeric and cognitive skills. The major constraint to quality education has been resources RoK (2007). In an effort to address the issues of quality and access in secondary education, the government introduced SSE programme in 2008 (KNBS, 2009). The implementation of SSE programme in 2008 increased access in education tremendously from 1,180,300 in 2007 to 1,382,200 in 2008 (Office of Prime Minister, 2011). As a result, there was a 17.1% more student who got a chance in secondary school which is a key strategy in increasing the transition rates as well as affording eligible students an opportunity to enroll and remain in school (RoK, 2005).

Kenya like other Sub-Sahara African countries has been making progress towards the attainment of Millennium Development goals (MDGS) of basic education and education for all, secondary education included, but lags behind on the specific targets of these goals such as education quality and efficiency due to inadequate resources (Wamukuru, Kamau & Ocholla, 2006). A society with more educated labour force can also expect faster economic growth even if the returns may not be discernible for many years (Hanushek, 2005). Countries which stick to a path of real school quality improvement and investment in education have the potential to deliver large economic as well as social gains (Hanushek, 2005). Human capital can be built up by providing more schooling but policies that fail to address the quality of schooling risk expanding quantity without expanding human capital.

Wanyoike (2006) did a study on the effects of rapid expansion of secondary schools on provision of quality education in Kericho District. The findings of the study were that rapid expansion of secondary schools, adversely affected the quality of secondary education in Kericho District. The study recommended further study on evaluating teacher quality in secondary schools in Kenya. Further research done by Buhere (2007) on quality of education in public secondary schools in Webuye Division of Bungoma District found out that the quality of secondary schools education in Webuye was poor due to several factors including

lack of physical facilities and high pupil teacher ratio. The study recommended further research on the factors contributing to poor examination performance in Bungoma District. Muthoni (2008) analyzed the factors affecting quality of education in public day secondary schools in Thika - Ruiru Division, Thika District. The findings of the study was that, of the several factors that affected the quality of education in Thika – Ruiru Division, the major ones were teacher student ratio, frequency of assignments and physical facilities. However, the effect of the introduction of the SSE programme on quality of instruction is not known. Therefore it is the intention of this study to assess the influence of SSE programme on the quality of instruction in public secondary schools in Kitui County.

2.8 Internal Efficiency in Public Secondary Education in Kenya

Easton, Sudikou, Aokin, Crouch (2003) pointed out that efficiency in utilization of resources is an aspect of concern in developing countries whose educational systems are mostly inefficient in using resources such that they do not achieve their educational objectives. Maiyo (2004) notes that for an efficient educational system, the number of graduates who achieve the required level of learning is crucial and not the number enrolled as often used to indicate educational progress in African Countries. Chiuri and Kiumi (2005) stressed that cost benefit analysis are crucial in assessing internal efficiency of a system since they enable planners to identify the problem areas and measures to take to rectify the situation. The rate of students flow into an educational system determines whether those entering the school system are able to graduate within a stipulated period thereby showing the extent of wastage in a school system. Nafukho (2000) noted that given the scarce resources allocated to the education sector, there is need for educational institutions to be internally efficient. Educational managers should be concerned with producing qualified graduates at minimum cost. Nyakeri (2007) points out that there is need for efficient use of inputs such as fees to maximize output in operations of educational institutions so as to achieve school prime objectives. Those schools that operate at a higher or lower than optimal level experience diseconomies of scale and over or under utilization of resources respectively.

The cost sharing policy initiated by the government in 1988 as a result of the implementation of structural adjustment programme (SAPs) became a major factor in contributing to internal inefficiency in education as the government withdrew financial support for teaching and learning materials. This in turn forced the parents to supplement the financing of education. However, due to the increased poverty and inability of the parents' to pay for secondary

education dropout rates increased significantly rendering access more difficult for the poor people (Rok, 1999).

Kingwara (2006) did a study on the factors influencing internal efficiency of primary schools under free primary education policy in Suba East division. The findings of the study were that there are several factors influencing internal efficiency in schools under the subsidized programme such as untimely release of funds under the programme. The study recommended further research on the factors influencing internal efficiency in secondary schools. Mutia (2007) did a study on internal efficiency and public secondary school financing in Central division Kitui district. The findings of the study were that internal efficiency of secondary schools depends on availability of funds. The study recommended further research on impact of subsidized education on internal efficiency.

Kitundu (2008) looked at the factors influencing internal efficiency in public primary schools in Central division in Machakos district. The findings of the study were that there were several factors that influenced the internal efficiency in public primary schools including physical facilities, classroom enrolment, and teacher pupil ratio and transition rates. The study recommended further research on the factors influencing the quality of education in public secondary schools in Kenya.

Kiveu and Mayio (2009) conducted a study on the impact of cost sharing on internal efficiency of public secondary schools in Ndivisi division of Bungoma ddistrict, Kenya. The objectives of the study were to determine the direct costs that parents incur as part of the cost sharing policy in financing secondary education, to determine parental contribution to parents' teachers' association projects and assess the views of both parents and teachers on the impact of cost sharing on internal efficiency. The study recommended that the Government of Kenya should establish the unit cost of secondary education and provide fee guidelines that are acceptable by all to avoid additional costs in the middle of the term or year. School auditors need to encourage the use of locally available teaching materials, start income generating projects and sensitize parents on their role in provision of physical facilities and equipment.

From the above it can be noted that the internal efficiency of educational institutions are affected by factors among them physical facilities, availability of funds, dropout rates,

retention rates, transition rates and cycle completion rates. The introduction of SSE programme provided funds to schools thus affecting some of the factors that determine the internal efficiency of schools, however the extent to which SSE affects the internals efficiency of public secondary schools is not known. Therefore it was the intention of this study to find out the effects of SSE on internal efficiency of public secondary schools.

2.9 Theoretical Framework

The study was based on the theory of human capital founded by Schultz (1961). This theory asserts that, between 1920 and 1957 the national income of United States of America increased at a vast higher rate than could be explained by the combination of land, hours worked and physical producible capital used to produce the income. Schultz postulated that the difference in National income could be explained by the increase in skills and knowledge possessed by the workers acquired through education and training. Schultz findings were further reinforced by use of Cobb Douglas production function that shows the relationship of an input to output (Hasley, 1997).

$Y = aK\,aL^{ß}H^{r}$ Where Y = National Income

K = Capital

L = Labour

H = Human Factor

r = Period of time

y, a and ^{ß} are constants

The economic growth that cannot be attributed to Capital (K) and Labour (L) is attributed to the human factor/residual factor (UNESCO, 2012). Education is viewed as an investment that increases the productivity capacity of workers through imparting skills and knowledge that increases their lifetime earnings (Hasley, 1997). Investment in education, apart from increasing the workers productivity and their lifetime earnings has spill-over benefits to society which benefits the society at large (Psacharapolous, 1985). The study found this theory appropriate because Kenya is a Country with inadequate skilled labour force to steer economic growth and development. With the SSE funds, the Government intends to increase the quality of human resource development which in turn may increase productivity of workers hence increase the national income.

2.10 Conceptual Framework

The conceptual framework model shows the relationship between the variables of the study as shown in figure one. The figure illustrates the interaction that exists between subsidized secondary education on one hand and quality of instructions and internal efficiency on the other hand.

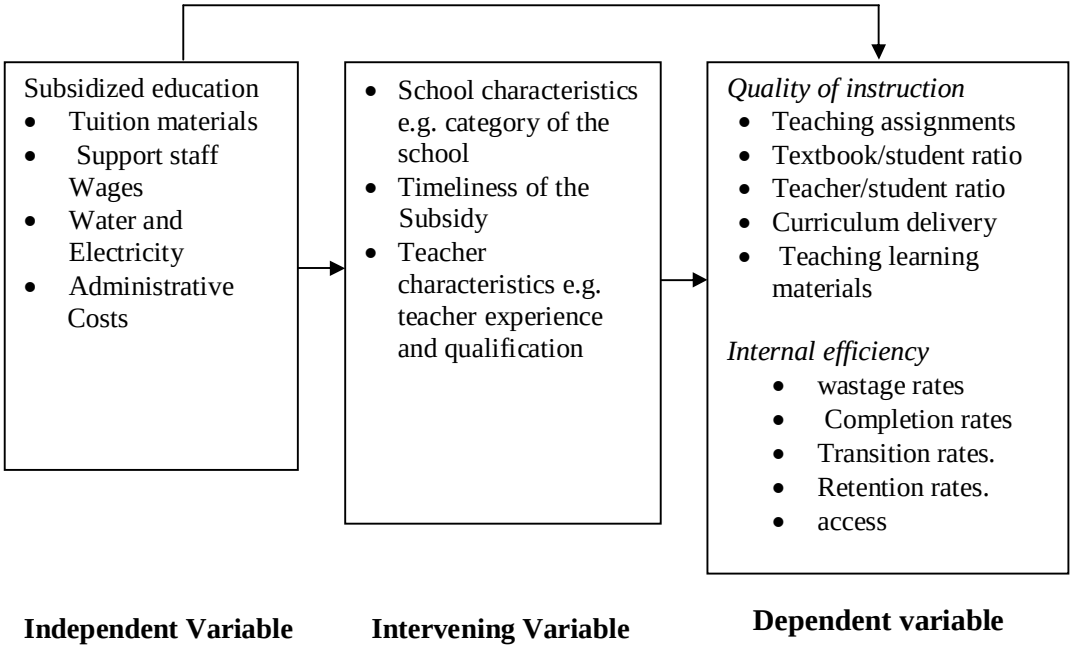

Figure1

A Conceptual Framework Showing, the Relationship between the Variables.

SSE is the independent variable while quality of instruction and internal efficiency are the dependant variables. If the SSE funds are provided on time and in the right amounts, the teachers will be able to prepare on time; schemes of work, lesson plans, lesson notes and practical's adequately. Adequate preparation of teachers will enhance effective curriculum delivery process which in turn will enhance quality of instruction in schools. SSE programme increased students enrolment in schools, however the Government of Kenya did not recruit teachers nor purchase textbooks to march the increase in student enrolment. This led to high teacher student ratio and low text book student ratio. Teachers may approach this miss-match by either giving same number of assignments and work for longer hours or give fewer assignments for the same number of hours worked before the SSE programme. If the teachers choose the later approach, quality of instruction in schools may be compromised.

The SSE programme has taken some of the financial burden from the shoulders of the parents and those students who were kept out of school due to lack of fees have access to education. This has reduced dropout rates and absenteeism in schools (those sent home due to lack of school fees). Drop in dropout rates and absenteeism leads to consistent school attendance translating to better performance and high retention rates. Increased retention rates leads to high transition rates, high completions rates, high enrolment and low repetition rates. This enhances internal efficiency.

The intervening variables are variables that may intervene between the independent and dependent variables. The intervening variables include school characteristics, timeliness of SSE funds and teacher characteristics. The school characteristics such as the school category may affect the quality of instruction. Schools in Kenya are categorized into National, County and Sub- County schools. The resources at the disposal of each category vary considerably. National and County schools tend to have more resources than the Sub- County schools and this may affect the quality of instruction in Sub- County schools.

Timeliness of SSE funds intervenes in that if provided on time teachers will be able to adequately prepare on time. This may enhance curriculum delivery process and hence enhance quality of instruction. Teacher characteristics in terms of qualifications, experience, attitudes and motivation may influence the school internal efficiency. For instance qualified and experienced teachers prepare well, have well developed curriculum delivery skills, relate well with students and know how to motivate students to develop interest in schooling. This may affect both quality of instruction and internal efficiency in schools. Motivated students may not drop out of school and are likely to perform well. The effect of the intervening variables was controlled through sampling.

The study involved only public secondary boarding schools. This minimized the effects of school and student factors such as school type, facilities and entry behavior of the students. The effects of the intervening variables was further minimized through randomization as the best method of minimizing the effects of the intervening variables because it ensures that any association between dependent and independent variables is not due to chance. The same view is also shared by Mugenda (2007) that randomization ensures that no systematic differences or an error on a given characteristic exists among the subjects and also equivalent representative groups that are essentially similar on a major characteristic.

CHAPTER THREE
METHODOLOGY

3.1 Introduction

This chapter gives a description of the procedures and tools that were employed in the study. These include the description of the research design, sampling, research instruments and procedures for data collection and analysis.

3.2 Research Design

The study employed the descriptive survey research design. This design was appropriate for the study because it was used to determine the nature of prevailing conditions and practices as they existed (Wiersma & Jurs, 2005). According to Kombo and Tromp (2006), descriptive survey is not only restricted to fact finding, but may often result in the formulation of principles of knowledge and solution to problems. They posit that the design is more than just about data collection as it involves measurement, classification analysis, comparison and interpretation of data. It gives a description of the nature of phenomena and examined actions as they were or as they happened without treatment to the variables (Kothari, 2004).

3.3 Location of the Study

The study was conducted in Kitui County which is in the Eastern region of Kenya. The County has six (6) Constituencies namely Kitui Central, Kitui West, Mutito, Kitui South, Mwingi North and Mwingi South (KNBS, 2010). It is an arid and semi arid region and its main economic activities include: bee keeping, subsistence farming and livestock rearing. The region has high levels of poverty 69.7% (CBS, 2004). The County has a total of 608 primary schools and 255 secondary schools. A total of 253 secondary schools are public, while only two are private (KNBS, 2010). Out of the 253 public schools, 74 are boarding while 179 are mixed day (Table 2).

Table 2

Distribution of Schools Category by Constituency in Kitui County

Constituency	Boys Boarding	Girls Boarding	Mixed B/Day	Mixed Day	Private	Total
Kitui Central	4	6	2	43	2	57
Kitui West	4	4	6	41	-	55
Mutitu	2	2	1	15	-	20
Kitui South	2	4	11	14	-	31
Mwingi North	4	5	3	26	-	38
Mwingi South	5	6	3	40	-	54
Total	**21**	**27**	**26**	**179**	**2**	**255**

Source: KNBS, 2010

Before the introduction of SSE in this County there was high school fees default by the parents because the cost of education was beyond the reach of the majority of the population. As a result there was high absenteeism, high dropout rates, low completion rates, low transition rates (27%) and low enrolments in public secondary schools (KNBS, 2010). The performance in National Examinations was very poor as evidenced by the KCSE results 2007 (KNEC, 2007). With the introduction of SSE programme in the year 2008, the student population increased in the County from 46,100 students in the year 2007 to 53,937 students in the year 2008 (KNBS, 2009). This increase apart from increasing the access, participation and retention may have had influence on the quality of instruction and internal efficiency of Public Secondary Schools in the County. The study found this location suitable because the researcher was familiar with the area and was interested in finding out the influence of SSE on quality of instruction and internal efficiency in public secondary schools in arid and semi arid regions in Kenya.

3.4 Population of the Study

The target population for the study was all public secondary school headteachers and all secondary school teachers in Kitui County. According to the (KNBS, 2010) there are 253 headteachers and 1587 teachers in public secondary schools in the county. The accessible population was all headteachers and teachers in boarding schools in the county. There were 74 headteachers and 512 teachers in boarding public secondary schools in the County from where the samples were drawn (Table 3). As much as the researcher wound have liked to

select day schools which were less efficient, it was not possible to do so as most of them were relatively new given that they were started between 2000 and 2009 (Table 6).

Table 3

Distribution of Headteachers and Teachers in Public Boarding Secondary Schools per Constituency in Kitui County

Constituency	Headteachers	Teachers	Total
Kitui Central	12	114	126
Kitui West	14	90	104
Mutitu	5	40	45
Kitui South	17	80	97
Mwingi North	12	86	98
Mwingi South	14	102	116
Total	**74**	**512**	**586**

Source: KNBS, 2010

3.5 Sampling Procedures and Sample Size

White (2002) suggested that with survey research it is usually impossible to question every member of the target population, hence the need for sampling. Sampling is the process of choosing units of the target population which are to be included in the study in such a way that the selected elements represent the population (Sarantakos, 1997). The number of the headteachers who participated in the study was determined using the table (appendix iii) for determining the sample size of a finite population developed by Kathuri and Pals (1993). The sample size of the headteachers was 59 given that their accessible population was 74. The selection of schools from which this sample was drawn was done using simple random sampling techniques.

The sample size of the teachers was also determined using the table developed by Kathuri and Pals (1993). The sample size was 217 out of a population of 512. Proportionate sampling was used to determine the number of respondents from each constituency. The proportion for each constituency was determined using the formula:

$n_{constituency} = (P_{constituency} / Population_{county})n$

Where- $P_{constituency}$ - Number of teachers in a given constituency

$Population_{count}$ - Population of teachers in the county

n - Sample size

$n_{constituency}$ - Number of teachers drawn from a constituency

After determining the number of teachers for each constituency, the schools and teachers who participated in the study were selected using simple random sampling. The distribution of the headteachers and teachers samples by constituency is in Table 4.

Table 4

The Sample Size of Teachers and Headteachers per Constituency in Kitui County

Name of Constituency	Sample of Teachers	Sample of Headteachers
Kitui Central	48	10
Kitui West	38	11
Mutitu	17	4
Kitui South	34	13
Mwingi North	37	10
Mwingi South	43	11
Total	**217**	**59**

Source: KNBS, 2010

3.6 Instrumentation

Data was collected using the headteacher questionnaire (HTQ) and teachers' questionnaire (TQ). The HTQ had three sections; section A, B and C. Section A was used to gather data on the personal details of the respondents. Section B elicited data on how SSE was implemented. Section C generated data on the influence of SSE on internal efficiency in public boarding secondary schools. TQ had two sections; section A and B. Section A gathered the bio-data of the respondents. Section B generated data on the influence of SSE on quality of instruction.

3.6.1 Validity of the Instrument

Validity is defined as the degree to which results obtained from an analysis of data actually represents the phenomena under study (Mugenda & Mugenda, 2007). The construct validity of data collection tool ensured that the items in the instruments were representative of the subject area while the content validity ensured that the tool actually measured what it was

supposed to measure (Fraenkel & Wallen, 2000). To ensure construct validity, the items in the instruments were constructed carefully thus minimizing ambiguity of the language used. The researcher ascertained this by pilot testing the data tools in 4 schools in Kitui County which did not take part in the actual study. Content validity was checked by five (5) research experts drawn from the department of Curriculum, Instruction and Educational Management, Egerton University which is agreement with the views of Borg and Gall (1996) who recommend that 2-3 units are adequate in pilot testing.

3.6.2 Reliability of the Instruments

A reliable instrument consistently yields the same results when used repeatedly to collect data from the same sample drawn from a population (Orodho, 2005). In order to avoid contamination, the instruments were piloted for reliability in four (4) schools in the County which were not included in the study. The Cronbach Alpha method was used to calculate the reliability. The method is ideal when an instrument is constructed using multiple response items and is administered once during piloting (Gall, Gall & Borg, 2007). The HTQ yielded a reliability coefficient of 0.71 whereas the reliability coefficient of TQ was 0.83. The two instruments were considered appropriate as their reliability coefficients were above the 0.70 threshold recommended Fraenkel and Wallen (2000).

3.7 Data Collection Procedures

The researcher got an introduction letter from Graduate School, Egerton University to be able to obtain a permit from the National Commission for Science, Technology and Innovation to conduct the research as required by the law before proceeding to the field. Once the permit had been granted, the researcher reported to the director of education Kitui County where she was permitted through a letter to visit administrators of the target schools. The researcher visited the individual schools, explained the purpose of the study to the respondents and their cooperation was sought. The researcher then arranged with the participants when and where to administer the questionnaires. On the appointed dates, the researcher explained to the participants how to fill the questionnaire and then administered them. The participants were given ample time to fill the questionnaires after which the filled questionnaires were collected.

3.8 Data Analysis

The collected data was organized, edited, coded and then entered into a computer. The entries were checked for errors and then analyzed using the Statistical Package for Social Science (SPSS). The analyzed data was summarized and described using frequencies, percentages, mean and standard deviation. The influence of SSE on quality of instruction and internal efficiency was established using the t-test. Comparison on quality of instruction and internal efficiency were conducted between schools which implemented SSE well and those which implemented it fairly. Significant differences observed during the comparisons were attributed to influence of SSE. The summary of data analysis is presented in Table 5.

Table 5

Summary of Data Analysis

Research question	Independent variable	Dependent variable	Statistics
What was the success level of subsidized secondary school education implementation in public secondary schools in Kitui County?	SSE	Implementation of SSE	Frequencies, percentage,means and standard deviation
What was the influence of subsidized secondary school education on quality of instruction in public secondary schools	Subsidized Secondary school education	Quality of instruction	Means,standard deviation and t-test
What was the influence of subsidized secondary school education on the internal efficiency of public secondary schools in Kitui County?	Subsidized Secondary school education	Internal efficiency	Means,standard deviation and t-test

CHAPTER FOUR
RESULTS AND DISCUSSIONS

4.1 Introduction

This chapter presents the results, discussions and interpretations of the study. The study investigated the influence of subsidized secondary school education on quality of instruction and internal efficiency of public secondary schools in Kitui County. The study sought to provide answers to three research questions namely: What were the success level of subsidized education implementation in public secondary schools in Kitui County? What was the influence of subsidized secondary school education on quality of instruction in public secondary schools in Kitui County? What was the influence of subsidized secondary school education on internal efficiency of public secondary schools in Kitui County?

4.2 Characteristics of the Respondent

The characteristics of the respondents were summarized and described before answers to the research questions were presented. Describing the characteristics of a sample helps the reader understand the sample better and also provides evidence that group of individuals and/or observations selected have the characteristics of the population (Field, 2005). The characteristics of the respondents that were described were; year when the school was started, the duration the principals and teachers had stayed in their current stations. Data on when the schools that took part in the study were started was collected and used to ascertain whether they were in existence when SSE was launched. The data is summarized in Table 6

Table 6

Year when the School was started

Period	**N = 55**	**Frequency**	**Percent**
Before 1980		11	20.0
1980 – 1989		14	25.5
1990 – 1999		8	14.5
2000 – 2009		22	40.0

The results in the Table 6 above showed that most schools (33), that is 60% of the total schools that participated in the study were started before 1999. This implies that the schools have been in existence for a reasonable period of time and have students in forms 1 to 4. It

also means that the schools were in existence when SSE programme was started given that it was introduced in Kenya in 2008 (MOE, 2008). The results also showed that most schools (40%) were started between the years 2000 - 2009. This suggests that there was an increased demand for secondary school education as a result of the introduction of SSE in 2008. This can be partly attributed to SSE as it gave more students an opportunity to attend school. This finding concurs with the views of Ohba (2009), that SSE was introduced by the government to increase transition rates from primary level of education to secondary level of education.

Data on the duration the Headteachers and teachers had been in their current stations was also sought. This information was important to the study because issues to do with quality of instruction and internal efficiency of a school should only be provided by those who have been in it for a reasonable period of time. The duration Headteachers have been heads of their respective schools is summarized in Table 7.

Table 7

Duration of Headteachers stay in the School as Heads

Duration N = 58	**Frequency**	**Percent**
2 years and below	23	39.7
3 – 5 years	20	34.5
6 – 8 years	12	20.7
9 years and above	3	5.2

Most (60.4%) of the principals had been in their current stations for 3 years and above. This means that they had been in their stations long enough to have a clear picture of the happenings in their schools in terms of quality of instruction and internal efficiency. According to Bakda (2006), the principal is the leader in a school, the pivot around which many aspects of the school such as academic work, administrative, discipline, and internal efficiency revolve. They play a key role in the delivery of quality instruction as their responsibilities include ensuring educational strategies are in place that support effective learning for students (Steton & Associates, 2011). They also serve as a facilitator, guide and supporter of quality instructional practices.

The study also gathered data on the duration teachers had been in their current stations. Teachers are responsible for the actual implementation of school curriculum in their

respective subject areas. They are key players in determining the quality of instruction as it is related to teaching-learning (Mkumbo, 2012). They also perform administrative work assigned to them by school heads. They thus play a role in ensuring that the school systems are efficient. It was necessary to elicit data on the duration teachers had been in their current stations as a way of ascertaining that the information given is from those who have been in the stations for a reasonable period of time Table 8.

Table 8

Duration the Teachers have been in current their Schools

Duration N = 211	**Frequency**	**Percent**
4 years and below	124	58.8
5 – 9 years	32	15.2
10 – 14 years	28	13.3
15 – 19 years	14	6.6
20 years and above	13	6.2

From Table 8, Majority (58.8%) of the teachers had been in their current schools for a period of 4 years and below. This can be attributed to the fact that a large percentage of secondary schools in the county were started after 1999 (Table 6). This is a fairly short period taking into consideration that there was a reasonable percent (12.8%) of teachers who had been in their current schools for 15 years and above. However, it is also worth noting that 41.2% of the teachers who took part in the study have been in their current stations for 5 years and above. Data in the table showed that the teachers sample was made up of those who had been in their stations for short and long periods of time. Generally, it can be said that these teachers were in a position to provide quality information on SSE quality of instruction and internal efficiency because they were conversant with what goes on in those schools as they had been in those stations for a reasonable period of time.

4.3 Implementation of Subsidized Secondary School Programme in Kitui County

The first objective of the study was to find out the success level of subsidized secondary education implementation in Public secondary schools in Kitui County. Information on the implementation of SSE was sought from the headteachers because they are central to the successful management of educational institutions. Wango (2009) asserts that the headteacher is responsible for the overall planning, organizing, directing, controlling, staffing,

coordinating, motivating and actualizing the educational goals and objectives of a school. The required data was generated using the headteachers' questionnaire. Implementation of the SSE programme was determined by examining two aspects of the programme namely; adequacy of SSE funds and their utilization. Adequacy of SSE funds was measured using a one to three rating scale namely; not adequate (1), moderately adequate (2), adequate (3) . Utilization of funds on the other hand was measured using a four point rating scale of never (1), rarely (2), occasionally (3) and always (4). The scores for each respondent were transformed into an aggregate score. The overall mean of means (sum of adequacy mean and utilization of funds mean divided by two) was calculated out of a maximum of 3.5. The overall mean was used as the measure for implementation of SSE. The mean scores and the standard deviations are summarized in Table 9.

Table 9

Implementation of SSE Means Scores and Standard Deviation

Statement	N = 59	Mean	SD
i) Adequacy of funds			
Extent to which SSE funds cater for tuition requirement		1.46	0.68
Extent to which SSE funds cater for administrative costs		1.47	0.50
Extent to which SSE funds cater for co-curriculum activities		1.01	0.00
Extent to which SSE funds cater for the school's electricity, water and conservancy		1.58	0.66
Extent to which SSE funds cater for the school's medical expenses		1.11	0.67
Extent to which SSE funds cater for school staff personal Emoluments		1.49	0.68
Extent to which SSE funds cater for repairs, maintenance and improvements of facilities		1.41	0.67
Adequacy of SSE funds aggregate mean		**1.36**	**0.14**
ii) Utilization of SSE funds			
I plan to use SSE funds		2.70	0.00
An annual budget is prepared for SSE funds		3.00	0.00
Records of accounts of SSE funds are well kept		3.00	0.00
SSE funds are used for the intended purpose as specified by the MOE		2.50	0.30
The SSE funds are disbursed to schools on time		1.09	0.94
Materials purchased by SSE funds reach the end users on time		2.14	0.78
Utilization of SSE funds mean		**2.40**	**0.25**
Overall mean score		**1.88**	**0.24**

The results contained in Table 9 show that the mean score for adequacy of funds was 1.36 (SD = 0.14) out of a maximum of 3 whereas the mean score for utilization of SSE funds was 2.40 (SD = 0.25) out of a maximum of 4 and the overall mean score was 1.88 (SD = 0.24) out of a maximum of 3.5. The implementation of SSE was then rated using the scale; poorly implemented for an overall mean between 0.0 - 1.16 range, fairly implemented when the overall mean score was between 1.17- 2.32 range and well implemented when the overall

mean score was in the range of 2.33– 3.50. Implementation of SSE was rated fair given that its overall mean was 1.88 (SD = 0.24)

The headteachers were further asked to rate the implementation of SSE in their schools as either poorly, fairly or well implemented. The findings are summarized in Table 10.

Table 10

Rating of Implementation of SSE Programme

Category	**Percentage N = 59**
Poorly implemented	0
Fairly implemented	89.8
Well implemented	10.20

The results in Table 10 reveal that 89.8% of the respondents were of the view that SSE was fairly implemented whereas 10.20% were of the view that SSE had been well implemented. The results concur with the findings in Table 8 that SSE implementation in Kitui County had been fairly implemented.

The headteachers were also requested to list the major challenges they face in terms of resources when implementing SSE. All the headteachers were of the view that the SSE programme had made schools over stretch the resources available in schools especially teachers, dormitories, classrooms and laboratories due to increased students' enrolments. The headteachers also observed that there was a serious problem of understaffing of teachers which posed a major challenge to the implementation of the programme. The issue raised by the headteachers on serious understaffing in the area concur with the findings of UNESCO (2012) that stipulated that, the student's/ teacher ratio in Kitui county was 34:1 in public secondary schools contrary to the Teacher Service Commission staffing norms of 10 teachers for a school with one stream from form 1to 4 and a maximum of 160 students translating to a ratio of 16:1.

They also noted with concern that the SSE funds were seriously delayed thus adversely affecting the utilization of time as a resource. The heads also indicated that the SSE funds were not adequate. The study established that SSE was fairly implemented in Kitui County. This is consistent with the findings of Mibei (2010) who conducted a study in Kericho on

factors influencing the implementation of subsidized secondary education in public secondary schools in Kericho district. The study found out that public secondary schools in Kericho district did not implement SSE well due to inadequate support mechanisms to aid its implementation. These included delayed disbursement of funds, inadequate funds and lack of funds for expansion of physical facilities to accommodate increased enrolment. The findings are also consistent with those of Chabari (2010). The study established that inadequate funds, overcrowded classes, heavy teacher workloads as major challenges facing the implementation of SSE.

The study further observed that teachers were not able to do their work well due to high students' enrolment and overcrowded classes. Muasya (2012) also noted high enrolment and overcrowding as some of the challenges facing implementation of SSE in Mwingi Central district. The study also found out that schools were not provided with funds for expansion to accommodate the increased number of students. This is consistent with the findings of Kago (2012) who observed that SSE fell short of addressing the financial needs of schools in Nyandarua district. This deficiency in resources becomes a challenge to secondary school administrators in the management of their schools. These challenges may perhaps be the reason that schools were not able to implement the SSE programme well.

Despite these challenges, the SSE programme is a worthy initiative as it enhances access to education despite the many challenges. However for it to be successful, all the stakeholders and the government should give it a lot of support. Atem (2001) asserted that teachers and headteachers need a lot of support during the stage of the implementation of a new programme. Huberman and Miles (1984) observed that any change bearing innovation lived or died depending on the amount and quality of assistance the users received once the change process was underway.

4.4 Influence of Subsidized Secondary School Programme on Quality of Instruction

The second objective of the study was to determine the influence of subsidized secondary school education on quality of Instruction. Data that was used to determine influence of SSE on quality of instruction was generated using the Teachers' questionnaire. The measurement of quality of instruction was done using a Likert-type scale of strongly disagree, agree, undecided, disagree and strongly agree based on the extent to which the respondents agreed with a set of 16 statements (items). Individual scores for each respondent were transformed

into an aggregate score (overall mean). The item mean scores and the overall mean score and their standard deviations are summarized in Table 11

Table 11

Quality of Instruction Means Scores and Standard Deviation

Statement	N	Mean	SD
We have enough classrooms in our school.	204	3.40	1.50
The school library is well equipped	196	2.35	1.19
Each student in my school has a desk and a chair	211	4.20	1.22
The school has the recommended student-teacher ratio	211	2.43	1.33
The school has the recommended student-ratio	211	3.18	1.24
The laboratories in my school are able to meet the students practical requirements	211	2.33	1.09
The school has adequate teaching learning materials	211	2.92	1.17
I prepare the schemes of work for all the lessons	203	4.28	0.97
I prepare a plan for each and every lesson I teach	211	3.12	1.25
I use teaching materials such as audiovisual aids during my lessons	211	3.02	1.39
My lessons always achieve their objectives	211	3.68	1.08
There is flow of ideas when delivering content during my lessons	204	4.12	0.56
Students actively participate during my lessons	204	3.99	0.80
I give students an assignment after every topic covered	203	3.92	0.96
I take my students through practical and project work as required	211	3.80	1.12
I give students at least three CATS in a term	198	3.63	1.19
Quality of instruction overall mean	**211**	**3.33**	**0.61**

The results in Table 11 show that the mean scores of the items were between 2.33 (SD = 1.09) to 4.28 (SD = 0.97) whereas the overall mean was 3.33 (SD = 0.61). To measure quality of instruction, a rating was developed as follows, the quality of instruction was considered poor if it had a mean score of between 1.0 to 1.66, fair quality of instruction when the mean of means fell between 1.67 to 3.33 and of good quality when the mean of means was between 3.4 to 5.0. Since the overall mean was 3.33 out of a maximum of 5 and under the fair

category, the quality of instruction was concluded to be fair. To determine the influence of SSE on quality of instruction, the teachers were categorized into two groups, teachers from schools that implemented the SSE well and teachers in the schools that implemented the SSE fairly according to the implementation rating given by the headteachers shown in Table 10. The mean of means and standard deviations of the two groups were also calculated (Table 12and 13).

Table 12

Quality of Instruction Means Scores and Standard Deviation of the group that implemented SSE fairly

Statement	N	Mean	SD
We have enough classrooms in our school.	183	3.35	1.20
The school library is well equipped	176	2.04	1.19
Each student in my school has a desk and a chair	189	4.24	1.22
The school has the recommended student-teacher ratio	189	2.56	0.87
The school has the recommended student-ratio	189	2.68	1.14
The laboratories in my school are able to meet the students practical requirements	189	2.61	1.09
The school has adequate teaching learning materials	189	2.95	1.02
I prepare the schemes of work for all the lessons	182	3.72	0.57
I prepare a plan for each and every lesson I teach	189	2.73	0.94
I use teaching materials such as audiovisual aids during my lessons	189	2.42	1.01
My lessons always achieve their objectives	189	3.01	0.71
There is flow of ideas when delivering content during my lessons	183	4.31	0.56
Students actively participate during my lessons	183	3.37	0.80
I give students an assignment after every topic covered	182	2.68	0.96
I take my students through practical and project work as required	189	3.21	0.88
I give students at least three CATS in a term	177	2.34	0.96
Quality of instruction overall mean	**185**	**3.01**	**0.64**

Table 13

Quality of Instruction Means Scores and Standard Deviation of the group that Implemented SSE well

Statement	N	Mean	SD
We have enough classrooms in our school.	21	3.74	1.5
The school library is well equipped	20	205	1.19
Each student in my school has a desk and a chair	22	4.20	1.22
The school has the recommended student-teacher ratio	22	3.76	1.33
The school has the recommended student-ratio	22	3.44	1.24
The laboratories in my school are able to meet the students practical requirements	22	2.65	1.09
The school has adequate teaching learning materials	22	3.54	1.17
I prepare the schemes of work for all the lessons	21	3.51	0.97
I prepare a plan for each and every lesson I teach	22	4.14	1.25
I use teaching materials such as audiovisual aids during my lessons	22	3.89	1.39
My lessons always achieve their objectives	22	4.13	1.08
There is flow of ideas when delivering content during my lessons	21	3.90	0.56
Students actively participate during my lessons	21	3.68	0.80
I give students an assignment after every topic covered	21	3.67	0.96
I take my students through practical and project work as required	22	4.12	1.12
I give students at least three CATS in a term	21	3.99	1.19
Quality of instruction overall mean	**22**	**3.65**	**0.57**

The Influence of SSE on quality of instruction was determined by comparing quality of instruction mean score of the group that implemented SSE well and that which implemented SSE fairly as shown in Table 12 and 13. The comparison was conducted using a t-test. According to Field (2005) the t-test is used when comparing differences between two sub-groups and the variable is always at a ratio scale and continuous. The comparison is represented in Table 14

Table 14

Comparison of the Mean Scores of the group of Schools that Implemented SSE well and that Implemented SSE fairly.

SSE Category	N	Mean	SD	df	t-value	p-value
Fairly implemented	53	3.01	0.64	209	4.425	0.000*
Well implemented	6	3.65	0.57			

*significant at 0.05 level

The results in Table 14 show that quality of instruction mean score (M = 3.65, SD = 0.57) of the group that implemented SSE well was higher than that (M = 3.01, SD = 0.64) of the group that had a fair implementation rating. The difference in quality of instruction mean score of the two groups was significant at 0.05, t (209) = 4.425, p = 0.000. This implies that the quality of instruction is higher in schools which implemented SSE well and low in schools that implemented the SSE fairly. The difference in quality of instruction between the two groups was attributed to SSE funds. Thus it can be concluded that the SSE programme positively influences quality of instruction.

The results of the study showed that the difference in quality of instruction between the groups that implemented SSE well was significantly different from that of the group that had a fair implementation rating. This means that SSE positively influences quality of instruction. The findings are in line with those of Newman and Wehlage (2009). They asserted that innovations and new programmes improve quality of instruction when their implementation is guided by substantive educational goals. The results also support that of a study conducted in Kericho district by Mibei (2010). The study observed that there was a remarkable improvement in quality of instruction. The improvement was attributed to availability of teaching-learning resources financed by SSE. However, the results of a study done by Chabari (2010) in Kangundo district are contrary to these findings. The study noted that the quality of instruction had gone down due to overstretched school resources. Most schools did not have the resources to accommodate the increase in demand for secondary school education. This led to overcrowded classes, heavy teacher workload and inadequate-teaching learning facilities. It should be noted that quality of education is closely linked to school resources. Facilities such as text books, stationary, laboratories, audio-visual aids, and computers with the relevant software make the teaching and learning process more effective (Onya & Mweseli 2008).

Teachers were further asked whether SSE influences the quality of instruction. They were of the view that SSE positively influences quality of instruction because it provided schools with funds to purchase teaching and learning materials. Teaching learning materials enhanced the teacher preparedness hence improved curriculum delivery. Improved curriculum delivery results to quality instruction in the classroom. This supports the views of the report of the task force on affordable secondary education (2007) which noted that the performance level of a school is mostly determined by the availability of teaching and learning resources. The same view is up held by UNESCO (2000) which recommends that to offer education of good quality, educational institutions and programmes should be adequately resourced with core requirements of accessibility facilities, well motivated teachers, books and other learning materials and technologies.

However, the teachers pointed out delays in release of SSE funds as a major challenge to provision of teaching-learning materials on time which in turn affects the quality of instruction. Teachers noted that, the inadequate teachers in schools were also a major challenge which resulted to high workloads and large classes. With high workloads the teachers reduced the amount of assignments given to students and the contact hours per student so as to attend to large numbers of students in classes, this compromised quality of instruction. The teachers also felt that the physical facilities such as dormitories, classrooms, student toilets, were not enough in schools to accommodate the increased enrolments occasioned by introduction of SSE. Overstretched physical facilities compromised a good environment necessary for delivery of quality instruction. This is consistent with UNESCO (2005) that recommends safe and conducive environment as being necessary for delivery of quality instruction.

Finally the teachers were asked to give suggestions of what need to be done to enhance the quality of instruction in schools. The suggestions are summarised in Table 15.

Table 15

Suggestions on how to Improve Quality of Instruction in Public Secondary Schools

Suggestions	N=211 Frequency	%
Government to employ additional teachers to meet the required student teacher ratio.	204	96.6
The SSE funds allocation per student should be increased to cater for adequate teaching and learning materials.	198	93.8
The government should ensure that schools have adequate Physical facilities such as adequate special equipment for students with special needs.	175	82.9
Schools in arid and semi arid areas should be considered for special funds to put in place water, feeding programme and provision of bursaries to needy children.	193	91.4
The government should distribute funds to schools timely to enable schools procure teaching and learning materials on time.	202	95.7
The government should finance all aspects of student's Education and make education free to all.	97	45.9
Conducive working environment to teachers, better remuneration, capacity building courses and refresher courses to motivate teachers.	105	49.7
Ministry of education to intensify supervision, monitoring and evaluation on implementation of SSE programme in schools, to ensure accountability.	90	42.6
Have the teachers sign performance contracts to facilitate monitoring and evaluation of the teachers.	85	40.0
Set standards to be achieved by the students joining Form 1 to motivate pupils to work hard.	65	29.3

Results in Table 15 indicated that 96% of the teachers were of the opinion that, to improve quality of instruction the government needed to employ more teachers in public secondary schools to improve the teacher student ratio which currently stands at 1:34 UNESCO (2012), this ratio is contrary to the findings of the Institute of Education Statistics New York (1995) that found out that in the developed countries student teacher ratio raged from 8:1 to 16:1 a ratio far below the ratio of 34:1 in Kitui County. The study further indicated that the higher the student teacher ratio the lower the availability of the teacher services to students and

quality of instruction. Low students teacher ratio would increase student teacher contact time, give teachers time to prepare well in terms of preparations of schemes of work, lesson plans and work plans, have time to give students assignments, check them as well assisting slow learners. This added together the teachers felt that the quality of instruction would be improved in secondary schools.

Most teachers (93.8%) revealed that the SSE funds allocation per student needed to be revised upwards to cater for adequate teaching and learning materials such as textbooks. This is consistent with the views of Cox (2004) who indicated that increased expenditure per child was important in enhancing quality instruction as adequate teaching and learning materials could be accessed for teachers. The teachers (82.9%) felt that the government should improve the physical infrastructure in secondary schools and in schools where they were not available they should be put in place. Physical infrastructure include additional classrooms to cater for increased students enrolments equipped libraries, science laboratories, computers laboratories and special equipments for students with special needs. This was in agreement with Onya and Mweseli (2008) who observed that appropriate physical facilities contribute 9% to effective teaching and learning, the lack of adequate physical facilities compromised quality of instruction in many schools as a result of overcrowding.

Results from Table15 indicated that 91.4% of the teachers teaching schools in the ASAL areas felt that there should be a special fund in addition to SSE funds to schools in ASAL areas, the special fund they said should be used to put in place electricity, award bursaries to bright but needy students, finance feeding programmes and water , this would reduce students absenteeism occasioned by students going home for unpaid levies, reduced absenteeism in turn assist both teachers and students in time management, increase students teachers contact hours and minimize loss of valuable learning time lost by the students while away for fees. The teachers further observed that once the student's levies had been paid the students wound settle and concentrate with their studies as well as creating conducive teaching and learning environment (UNESCO, 2005). This combination would improve the quality of instruction in schools.

From the results in table 15 teachers (95.7%) further suggested that the government should distribute SSE funds to schools timely to enable the school procure teaching and learning materials on time. Once the materials are procured the teachers and students will have

adequate time to interact with materials purchased. In cases where the materials reached the schools late the teachers observed that it compromised the teacher's preparedness and implementation of the teacher's schemes of work, lessons plans, work plans, time management as well as syllabus coverage. This in total affected the quality of instruction in schools negatively. The teachers (45.9%) indicated that in order to improve the quality of instruction, the government should fund all aspects of student education cost and make education free to all. The teachers further observed that funding would promote an environment conducive for learning and teaching, proper time management, improved teachers' preparedness, increased student's teacher contact hours and therefore improve the quality of instruction.

To improve the of quality of instruction 49.7% of the teachers felt that, the teachers should have good working conditions at their work stations, have fair remuneration, expose teachers to capacity building courses as well as refresher courses to motivate them. A well motivated teacher would tend to motivate the students which will improve students' participation hence improvement of the quality of instruction. The teachers (42.6 %) shared the view that the ministry of education should intensify supervision, monitoring and evaluation of the implementation of SSE programme in schools. This they felt was to ensure that funds are used for the intended purposes and the schools are made accountable so that students get the value for the funds given to schools. This would ensure that funds given to schools are put in areas targeted by the government and therefore improve the quality of instruction.

The teachers (40.2 %) were of the view that to improve the quality of instruction, teachers should sign performance contracts. Such an action would promote commitment, devotion to duty and enhance teachers preparedness as a well as accountability and responsibility thus promoting quality of instruction. 29.3 % of the teachers felt that standards be set which must be achieved before students join Form 1 to motivate them to work hard.

4.5 Influence of Subsidized Secondary School Programme on Internal Efficiency of Schools

In the last objective of the study, the researcher was interested in finding out whether SSE influences the internal efficiency of public boarding schools. The HTQ (head teacher questionnaire) was used to generate the data required by this objective. Internal efficiency was expressed in terms of completion rates and transition rates. Prior to determination of the

influence of subsidized secondary education on internal efficiency of public boarding schools the enrolment trends and transition rates of students were examined. The two constructs were examined because enrolment and transition rates are closely associated with internal efficiency of schools (Republic of South Africa, 2013). Data on enrolment was provided by the headteachers questionnaire and the total number of students' enrolled in the schools from the year 2006 to 2010 was used which is summarized in Table 16

Table 16

Students' Enrolment for the Years 2006 to 2010

Year	Numbers enrolled
2006	19310
2007	20222
2008	20763
2009	22009
2010	22627

The results in Table 16 show that there was a steady increase in the number of students enrolled with the years. This means that demand for education was increasing with years. It is also worth noting that the increase in enrolment was highest during the years 2008-2009. This was the time when the SSE programme was introduced (MOE, 2008). The results suggested that SSE boosted students' enrolment. According RoK (2009), there has been a substantial increase in the number of secondary schools and enrolment rates of students since the introduction of Government funded tuition secondary education.

The headteachers views on whether SSE had contributed towards improving access to public secondary education were also sought. Most (89.66%) of the headteachers were of the opinion that the SSE programme had been very successful in improving access to secondary school education. All of them agreed that the SSE programme had reduced wastage. The headteachers also noted that wastage of learning time when students go home for school fees had been minimized.

Data on the transition rates was also captured using the HTQ. According to UNESCO (2009), transition rate is the number of students admitted to the first grade of a higher level of education in a given year, expressed as a percentage or ratio of the number of students

enrolled in the final grade of the lower level of education in the previous year. Data on the number of students in the 2006 cohort as they progressed from form 1 to form 4 is summarized in Table 17

Table 17

Students' Numbers of the 2006 Cohort as they progressed from form 1 to form 4

Year	Form	Numbers
2006	Form 1	4775
2007	Form 2	4693
2008	Form 3	4622
2009	Form 4	4244

The results in Table 17 reveal that the cohort had 4775 in 2006 and the number drop to 4244 in 2009. This means that there was a steady decrease in the number of pupils by the year. However, it should be noted that the decrease in numbers is only marginal. The transition rates of the 2006 cohort were computed using the students' progress data in table 15, the computation was done using the formula below;

Transition rate = $(E_{n+1} - R)/E$

Where E_n = Number of students enrolled in the year n

E_{n+1} = Number of students enrolled in the next class a year later

R = number of repeaters

The transition rates for years 2006/7, 2007/8 and 2008/9 are tabulated in Table 18

Table 18

Transition Rates of the 2006 Cohort

Year	Transition rate
2006 – 2007	0.98
2007 – 2008	0.98
2008 - 2009	0.94

Transition rate was fairly high ranging from 0.94 to 0.98 between 2006 and 2009. However, it should be noted that data collected did not capture the number of new admissions joining the cohort in forms two, three and four which could have the effect of increasing the transition rates. According to Magondu (2013), the rate of transition varies in all the counties

in Kenya with urban areas registering the lowest transition rates. The data set that was used to determine internal efficiency was completion rates. The rate refers to the percentage of first year entrants into a cycle of education surviving to the end of the cycle. The study examined the 2006 cohort during its 4 year secondary school cycle. The completion rate was determined using the formula:

(Nn + 3)/ Nn

Where: Nn = Number of students enrolled in form 1 in the year n

Nn + 3 = Number of students who completed form 4, three years later (2009)

The completion rate of the cohort for the group that implemented SSE well was computed 0.93% while the completion rate for the group that implemented the SSE fairly was 0.92%. The influence of SSE on internal efficiency was determined by comparing completion rate of the group that implemented SSE well and that implemented SSE fairly (SSE implementation table 10). The internal efficiency was measured in terms of completion rates. Adhikari (2010) argued that the internal efficiency generally refers to the simple intake and out – turn of pupils. The completion rate of schools that implemented SSE well and the schools that implemented SSE fairly was computed and compared using the t-test (Table19).

Table 19

Comparison of Completion Rate of the Group that Implemented SSE well and that which Implemented SSE fairly

SSE Category	N	Completion rate	SD	df	t-value	p-value
Fairy implement	53	0.92	0.13	57	0.038	0.97
Well implemented	6	0.93	0.05			

*significant at 0.05 level

The results in Table 19 revealed that the difference between the completion rate of the two groups was not significant at the 0.05 level of significance, t (57) = 0.037, p = 0.97. This means that SSE does not influence internal efficiency. Qualitative data from the headteachers also showed that majority (89.9%) of the headteachers were of the opinion that SSE Programme had no effect on the internal efficiency in their Schools.

The results in Table 19 revealed that students' enrolment had been increasing with the years and the transition rate was high. The results further showed that the mean score on completion rate of the group that implemented SSE well was higher than the mean score of

the group that implemented SSE fairly. The findings support those of Muasya (2010) which indicated that SSE improved students' enrolment. SSE cushions the poor from the escalating cost of education. Studies done in Spain by Manceb_on-Torrubia, Calero, Choi and Xim_enez-de-Emb_un (2012) also showed that government subsidies to schools enhance enrolment. These results provide support to the justification for the government subsidy at secondary school level as an efficient way of capturing higher numbers of pupils from the poorest households in Kenya.

The results also revealed that transition rates were high. This is consistent with the findings of the Republic of Kenya (2012). During the review of the SSE programme for the years 2009 - 2012, the government noted that there was a remarkable improvement in transition rates in secondary schools. The findings are however contrary to those of Kago (2012), who noted that secondary education costs remain high due to school levies despite the government subsidy. This affects access and retention in the secondary schools and transition from primary to secondary education. The findings are also contrary to those of ILO (2010) which showed that SSE had little impact on retention. ILO (2010) attributed this to the maze of school levies such as tuition, desk, lunch and examinations. Such additional costs force students from low income families to drop out of school.

Finally the study showed that the completion rates (0.92 and 0.93) of the two groups were high but not significantly different and therefore it can be concluded that SSE had no effect on the internal efficiency of schools. The findings are consistent with those of the Republic of South Africa (2013). The study pointed out that government subsidies can only enhance internal efficiency when other factors in schools that lead to drop-outs, repetition and low retention are dealt with. Studies done in Tanzania have also shown that internal efficiency of school is related to social, economic and cultural background of the students.

CHAPTER FIVE
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The general objective of the study was to find out the influence of subsidized secondary school education on quality of instruction and internal efficiency of public secondary schools in Kitui County. This chapter presents a summary of the findings, the conclusions, recommendations and areas that warrant further research**.**

5.2 Summary of the Study

This project report comprises of five chapters; an introduction, literature review, methodology, results and discussions and lastly a summary of the study, conclusions and recommendations. The first chapter of the study presented the background to the study. It highlights the importance of education and examines financing of secondary school education. It also examines internal efficiency and quality of instruction, challenges faced by schools after the introduction of SSE. It also presents the problem statement and objectives of the study. The second chapter gives a review of literature relating to financing of education in developed countries, developing countries and Kenya. It revealed other works done in the areas of quality of instruction, challenges facing the subsidized secondary education as well as internal efficiency. The chapter also contains the theoretical and conceptual frameworks. The third chapter presents the procedures that were used in collecting data. It contains a description of the research design, study location population, sampling procedures, instrumentation, data collection and analysis methods. The results and discussions are contained in chapter four while the fifth chapter gives a summary of the findings, conclusions and recommendations.

5.3 Summary of the Findings

The results of the study were presented in the previous chapter; the major findings of the study were summarized as:

(i) Out of the 59 headteachers who took part in the study 10.2% were of the view that SSE was well implemented while the remaining 89.8% were of the view that SSE was fairly implemented.

(ii) The quality of instruction overall mean of schools that implemented SSE well was higher than the mean of schools with a fair SSE implementation rating. The difference

between the qualities of instruction overall mean of schools that implemented SSE well was significantly different from that of schools with a fair SSE implementation rating.

(iii) The transition and completion rates of schools that implemented SSE well were higher than that of schools with a fair SSE implementation rating. However, the differences between the transition and completion rates of the two groups were not significant.

5.4 Conclusions

The results of the study showed that majority of the headteachers rated the SSE implementation as fair. The results also revealed that the difference between the mean score on quality of instruction of schools with a fair SSE implementation rating was significantly different from that of schools which implemented the SSE programme well. Lastly, the difference between the internal efficiency mean score of schools with a fair SSE implementation rating was not significantly different from that of schools that implemented SSE well. On the basis of these results the following conclusions were drawn:

i. The SSE programme has been fairly implemented in public secondary schools in Kitui County given that it had an overall mean of 1.88 (SD = 0.24) out of a maximum 3.5.

ii. SSE funds positively influenced the quality of instruction in public boarding secondary schools.

iii. SSE funds do not influence the internal efficiency of public boarding secondary schools.

5.5 Recommendation

In view of the foregoing conclusions; the following recommendations were made;

a. More resources and effort need to be availed to fully implement the SSE progamme.

b. There is need to monitor and evaluate implementation of the programme to ensure that emerging challenges are addressed.

c. The government should also assist the headteachers acquire the skills that are necessary in management of the implement SSE programme.

d. There is need to increase the SSE allocation per student to compensate the loss of value of the money due to inflation

e. The Government should base the allocations per student on calculated unit cost of secondary education and make timely disbursements of the SSE funds.

f. The Government should also address the issue of shortage of teachers by employing more teachers to take care of the increased enrolments due to the implementation of SSE programme.

g. The Government should identify and address factors that affect the internal efficiency of schools other than finance so as to retain enrolments of students till completion of the 4-year course.

5.6 Suggestions for Furher Research

During the course of the study certain issues came to light that may warrant further research. These are;

a. The study targeted only boarding secondary schools, it is important that a similar study that targets day schools only be conducted given that SSE funds are the main source of funds for this category of schools.

b. The study noted high enrolment and improvement in quality of instruction; these two may have a bearing on achievement. Therefore, there is need to investigate the influence of SSE on students' academic achievement.

c. Further research can be done on causes of high dropout rates or low transition rates in Arid and Semi Arid lands under the SSE programme.

REFERENCES

Adhikari, M. (2010). *A study on internal efficiency of primary education.* Sanothimi, Bhaktapur: Government of Napal.

Adigun, J. T. & Adu, E. T. (2012). Effective management of school based assessment as a correlate of internal efficiency of the colleges of education in Nigeria. *International Journal of Humanities and Social Sciences, vol.14* (special issue July, 2012).

Anderson, G. A., & Keys, J. D. (2007). Building human capital through education. *Journal of Legal Economics, 14* (49**)**, 12-20.

Atem, K. J. (2001). *An investigation of the factors affecting the 8.4.4 curriculum implementation at Kakuma refugee camp in Kenya*. Unpublished M.Phil. Thesis, Moi University, Eldoret, Kenya.

Bakhda, S. (2006). *Management and evaluation of schools*. Nairobi, Kenya: Oxford University Press, East Africa Ltd.

Barat, S. (2007). *Financing secondary education in Kenya through bursary scheme: accessibility and impact on completion rates in Nairobi Province.* Unpublished M.Ed. Project Report, University of Nairobi.

Baraza, J. M. & Tsisinga, M. J. (2014). Impact of subsidized school funding on infrastructure and development in public secondary schools in Sabatia Sub-County,Vihiga County, Kenya. *International Journal of Management Research and Review, 4* (5), 564 –574.

Barasa, L. & Kiplangat, S. (2007, May 2).Tuition fee scrapping in Kenya schools. *The Daily Nation*, pp. 6.

Betts, J. K., & Shallock, J. K. (1999). The behavioural effects of variations in class size. The case of mathematics teachers. *Educational Evaluation and Policy Analysis, 21* (2), 193-213.

Bray, M. (2001). *The costs and financing of education: Trends and policy implications.* Manila: Asian Development Bank.

Buhere, P. (2007). *A study of quality education in public secondary schools in Webuye Division of Bungoma District.* Unpublished M.Ed. Project Report, University of Nairobi.

Cox, C. (2004). *Innovation and reform to improve quality of primary education.* Washington DC: World Bank.

Chandi, J. R. (2002). *The impact of cost sharing on school inputs: A comparative study of primary schools in Embu and Mbeere Districts*. Unpublished M.Ed. Project Report, University of Nairobi, Nairobi, Kenya.

Chareonwongsak, K. (2005*).* Subsidized basic education in Thailand with quality and efficiency*. The Journal of Education, 1* (2), 1 – 10.

Central Bureau of Statistics. (2004). *Effective management for economic growth and poverty reduction. Central Bureau of Statistics.* Nairobi, Kenya: Government Printer.

Chabari, E. B. (2010). *Challenges facing the effective implementation of free secondary education in public secondary schools in Kangundo District, Kenya*. Unpublished M.Ed. Thesis, Chuka University, Kenya.

Chimombo, J. P. G. (2005). Issues in basic education in developing countries: An exploration of policy options for improved delivery. *Journal of International Cooperation in Education, 6* (1), 129 -152.

Chiuri, L. W., & Kiumi, J. K. (2005). *Planning and economics of education*. Egerton: Pengoline Publishers.

Coclough, C. (2012). *Education outcomes and poverty reassessment*. London: Routledge.

Cohen, L., Marion, L., & Morrison, K. (2007). *Research methods in education* (6th ed.). London: Routledge.

County Education Office Kitui County. (2009). *Staff returns.*

Easton, P., Sudikou, M., Aokin, A., & Crouch, L. (2003). *Rethinking World Bank policy and practice in support of adult and non-formal education.* Washington D.C: World Bank.

European Union. (2013). Education and development, from challenges to opportunities: *ELC Conference on Education and Developmen*t, Brussels 23 may 2013.

Fraenkel, J. R., & Wallen, N. E. (2000). *How to design and evaluate research in education* (4th ed.*)*. Boston, USA: McGraw-Hill Company.

Fullan, M. (1982). *The new meaning of educational change*. London: Cassel Education Limited.

Field, A. (2005). *Discovering statistics using SPSS* (2 ed.). London: Sage Publications.

Gall, M. D., Gall, J. P., & Borg, W. R. (2007). *Introduction to education research (8 edition.*). Boston, USA: Pearsons Educational Inc.

GIZ. (2010). *Interim evaluation, policy planning lessons from Sri Lanka: Education for Social Cohesion.* Potsdam: GIZ.

Gogo, J., Ayodo, T. M., & Othuon, L. A. (2010). The impact of cost sharing strategy on access, equity and equality of secondary education in Kenya. *Journal of Educational Planning and Economic Management,* (2), 31 – 44.

Gropello, E. D. (2006). *Meeting the challenges of education in Latin America and East Asia: Improving efficiency and resource mobilization.* Washington D.C: World Bank.

Halsey, H.A., Lander, H., Brown, P., & Wells, S.A. (1997). *Education, culture, economy and society*. New York: Oxford University Press.

Hanushek, E. A. (2005). *Why quality matters in education: Finance and development.* Retrieved from http://www.imf.org/external/pubs/ft/fandd/2009hanushek.htp

Hornby, A. S. (2010). *Oxford larners dictionary*. London: Oxford University Press.

Hurberman, A., & Miles, A. (1984). *Innovating up close*. New York: Plenum Press.

IDEA. (2008). *The provision of teacher and education personnel for post primary education*. Retrived from www.ideanewyorkstateeducation department,University of the state of Newyork

Institute of Policy Analysis and Research. (2003). *Cost Sharing in the education and health sectors in Kenya*. Nairobi: DFID.

Institute of National Centre for Education Statistics. (1995). *Report on education indicators. An international perspective, indicator 39 on student teacher ratio*. New York: United States of America Department of Education Institute of Education Science National Centre for Education Statistics.

International Labour Organization. (2010). *Micro factors inhibiting education access retention and completion by children from vulnerable communities in Kenya*. Nairobi: Government Printers.

Japan International Corporation Agency, (2004). *The history of Japan education development.* Retrived from www.jicaresearchinstitute

Jean, P. S. (2010). *Africa economic outlook: Access to technical and vocational education in Africa*. Retrieved from *http://www.africaeonomicoutlook.org.Accessedon*

Juma, C., & Yee, C. L. (2005). *Innovation: applying knowledge in development*. London, UK: Earthscan Publishers.

Kaiser, F. (2007). *Higher education in france, Country report*. Paris: Centre for High Education Policy Studies.

Khamati, M. J., & Nyomgesa, W. J. (2013) Factors influencing implementation of free secondary education in Mumias District, Kenya. *Journal of Social Science for Policy Implementation, 1* (1), 32- 47.

Kango, J. (2012). *School levies and their effects on access and retention since the introduction of subsidized secondary education in Nyandarua North District Kenya*.Unpublished M.Ed. Project Report, University of Nairobi, Nairobi, Kenya.

Kathuri, N. J., & Pals, A. P. (1993). *Introduction to education research*. Njoro, Kenya: Egerton University Press.

Kilel, C. F. (2007). *Primary teachers perception of the effects of class size on teaching effectiveness: A case of Kapsabet Division Nandi North District of Kenya*. Unpublished M. Phil thesis, Moi University, Eldoret.

Kenya National Examination Council. (KNEC). (2007). *K.C.S.E Examinations results:* Nairobi.

Kenya National Bureau of Statistics. (2009). *Economic survey 2009*. Nairobi: Government Printer.

Kenya National Bureau of Statistics. (2010). *Economic survey 2010*. Nairobi: Government Printer.

Kingwara, A. E. (2006). *Factors influencing internal efficiency of primary schools under free primary education policy in Suba East Division.* Unpublished M.Ed. Project Report, University of Nairobi, Nairobi, Kenya.

KIPPRA .(2008). *Public expenditure tracking of secondary education bursary fund in Nairobi Province, Kenya*.
Retrieved from www.IPAR.publicexpendituretracking.go.ke

Kioko, F. M. (2008). *Impact assessment of Government fees guidelines on internal efficiency in public secondary schools in Mbitini & Nzaui Districts*. Unpublished M.Ed. Project Report, Kenyatta University, Nairobi, Kenya.

Kiragu, M.W. (2002). *The impact of cost sharing on university education: A case study of the regular under graduate students of the college of education and external studies in Nairobi University.* Unpublished M.A. Project Report, University of Nairobi, Nairobi, Kenya.

Kitundu, P. (2008). *Factors influencing internal efficiency in public primary schools in Central Division Machakos District, Kenya*. Unpublished M.Ed. Project Report, University of Nairobi, Nairobi, Kenya.

Kirujah, R.K. (2002). *A study of Non Governmental Organization participation in financing secondary schools for quality education in Central Division of Laikipia District*. Unpublished M.Ed. Project Report, University of Nairobi, Nairobi, Kenya.

Kiveu, N. M., & Mayio, J. (2009). *Educational Research and Review, 4* (5), 272-284.

Koskei, Z., & Rono, P. (2004). Determining the optimal size and cost-efficiency of Nandi District secondary schools. *Journal of Education and Human Resources, 2* (2), 45-50.

Kothari, C. R. (2004). *Research methodology*. New Delhi: Willy Eastern Limited.

Kwamboka, A. (2009). Free secondary schooling policy faces testing times. *IPS News Article on Education, 4* (2), 1-3.

Lee, V. E., Shanta, R. B., & Sebastian, J. (2012). The quality of instruction in urban high schools: Comparing Mathematics & Science to English and Social Studies Classes in Chicago. *The High School Journal, 15* (3), 14-48.

Lewin, K.M. (2012). Nine year compulsory education in China: What can be learned from two decades of development? : The experience of nine year compulsory education in China. Qin Hangyin, Beijing: UNESCO.

Lewin, K. M. (2007). *Expanding access to secondary schooling in Sub Saharan Africa: Key planning and financial issues. CREATE Pathways to Access Research Monograph. No. 8*. Brighton: University of Sussex.

Lewin, K. M., & Moyo, J. M. (2001). *Financing secondary education in Zimbabwe: access, equity and efficiency*. Paris: International institute for Education Planning.

Lewin, K.M., &. Francoise, C. (2001). *Financing secondary education in developing countries*. Paris: UNESCO.

Linda, S. B. (Ed). (2010). Teachers and students' academic performance. *Florida Journal of Education, 3* (2), 87-105.

Lewin, K. M., & Stuart, J. S. (2003). *Researching teacher education: New perspectives on practice, performance and policy*. London, U.K: Department for international development.

Liu, F. (2004). Basic education in China's rural areas: A legal obligation on individual choice. *International Journal of Education Development, 24* (1), 5-21.

Lockheed, M. E., & Vespoor, A. M. (1991*). Improving primary education in developing countries*. Oxford: Pergamon Press.

Magondu, M. S. (2013). *Factors influencing student's transition rates to secondary school: A case of Kieni East District, Nyeri County, Kenya*.
Retrieved from *http://pdf.usaid.gov/pdf_docs/PNABB889.pdf*

Maisory, M. (2006). *The impact of the bursary scheme on participation rates at the secondary school level in Migori District*. Unpublished M.Ed. Project Report. University of Nairobi, Nairobi, Kenya.

Maiyo, K. J. (2004). *Determining internal efficiency in secondary schools: A case of Trans-Nzoia District in Kenya*. Unpublished PhD Thesis, Moi University, Eldoret, Kenya.

Maiyo, K. J. (2006). Determining internal efficiency of secondary schools in Kenya. *International Journal of education management UEM, 4* (1), 83-95.

Mauluko, N. J., & Muhari, S. L. (2013). Government funding on access to secondary education in Kenya: Challenges and prospects. *Journal of Education Management and Planning, 1* (1), 1-6.

Meier, G. M., & Rauch, J. E. (2000). *Leading issues in economic development.* New York: Oxford University Press.

Mibei, R. K. (2010). *Factors influencing the implementation of subsidized secondary education in public secondary schools in Kericho District.* Unpublished M.Ed. Thesis, Moi University, Eldoret, Kenya.

Mingat, A. R., & Rakotomalala, J-P. Tan. (2004). *Financing education for all by 2015: "Simulations for 33 African countries*. Washington, D.C: World Bank.

Ministry of Finance and Planning. (2000). Second report on poverty in Kenya. *Incidence and Depth of Poverty, 1* (2), 1-12.

Ministry of Education. (2008). *Interim guidelines for the implementation of free secondary education in Kenya, Nairobi:* Government Printer.

Mitha, N. J. (1995). Cost and financing of education in Kenya: Access, quality and literacy in Kenya. Oxford: Pergamon Press.

Mkumbo, K. A. K. (2012). Teacher's commitment to and experiences of the teaching profession in Tanzania: Findings of focus group research. *Journal of International Education Studies, 5* (3), 97-115.

Muasya, N. K. (2012). *The Effect of subsidized secondary education on retention and access in secondary education in Mwingi Central District, Kitui, Kenya.* Unpublished M.Ed. Thesis, Kenyatta University, Nairobi, Kenya.

Muhindi, D. M. (2012). Challenges facing the implementation of free day secondary education. A case study of Nyeri South District, Nyeri County in Kenya. Unpublished M. Ed. Thesis, Kenyatta University, Kenya.

Mugenda, O. M., & Mugenda, G. D. (2007*). Research methods: Quantitative and qualitative approaches.* Nairobi: Acts Press.

Mukua, A. R. (2013). *Effects of subsidized secondary education on access to public secondary schools in Nyamache Division Kisii County, Kenya.* Unpublished M. Ed. Thesis, Kenyatta University.

Mulkeen, A., Chapman, D. W., & Dejaegher, J. G. (2005). *Recruiting, retraining and retaining secondary school teachers and principals in Sub-Saharan Africa*. Washington D. C: Academy for Education Development and the World Bank.

Muthoni, P.W. (2008). *Factors affecting quality education in public day secondary schools in Thika-Ruiru Division, Thika District.* Unpublished M.Ed. Project Report. University of Nairobi, Nairobi, Kenya.

Mutia, J. M. (2007). *Internal efficiency and public secondary school financing in Central Division Kitui District.* Unpublished M.Ed. Project Report. University of Nairobi, Nairobi, Kenya.

Mwangi, J. G. (2002). Using good financial management to enhance the quality in Kenyan's secondary school education. *A Journal of Humanities, Social Science and Education Series, 3* (1), 45-48

.

Nafukho, F. M. (2002*). Determining optimal size and Existence of economies of scale in Kakamega District secondary schools.* Unpublished M.Ed. Thesis, university of Nairobi.

Ncube, N. J. (2004). *Managing the quality of education in Zimbabwe: The internal efficiency of rural day schools*. (Unpublished PhD thesis). Harare, University of Zimbabwe.

Newmann, M., & Wehlage, G. G. (2009). *Five standards of authentic instruction*: http://www.learner.org/workshops/socialstudies/pdf/session6/6.AuthenticInstruction.

Ndabazinhle, J. N. (2004). *Managing the quality of education in Zimbabwe*. *The internal efficiency of rural day secondary schools.* Unpublished PHD, Thesis, University of South Africa.

Njoroge, B. N. (2003). *The impact of cost sharing policy in education on the dropout rates in public secondary school Students in Nyandarua District Central, Kenya.* Unpublished, M.A. Project Report. University of Nairobi: Nairobi. Kenya.

Nicolai, S., Prizzon, A., & Hine, S. (2014). *Beyond basic: The growth of post primary education in Kenya.* Overseas Development Institute.

Nyaga, B. M. (2005). *Effects of delayed fees payments on the teaching and learning process in public secondary schools in Mbeere District, Kenya.* Unpublished M.Ed. Thesis, Nairobi, Kenyatta University.

Nyakeri, B. (2007). *Analysis of effects of subsidized secondary school education on access and participation: A case of Manga District*. Unpublished M.Ed. Thesis, Kenyatta University, Nairobi, Kenya.

Nyaronge, G. A. (2005). *The effects of cost of education to the relatively low income earners: A survey on parents and secondary schools in Dagoreti Division of Nairobi Province.* Unpublished M.Ed. Project Report, University of Nairobi, Kenya.

Ochenje, C. A. (2008). *A comparative study of factors influencing academic performance between private and public primary school in Kitale Municipality in Kenya*. Unpublished M.Phil, Thesis, Moi Unversity, Eldoret.

Onyango, F. A. (2012). *Contribution of education subsidies to students' participation in public secondary schools in Kyuso district, Kitui county, Kenya*. Unpublished M.Ed. Thesis, Kenyatta University.

Office of the Prime Minister, Kenya. (2011). Access *and quality in the Kenyan education system: A review of the progress, challenges and potential solutions.* Nairobi: Government Printers.

Ohba, A. (2009). *Does free secondary education enable the poor to gain access? A study from rural Kenya,* CREATE pathways to success, research monograph No21.

Odada, J.E., & Odhiambo, L.O. (1989). *Education workshop on cost sharing in Kenya* . Nairobi: United Nations Children's Fund.

Okemwa, L. A. (2002*). Cost cutting measures and quality education in public schools in Nyamira District.* Unpublished M.Ed. Research Project, University of Nairobi, Nairobi, Kenya

Onsomu, E. N., Muthaka, D., Ngware, M., & Kosimbei, G. (2006). Financing of secondary education in Kenya. *Costs and options KIPPRA Discussion paper No. 55.*

Onya, E., & Mweseli, J. (2008). *Effective leadership and effective management in Kenya schools.* Nairobi: Rinny Educational and Technical Publishing Services.

Orodho,J., & Njeru, E. (2003). *Access and participation of secondary school education in Kenya: Emerging issues and policy implementation*: Kenya Institute for Public policy Research (KIPPRA).

Orodho, J. A., & Njeru, H.N. (2003*).* Secondary bursary scheme implementation and challenges. *IPAR Discussion Paper 035/2003*.

Orodho, J. A. (2005). *Tecniques of writing research proposals and reports in education and social sciences*. Nairobi: Reata Press.

Owino, W., & Abagi, O. (2000). *Cost sharing in education and health in Kenya.* Nairobi: Department for International Development. East Africa.

Psacharopolous, G., & Woodhall, M. (1985). *Education for development an analysis of investment choices.*Washington DC: Oxford University Press.

Rao, D. B. (2007). *Education for all*. Naagia, New Delhi: APH Corporation.

Reche, D. N., Bundi, T. K., Ruingi, J. N., & Mbugua, Z. K. (2012). Factors contributing to poor performance in certificate of primary education in public day primary schools in Mwimbi Division of Maara District Kenya. *International Journal of Humanities and Social Sciences* 2 (5), 1.

Republic of Kenya. (1965). *Report of the education commission* (Part II Ominde Report). Nairobi: Government Printer.

Republic of Kenya. (1986). *Sessional paper No. 1 of 1986 on economic management of research and growth.* Nairobi: Government Printer.

Republic of Kenya. (1988). *Report of the Presidential Working Party on education and training for the next decade and beyond.* Nairobi: Government Printer.

Republic of Kenya.(1999). *Total integrated quality education and training.*Nairobi: Government Printer.

Republic of Kenya. (2005). *Sessional paper No.1 policy framework for education training and research.* Nairobi: Government Printer.

Republic of Kenya. (2007). *Report of the task force on affordable secondary education*. Nairobi: Government Printer.

Republic of Kenya. (2009). *Development plan 2008-2012*. Nairobi: Government Printers.

Republic of Kenya. (2011). *The budget for the fiscal year 2011/2012*. Nairobi: Government Printer.

Republic of Kenya. (2012). *Report on review of the subsidized secondary education programme in Kenya from 2009 -2012*. Nairobi: Ministry of Education.

Republic of South Africa. (2013). *The internal efficiency of the school system: A report on selected aspects of access to education grade repetition, and learner performance.* MOE South Africa.

Sarantakos, S. (2001).Social research (2nd ed.). Retrived from www.journalsonsocial research.acica/publicarticlesview/25

Schultz, T. W. (1961). Investment in human capital*. American Economic Review*. Vol.51, 1961.

Shovel, M. (2011). *Macmillan English Dictionary for Advanced learners*. Kuala Lumpur, Malaysia: Macmillan Publishers.

Stetson & Associates. (2011). The principal's responsibilities in quality instruction Retrieved from *http://inclusiveschools.org/the-principals-responsibilities-in-supporting-quality-instruction/*

Sudhoo et al. (2001). *The financing and cost of education in Mauritius.* Dakar: Adea & Code Sria.

Thakur, D. N., & Thakur, D. (2004). *Educational planning and administration*. (2ndEd.). New Delhi: Deep & Deep Publications PVT Ltd.

Torrubia, M. J. M., Calero, J., Choi, A., & Embun, D. P. X. (2010). Efficiency of public and publicly subsidized high schools in Spain. Evidence from *PISA 2006*. Retrieved from *http; //mpra.ub.uni.-muenchen.de/ 22354/MPRA Paper. No.22354*.

Turano, J. O. (June 24th, 2010). Free secondary schooling faces testing times. The Daily Nation, Nairobi. Nation Media Group.

Tronchim, W. M. K. (2006*). Research methods knowledge Base*. (3rd ed.). New York: Atomic Dog Publishers.

UNESCO. (2000). *World education forum. Education for all: Meeting our collective commitments. The Dakar framework for action*. Paris: UNESCO.

UNESCO. (2003). *Gender and education for all: The leap to equality*. EFA, Paris: UNESCO.

UNESCO. (2005). *Gender and education for all: The leap to quality – EFA global monitoring report. (*2003/2004). Paris: UNESCO.

UNESCO. (2008). *World teachers' day 2008: Teacher matter. Paris*: UNESCO.

UNESCO. (2009*). Education indicators technical guidelines. Paris:* UNESCO Institute for Statistics.

UNESCO. (2012). Education for sustainable development. Retrieved from *http//www.unesco./org/new/en/education/thesis/leading-the-international-agenda/education-for-sustainable-development/browse/6.*

Verspoor, A. (2008). *At the crossroads: choices for secondary education in Sub- Saharan Africa.* Washington D.C: World Bank.

Wango, G. (2009). *School administration and management*. Nairobi: The Jomo Kenyatta Foundation.

Wanyoike, K. N. (2006). *The effects of rapid expansion of secondary schools on provision of quality education in Kericho District.* Unpublished M.Ed. Research Project, University of Nairobi, Nairobi, Kenya.

White, G. W. (2002). Teacher report of how to use humor with student perceived use of such humor. *Journal of Statistics Education, 17* (122), 337 -348.

Wiersma, W., & Jurs, S. G. (2005). *Research methods in education.* Boston: Pearson Publishers.

Wamukuru, D.K., Kamau, C. W., & Ochola, W. O. (2006). The challenge of implementing free primary education in Kenya and its effects on teacher effectiveness: The teacher perspective. *African Journal of Education Studies,* 1 (2), 2-15.

World Bank. (1988). *Education in Sub Sahara Africa: policy adjustment, revitalization and expansion.* Washington D.C: World Bank.

World Bank. (2002). *Education and HIV/AIDS: A window of hope.* Washington D.C: World Bank.

World Bank. (2005). *Education in Sub-Saharan Africa.* Washington D. C: World Bank.

World Bank. (2007). *Recruiting, retaining and retraining secondary teachers and principals in Sub- Saharan Africa: Working Paper no. 99.* Washington D. C: World Bank.

World Bank. (2008). *World development indicators 2008-09.*Washington D.C: World Bank.

World Bank. (2009). Secondary education in India. Universalising opportunity.1 (2). Retrieved from *http//siteresources.worldbank.org*.

APPENDICES

APPENDIX I :
HEADTEACHERS' QUESTIONNAIRE (HTQ)

Dear Headteacher,

I am a student at Egerton University currently pursuing a Master of Education degree. I am conducting a research on **"** *The Influence of Subsidized Secondary Education on the Quality of Instruction and Internal Efficiency of Secondary Schools in Lower Yatta District"*. I am requesting you kindly to participate in the research by filling in this questionnaire. The information given will be used only for this research work and will be treated with outmost confidentiality.

Yours sincerely

Frida Katumbi Kituli

SECTION A: Preliminary Data

1. Gender: (tick one)
   - Male ( )
   - Female ( )

2. Age: (tick as appropriate)
   - Below 25years ( )
   - 26-30years ( )
   - 31-35years ( )
   - 36-40years ( )
   - 41-45years ( )
   - Above 45years.

3. Professional Qualification: (tick as appropriate)
   - Untrained teacher ( )
   - Diploma in Education ( )
   - B.Ed ( )
   - M.Ed ( )

   Others specify----------

4. School category: (tick as appropriate)
   - Sub County ( )
   - County ( )
   - National ( )

5. School Type: (tick as appropriate)
   - Day ( )
   - Boarding ( )
   - Day/Boarding ( )

6. When was this school started? Specify the year----------

7. For how long have you been a head teacher of this school? ----------
   - Less than 1 year ( )
   - 1-5years ( )
   - 6-10years ( )
   - 11-15years ( )
   - 16-20 years ( )
   - Above 20year ( )

SECTION B: SSE Programme

To what extent do funds provided by the SSE programme cater for your school requirements in the areas listed below? Tick as appropriate.

KEY

NA - Not adequate

MA - Moderately adequate

A - Adequate

		NA	**MA**	**A**
1	Tuition			
2	Administrative costs			
3	Activity			
4	Electricity, water and conservancy			
5	Medical			
6	Personal emoluments			
7	Repairs, maintenance and improvement			

Use Key: Never, Occasionally and Always as appropriate

N - Never **C - Occasionally**

AL - Always

		N	**R**	**O**	**AL**
8	I plan how to use SSE funds				
9	An annual budget is prepared for use of SSE funds				
10	Records of accounts on SSE funds are kept				
11	SSE funds are used for the intended purpose as specified by the MOE				
12	The SSE funds are disbursed to schools on time				
13	Materials purchased by SSE funds reach the end users on time				

14. How successful has the SSE programme been implemented in your school? Tick as Appropriate.

    i. Poorly implemented ( )

    ii. Fairly implemented ( )

    iii. Well implemented ( )

15. In your view, what are some of the major challenges you have experienced in the implementation of the SSE programme in your school.

    _____

    _____

    _____

16. How has the SSE programme affected quality of instruction in your school?

    _____

    _____

    _____

SECTION C: Internal Efficiency- Optimum Utilization of Resources.

To what extent are the resources listed below utilized? Tick as appropriate.

Key:

NU - Never Utilized UU - Under utilized

MU - Moderately Utilized FU - Fully Utilized

OU - Over utilized

		NU	**UU**	**MU**	**FU**	**OU**
1	Classrooms					
2	Library					
3	Laboratories					
4	Teaching – learning materials					
5	ICT & Audio Visual Aids					
6	Funds					
7	Furniture (students desks & Chairs)					
8	Text Books					
9	Teachers					

10. Please record by year the student enrolment in your school.

Year	**2006**	**2007**	**2008**	**2009**	**2010**
Enrolment					

11. Please indicate the number of students who dropped out of school by year.

Year	**2006**	**2007**	**2008**	**2009**	**2010**
No of drop outs					

12. Please indicate the number of repeaters in your school by year.

Year	**2006**	**2007**	**2008**	**2009**	**2010**
No of repeaters					

13. Please indicate in each cell, the number of students in each form for the following years.

Form	**2006**	**2007**	**2008**	**2009**	**2010**
Form 1					
Form 2					
Form 3					
Form 4					

14. In your view how has the SSE Programme affected utilization of resources in your school?

_____

_____

_____

15. How has SSE programme influenced access to secondary education in terms of enrolment and wastage? _____

_____

_____

APPENDIX II

TEACHERS' QUESTIONNAIRE (TQ)

Dear Teacher,

I am a student at Egerton University currently pursuing a Master of Education degree. I am conducting a research on **"** *The Influence of Subsidized Secondary Education on the Quality of Instruction and Internal Efficiency of Secondary Schools in Lower Yatta District"*. I am requesting you kindly to participate in the research by filling in this questionnaire. The information given will be used only for this research work and will be treated with outmost confidentiality.

Yours sincerely

Frida Katumbi Kituli

SECTION A: Preliminary Data

1. Gender (tick one) Male ( )
   Female ( )
2. Age: (tick as appropriate)
   Below 25years ( )
   26-30years ( )
   31-35years ( )
   36-40years ( )
   41-45years ( )
   Above 45years.
3. Professional Qualification: (tick as appropriate)
   Untrained teacher ( )
   Diploma in Education ( )
   B.Ed ( )

   Others specify----------

4. School category: (tick as appropriate)
   Sub County ( )
   County ( )
   National ( )
5. School Type: : (tick as appropriate)
   Day ( )
   Boarding ( )
   Day/Boarding ( )
6. When was this school started? Specify the year----------
7. For how long have you been a teacher in this school……
   Less than 1 year ( )
   1-5years ( )
   6-10years ( )
   11-15years ( )
   16-20 years ( )
   Above 20year ( )

Section B: Quality of Instruction

The items below are about quality of instruction in your school. Indicate the extent to which you agree with them by placing a tick in the cell. Key: SA- Strongly Agree, A-Agree, U-Undecided, D- Disagree, SD-Strongly Disagree.

		SA	**A**	**U**	**D**	**SD**
1.	We have enough classrooms in our school					
2.	The school library is well equipped					
3.	Each student in my school has a desk and a chair					
4.	The school has the recommended student/teacher ratio.					
5.	The school has the recommended student/books ratio of 1:1					
6.	The laboratories in my school are able to meet all the students practical requirements					
7.	The school has adequate teaching learning materials					
8.	I prepare schemes of work for all my lessons					
9.	I prepare a plan for each and every lesson I teach					
10.	I use teaching materials such as audio visual and visual aids during my lessons.					
11.	My lessons always achieve their objectives					
12.	There is flow when delivering content during my lessons.					
13.	Students actively participate in my classes					
14.	I give students assignments after every topic covered.					
15.	I take my students through practical and project work as demanded by the curriculum					
16.	I give students at least three CATS in a term					

17. How has the SSE programme affected the quality of instruction in your classes?

_____

_____

_____

18. In your view what needs to be done to improve quality of instruction under the SSE Programme?

_____

_____

_____

APPENDIX III:

TABLE FOR DETERMINING REQUIRED SIZE FOR RANDOMLY CHOSEN SAMPLE

A table for determining a size of a randomly chosen sample from a given finite population of N cases such that the sample proportion P will be within or minus .05 of the population proportion P with a 95 per cent level of confidence.

N	**S**	**N**	**S**	**N**	**S**
10	10	220	140	1200	291
15	14	230	144	1300	297
20	19	140	148	1400	302
25	24	250	152	1500	306
30	28	260	155	1600	310
35	32	270	159	1700	313
40	36	280	162	1800	317
45	40	290	165	1900	320
50	44	300	169	2000	322
55	18	320	175	2200	327
60	52	340	181	2400	331
65	56	360	186	2600	335
70	59	380	191	2800	338
75	63	400	196	3000	341
80	66	420	201	3500	346
85	70	440	205	4000	351
90	73	460	210	4500	354
95	76	480	214	5000	357
100	80	500	217	6000	361
110	86	550	226	7000	364
120	92	600	234	8000	367
130	97	650	241	9000	368
140	103	700	248	10000	370
150	108	750	254	15000	375
160	113	800	260	20,000	377

Source: Kathuri & Pals (1993)

APPEN DIX IV:

RESEARCH PARMIT

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