FINANCING OF PUBLIC DAY SECONDARY SCHOOLS EDUCATION AND ITS IMPLICATIONS ON THE QUALITY OF LEARNING IN KISII CENTRAL DISTRICT, KISII COUNTY, KENYA

BY

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DECLARATION

This thesis is my own original work and has not been presented for award of a degree in this or any other university.

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DEDICATION

This thesis is dedicated to God my creator and provider.

To my dad Pastor Jameson Getange and my mum Eunice Nyamoita for laying a firm foundation of increasing my human capital and their encouragement during the study.

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ABBREVIATIONS AND ACRONYMS

BoG - Board of Governors

CDF - Constituency Development Funds

DEO - District Education Officer

EFA - Education for All

FPE - Free Primary Education

FSTE - Free Secondary Tuition Education

GNP - Gross National Product

GoK - Government of Kenya

ICTS - Information and Communication Technologies

IGAS - Income Generating Activities

KCSE - Kenya Certificate of Secondary Education

KES - Kenya Shilling

KESSP - Kenya Educational Sector Support Programme

KNEC - Kenya National Examinations Council

LATF - Local Authority Transfer Funds

MDG - Millennium Development Goals

MOE - Ministry of Education

PDSS - Public Day Secondary Schools

PTA - Parents Teachers Association

UNESCO - United Nations Educational, Scientific and Cultural Organization

UNO - United Nations Organization

UPE - Universal Primary Education

SABER - System Assessment and Benchmarking for Education Results

SAPS - Structural Adjustment Programmes

SWAP - Sector Wide Approach

ABSTRACT

Despite the fact that the policy shift in secondary education in Kenya to promoting day secondary schooling in response to the exponential growth in secondary school enrollment as a viable alternative to limited opportunities occasioned by the high cost of education, the attainment of the envisaged objective of quality, equity and relevance of the public day secondary schools (PDSS) has been a question in various political and academic fora. The purpose of this study was to assess the financing of day secondary school education and it's implications on the quality of learning in Kisii District, Kisii County, Kenya. The study had four objectives, namely; to examine the adequacy, reliability and trends of income sources in financing day secondary schools; to analyze the utilization of existing income sources in the teaching and learning process; find out the implications of financing PDSS on quality of learning, and finally device strategies of enhancing the quality of learning in day secondary schools in the study locale of Kisii county. A descriptive survey design was used in this study. The target population was all the 102 public day secondary schools in the district. The sample of the study comprised of 36 day secondary schools chosen through stratified random sampling. Purposive sampling was used to select 36 principals, 36 Bursars, 36 Board of Governors(BOG), 36 Parents Teachers Association (PTA) chair persons and 4 district quality assurance officers (DQAS) yielding a total of 148 respondents. Data was collected through questionnaires for principals and bursars and interview schedule for PTA, BOG chairpersons and DQASOs. The validity of the instruments was established through scrutiny by experts who were thesis supervisors. Test-retest method was used to establish reliability of the instruments. A correlation coefficient of 0.86 and 0.87 for Principals' questionnaires and Bursars' questionnaire was established respectively. The qualitative data from interview schedule was analyzed thematically and reported in narrative and direct quotes. The data from questionnaires was analyzed using the statistical package for social sciences (SPSS) computer programme version 20.0 and descriptive and inferential statistics generated. Specifically, percentages, means, standard deviation and t-test were used. The level of testing the hypotheses was set at .05 level of statistical significance confidence level. The major findings of the study indicated that the income sources in public day secondary schools (PDSS) were not only inadequate in providing learning resources to enhance quality of education, but also unreliable in providing resources to PDSS. The implications of these findings were that, the financial allocations were not enough to meet the quality of learning. This is in view of the fact that school enrolment had risen sharply and the available resources were overstretched. The overall conclusion emanating from these findings is that the sources of financing day secondary education were inadequate to meet the financial demands of learning to enhance quality. It is therefore recommended that; to enhance quality in day secondary schools, several sources be harnessed and the existing ones to be strengthened; it was necessary for schools to venture into enterprises which can generate more income like rental houses, crop and animal production, intensive gardening and hiring of school facilities; minimal cost sharing to continue being adopted in financing education. Finally further research to be carried out in more counties with varying socio-economic status to determine the strategy of boosting the income sources in order to enhance quality.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Education is widely valued as a central factor in economic, social, and political development of any country. The public expenditure on education has been increasing because of the role it plays in economic growth. World Bank (1980) pointed out that between 1960 and 1974 the average expenditure by developing countries on education increased as a percentage of both GNP (Gross National Product) and national budget. The rate of increase was found to be higher in developing countries than in developed ones.

In developing countries, increased access to education is attributable to the United Nations Organization (UNO) Charter of 1948 which declared education as a basic human right and therefore proposed free education at least in elementary stages. The UNESCO Addis Ababa Conference of 1961 reiterated the UNO objective and set the year 1980 as the year by which all African States should achieve Universal Primary Education (UPE) (World Bank, 1980). To achieve this, African countries had to allocate large percentages of their national budgets to education.

1.1.1 History of Secondary Education in Kenya

At independence in 1963, secondary education was viewed as one of the critical areas of education activity, both in quantitative and its qualitative aspects. Two historical influences had hitherto determined the content and character of secondary education. The first was that in the past, secondary school education had prepared learners for the clerical and administrative cadres of white –collar jobs and had, therefore, come to be associated with an escape from arduous, manual occupations in general and from agriculture in particular. The second

historical influence was that the Cambridge overseas school certificate replaced the Kenya Preliminary Examination as the watershed of individual advancement and progress. Therefore all education activities were directed towards success in the 'Cambridge' examination (Republic of Kenya; 1964).

The Government of Kenya (GOK), households and the private sector collectively endeavored to enhance the development of education in the country on the attainment of political independence in 1963. This aspiration has consistently been reflected in various government documents such as National development plans, Sessional papers and Education Commission reports (Republic of Kenya 1964; 1988; 1999; 2000; 2001). There was rapid and remarkable development of education which was necessitated by two responsibilities: First, to replace the departing colonial officers and expatriate staff in the public sector (World Bank 1991). Second, the newly independent government felt a strong need for the welfare of its people by envisaging that many trained people would be needed for rapid expansion of the critical services provided by government (Sifuna, 1997; World Bank, 1991).

Secondary education caters for primary school graduates of 15-18 age groups. The course prepares the participants for advancement to university, entry into middle level trades and professions, vocational and technical training or direct employment. The curriculum content plays a crucial role of determining whether the participant enters direct employment or goes for further training.

In Kenya, there has been remarkable growth in secondary education, with 151 secondary schools at independence (1963) and a gross enrolment of 30,120 students. By 2007 this had grown to 6485 schools with a gross enrolment of 1,180,267 students (Republic of Kenya, 2008). But impressive as this growth has

been, it has not kept pace with the growth in population and the accompanying demand for education. The increasing number of schools and enrolment of students in schools have had an effect on the government allocation of resources to education.

Initially in Kenya, secondary schools were categorized into; first, National schools which admitted students from all over the country and were financed by the government. Second; Maintained schools, whose financial responsibility for maintenance was met by the ministry or local authority. Third; Assisted schools, which received some financial assistance from the ministry but not as extensive as in maintained schools. Fourth; Harambee schools, which were schools initiated on the basis of a felt need within the community. They were financed by contributions from the community. Finally, Private schools, which were managed by private individuals or organizations. Such schools were to be registered by the Ministry of Education but met their own financial responsibilities.

This categorization had an effect on the financial contribution and the adequacy of resources. Further, public secondary schools were categorized into National, Provincial and District secondary schools. In 1989 all secondary schools were classified into either private or public schools. Majority of the Harambee schools were day schools, hence community financing played an important role in the provision of resources. This study assessed the adequacy of the resources provided to these schools and their implications on quality education.

In 1981, the presidential working party on the second university was commissioned to look at possibilities of setting up a second university in Kenya. It was also responsible for reforming the entire education system. The committee

recommended that the 7-4-2-3 system be changed to an 8-4-4 system (eight years in primary, four in secondary and four years in university)

The 8-4-4 curriculum was launched in 1985 and emphasized vocational subjects. It was assumed that this new structure would enable school dropouts at all levels to be either self employed or get employed in the non-formal sector.

In 1989 the Harambee schools were declared public schools except for the private ones. A great effort was made to provide resources to former Harambee secondary schools in order to uplift their standards to the same level as that of the maintained schools.

A closer analysis of expenditure by the Ministry of Education Science and Technology shows that from 1992/93 - 1996/97 fiscal periods, the total expenditure in education experienced a decline. Since the implementation of SAPs through cost sharing, the government expenditure allocation to education that stood at 18% of total expenditure in 1988/89 declined to 6.9% by 1991/92 (a reduction by 62%) and stood at only 7.3% by 1996/97 (World Bank, government of Kenya, 1996, Abagi, 1997). The consequences have included lack of equipment, teaching materials and other operation and maintenance expenditure outlays that are important for the development of the education sector.

In 2003, the Government of Kenya announced the introduction of free primary education. As a result, in 2004 primary school enrollment increased by about 26.7% with primary school graduates joining secondary schools at the transition rate of 57% in 2004(Republic of Kenya 2007). The government further declared secondary education as part of basic education (Republic of Kenya, 2007).

The introduction of free primary education programme launched in 2002 will continue to have an enormous impact on the education sector as a whole. One of

the impacts is on secondary education which is expected to increase the number of students requiring placement in secondary schools.

The ministry of education in responding to the challenges of free primary education drafted the Sessional Paper No.1 in 2005 on Education, Training and Research which outlines the reform policies in the educational sector. These policies are operationalized in an implementation document entitled the "Kenya Educational Sector Support Programme" (KESSP).

KESSP is being implemented within a Sector-Wide Approach (SWAP) framework driven by the government with active participation of development partners. KESSP has a total of 23 investment programmmes which are eligible for funding from pooled funding due to the absence of respective sub-sector strategies. KESSP recognizes expanding access to secondary education at relatively low cost, while improving the quality of secondary education is the immediate challenge to be tackled by the Ministry of Education.

The World Bank (2005) observed that depending on specific country conditions, the principal challenges in secondary education in developing countries and transition economies can be grouped into four not mutually exclusive, priority areas: a)expanding access for all, paying attention to issues relating to gender equality, b)increasing retention and graduation c)improving efficiency and d)Improving relevancy and quality.

To address the challenges of cost, KESSP proposed among other policies the promotion of day schools as a means of expanding access and reducing the cost to parents and target provision of instrumental materials to needy public secondary schools, while encouraging parents and communities to provide infrastructure and operational costs (Republic of Kenya,2007).

1.1.2 Trends in Financing Secondary Education Since Independence

During the 1960s and 1970s most of the expansion of education in almost every country was financed by increasing public expenditure on education with the obvious justification of the socio-economic benefits resulting from education (Shultz 1960, Becker 1964). Kenya has not been exceptional to this trend of increasing allocation of resources to education. In 1963/64 the recurrent expenditure on education was 22.5% of the national recurrent budget. This percentage increased over the years so that by 1998/99 the government allocated 38% of the national recurrent expenditure to education (Republic of Kenya 2001). At independence in 1963, since the government would not meet the high demand for education, local communities took the initiative of building schools which were later taken over by the government. The government took over the responsibility of paying teachers salaries and providing instrumental facilities and equipment.

Due to the rising cost of education and training, the government in 1986 issued Sessional paper No. 1 on Economic Management and Training for Renewed Growth, to reduce the recurrent expenditure on formal education and training under the ministry of education to about 30%. Table 1.1 shows the rising percentage of expenditure from 1963-2002.

Table 1.1: Ministry of Education Recurrent Expenditure in Secondary Education, 1970-2002

Fiscal Year	Recurrent Expenditure ($ Million)
1970	**8.32**
1975	**8.40**
1980	**13.53**
1985	**30.09**
1990	**78.60**
1995	**16.03**
2002	**33.75**

***Source: Ministry of Finance and Planning Statistical Abstract (1970-2002)**

World Bank (1988) marks one of the earlier studies carried out on promoting user fees in the African region including Kenya. The World Bank recommended upon African Governments to move towards initiating greater liberalization of education and entrenchment of Structural Adjustment Programs (SAPs). SAPs according to Akampuria (1991) were administrative tactics designed by the World Bank and her working partner, the International Monetary Fund (IMF) for the developing countries to help them restructure their social –political and economic trends so as to adjust the fast changing social political and economic demands of the world.

Further, structural adjustments were introduced in Kenya in 1991/92 fiscal year through the Education Sector Adjustment Credit (EDSAC). This policy emphasized increased implementation of user fees, restricting recruitment by teachers' training colleges, quality education and budget rationalization among

other things. Consequently, the government of Kenya appointed a presidential working party on Education and Training in 1988 to study the education sector and recommend ways of ensuring delivery of education and training services within the limits of the constrained economic conditions. The report recommended introduction of cost sharing in education, which was accepted by government in Sessional paper No.6 on Education and Training for the Next Decade and Beyond .These documents provided the framework for the implementation of cost sharing where the government was to meet the salaries of teachers and education administration as well as funding for limited school facilities, while parents were to provide tuition, textbooks, activity and examination fees. The communities on the other hand were to be responsible for putting up physical structures and ensuring their maintenance.

According to the Republic of Kenya Report (2001), education is financed from different sources depending on the categories of schools. The sources include: public resources, grants from donors, bilateral loans and private investors, religious and charitable organizations.

Table.1.2*:* **Sources of Financing Education in Kenya.**

Categories of Schools	**Sources of Financing**
- Public Education Sector	- Taxation - Cost sharing levies and fines - Community cash and in kind including land and labour
- Non Profit /Charitable Schools	- -Grants from religious and charitable organizations - Cost sharing levies and charge - Donor/Agencies
- Private Sector Schools	- Fees and other levies - Private - Contributions from parents

Source: Republic of Kenya on Sources of Financing Secondary Education (2001)

According to the Kenya's Ministry of Education, the major portion of expenditure is on recurrent expenditure leaving very little for development (Republic of Kenya 2003). Poor economic growth and the increase of inflation rates have led to an increase in the cost of education. The reorganization of cost sharing in mid 1980's has worsened the situation. Households are experiencing a heavy finance burden in meeting the cost of education (Republic of Kenya, 2001). Table 1.3 shows the percentage of costs borne between the government and households in 1995/96 within the sub sector of education.

Table.1.3*:* Percentage of Cost Sharing between Government and Households(1995/96)

Sub Sector	**Ministry** %	**Household** %
Pre-primary	0.1	99.9
Primary	69	31
Secondary	40	60
Technical	40	60
University	92	0.8

****Source: Republic of Kenya on Cost sharing between the Government and Households (2001)***

Table 1.3 shows that households in Secondary Schools meet 60 % of the cost, while the Government meets 40% of the expenses. The continuous increase of government expenditure in education since independence made it necessary to reorganize cost sharing policy in 1988.

The Government of Kenya changed the education system from 7.4.2.3 to 8.4.4.in 1985. The rationale given for the change was that the government needed to respond to challenges of national development, provision of a practical oriented curriculum which was to offer wide employment opportunities and the need to provide equitable distribution of educational resources (Republic of Kenya, 1984). The restructuring of education required substantial resources for

implementation and brought extra financial demands on government, parents and communities. The expanded curriculum required different textbooks and with the increasing cost of the textbooks, there was concern, especially from parents who were to bear the cost, hence quality was likely to be affected.

The data presented in Table 1.4 illustrate the total social sector expenditure trends in Kenya between 2004/05 to 2008/09. The ministry of education recorded a recurrent budget of Ksh 10619301 compared to Ksh 8023991 in 2004/05. Development expenditure increased from Ksh 477147 in 2004/05 to Ksh 986681 in 2008/09. This increase reflects the government commitment in providing education as compared to other ministries.

Table 1.4: Central Government Expenditure on Social Services, 2004/05-2008/09

	2004/05	2005/06	2006/07	2007/08	2008/09
RECURRENT EXPENDITURE					
Ministry of Education	80,239.91	88,357.51	99,806.41	106,914.84	106,193.01
Ministry of Higher Education, science and technology			1,453.27	15,859.84	19,334.59
Ministry of Health	17,605.18	19,000.00	22,324.00	25,440.00	27,689.40
Ministry of Labour and Human Resource Development	779.09	891.00	910.24	955.75	999.55
Ministry of Home Affairs	1,478.56	2,000.00	2,234.25	6,494.21	9,522.51
Ministry of Gender and Children Development	-	-	-	2,035.06	1,640.16
Ministry of State for National Heritage and Culture	-	-	-	932.59	1,496.38
Ministry of State for Youth Affairs and Sports	-	-	-	2,559.86	4,230.91
Total	100,102.74	110,248.51	126,728.17	161,192.15	171,106.52
DEVELOPMENT EXPENDITURE					
Ministry of Education	4,771.47	4,002.84	10,020.78	9,683.67	9,866.81
Ministry of Higher Education, science and technology	-	-	324.34	316.00	3,385.90
Ministry of Health	7,803.91	9,943.17	9,832.24	11,230.00	6,947.13
Ministry of Labour and Human Resource Development	466.53	194.00	201.12	408.64	399.71
Ministry of Home Affairs	466.90	2,307.30	2,410.34	1,074.50	1,139.00
Ministry of Gender and Children Development	-	-	-	1,910.29	1,421.42
Ministry of State for National Heritage and Culture	-	-	-	170.72	331.56
Ministry of State for Youth Affairs and Sports	-	-	-	1,783.33	7,830.24
	13,488.81	16,447.32	22,788.82	26,577.15	31,321.78
TOTAL EXPENDITURE	113,591.55	126,695.83	149,516.99	187,769.30	202,428.30

*__Source: Economic survey 2009__

Table 1.4 illustrates the recurrent and development expenditure of the Ministry of education between 2005/05 and 2008/09. The expenditure trend reflects the government commitment to implementing Free Primary Education (FPE) and Free Tuition Secondary Education (FTSE). The highest expenditure during the same period was recorded in secondary education which increased by 342 percent from Ksh 3,919.0 in 2007/08 to Ksh 12,472.4 in 2008/09. Table 1.5 shows the expenditure of the MoE between 2004/05 to 2008/09.

Table.1.5: Expenditure of the Ministry of Education, 2004/05-2008/09

	2004/05	2005/06	2006/07	207/08*	2008/09+
RECURRENT EXPENDITURE					
General administration and planning	59,140.8	64,139.3	72,946.9	82,497.2	82,086.8
Pre-primary Education... ..	25.7	57.0	50.5	41.4	221.5
Primary Education…. ….	6,894.4	7,148.6	7,746.5	7,938.9	9,668.4
Secondary Education … …	938.8	2,893.7	1,019.0	3,919.0	12,472.4
Special Education …. ….	209.8	193.1	353.1	407.6	587.8
Teacher Education …. ……	210.4	177.7	144.9	247.6	214.2
Adult Education …. ……					
Youth Polytechnic and Training[1]				775.3	1,272.6
Technical education[2] … … …	1,546.6	1,291.1	2,819.0	2,694.6	2,884.3
Polytechnic Education[2]	1,538.2	571.7	568.0	633.9	811.2
Universities[2]	9,735.3	11,885.2	14,156.6	11,904.6	11,809.0
SUB-TOTAL	80,239.9	88,357.5	99,806.4	111,060.1	122,028.2
DEVELOPMENT EXPENDITURE					
General administration and planning	651.0	1,705.0	2,630.1	899.4	714.1
Pre-primary Education... ..	6.6	-	-	21.8	21.8
Primary Education…. ….	3,196.9	1,311.6	6,424.2	7,281.5	8,297.9
Secondary Education … …	205.5	170.0	170.0	192.0	849.0
Special Education …. ….	-	-	-	-	-
Teacher Education …. ……	80.3	143.5	50.0	193.3	180.0
Adult Education …. ……				16.9	5.9
Youth Polytechnic and Training[1]				1,131.9	1,383.0
Technical education[2] … … …	70.0	185.0	85.0	310.0	720.0
Polytechnic Education[2]	-	-	-	-	317.0
Universities[2]	560.2	487.7	661.5	937.5	2,261.7
SUB-TOTAL	4,770.5	4,002.8	10,020.8	10,984.2	14,750.3
GROSS TOTAL EXPENDITURE	**85,010.3**	**92,360.4**	**109,827.2**	**109,827.2**	**136,778.5**

Source: Economic survey 2009*

Table 1.5 on the overall shows the higher expenditure on recurrent than development expenditure. This indicates a limitation on the ability of the government to finance development projects within public education.

The introduction of Free Secondary Education (FSE) was as a result of the Government commitment to the achievement of EFA and the MDGs with the promise to achieve a 70 % transition rate, from primary to secondary by the year 2008. Free secondary education was also one of the manifestos of the 2007 major political parties. A number of recent government documents refer to the government's high commitment to meeting the EFA and MDGs targets (MOEST,

2004, 2005). In particular, the Sessional Paper No. 1 of 2005 by the Ministry of Education Science and Technology underscores the fact that the high cost of secondary education is the main reason for the low transition rate to secondary education.

In response, the Government developed the Kenya Education Sector Support Programme (KESSP) 2005-2010 which clearly states the intention of making secondary education part of basic education (MOEST, 2005). This policy framework became the backbone of implementing free secondary education. It seems the government assumed that there was adequate physical capacity to accommodate more students in schools; that the current budget for secondary education was sustainable, and that free primary education was successful (IPAR, 2007).

Kenya's secondary education spending is notably low at 1.6 percent of total education spending (Kippra 2006). Other analyzes such as Mingat (2004) seem to suggest that African countries would be required to double the current expenditure levels for secondary educational scenario that does not seem feasible (World Bank 2005).

1.1.3 Situational Analysis of the Problem in Kisii Central District

Michieka (1994) in his study of the causes of poor academic performance in Kisii and Nyamira Districts, cited the low level of facilities, especially in science subjects as a major cause of student failure in National Examinations. The study revealed that less than 10% of the parents purchase books for their children. The study further indicated that parents engage their children in tea and pyrethrum picking, weeding, water and firewood fetching at the expense of attending classes. This study benefited the current study because facilities and time affect the quality

of education. The poor performance is further evident from the 2006 KCSE results of the top 100 district schools; there were only 3 day schools from Kisii district. Overall, Kisii Central District took position 67 out of 75 nationally. This shows that performance in Kisii District is quite low, particularly in day schools, which comprise the majority of public secondary schools.

1.2 Statement of the Problem

The background clearly shows that enrollment in secondary schools has been increasing since 1963 when Kenya achieved its independence. It is also evident that the Kenya government allocation of funds towards secondary school education has been increasing. The categorization of schools favored national and provincial schools in financial allocation.Day schools have been financed by communities. The government started financing the schools under the free secondary education launched in 2008. However, the government is facing budgetary constraints because public resources are not adequate to meet the physical infrastructure demand, donor funds are inclined towards primary school education, wide spread poverty has reduced household ability to finance education and there is lack of sustainable public-private sector financing framework.

In response to increased flow of primary school learners and the government commitment to meet the EFA and MDGs goals, free secondary tuition education was introduced in 2008. With looming state funding crisis, construction costs rising, and increasing demand on academic quality, the question is how are the income sources meeting the quality of education? At present in Kenya there is a policy shift to promoting day secondary school as a viable option to limited opportunities occasioned by the high cost of schooling. Funding adequacy and

quality has not been empirically established from anecdotal records to have been achieved and the current position is unknown. Against this background the unresolved issue is how are the income sources responding to quality demands of PDSS in the country generally and in the study locale?

1.3 Purpose of the Study

The purpose of this study was to assess the financing of public day secondary education and its implications on the quality of learning.

1.4 Objectives of the Study

The specific objectives of the study were:

i) To find out the adequacy, reliability and trends of income sources in financing day secondary school in Kisii Central District

ii) To analyze the utilization of existing income sources in the teaching and learning process in Kisii Central District.

iii) To find out the implications of financing day secondary schools on the quality of learning.

iv) To devise strategies on how the income sources in public secondary schools can be improved to enhance the adequacy and quality of teaching and learning resources in day secondary schools.

1.5 Research Questions

The study was guided by the following research questions:-

i. How adequate and reliable are the income sources in financing PDSS in Kisii Central District?

ii. How are the income sources utilized in financing teaching and learning resources in Kisii Central District?

iii. What are the implications of financing day secondary school education on the quality of learning?

iv. How can the income sources in PDSS be improved to enhance adequacy of resources and quality of learning in PDSS in Kisii Central District?

1.6 Hypotheses

The questions were further investigated using the following hypotheses;

$H_0$1: There is no statistically significant difference between PDSS income sources

$H_0$2: There is no significant relationship between projected and actual expenditure in PDSS.

$H_0$3: There is no statistical relationship between income and expenditure in PDSS.

$H_0$4: There is no statistically significant difference between amount of income to PDSS and expenditure

$H_0$5: There is no significant difference in performance before and after FSE in PDSS in KCSE.

1.7 Significance of the Study

The current study was necessary to provide data on the adequacy and quality of teaching and learning resources in day secondary schools. Day secondary schools comprise 87% of the public schools in Kisii Central District. The current study will make the stakeholders aware of their contributions so as to come up with ways of improving the quality of the teaching and learning resources.

This study provides data on the financial contributions of the various income sources so as to be able to evaluate the extent to which they meet the cost of day secondary schooling in Kisii Central District. This information will also be useful to educational planners in making equitable financing policies of day secondary schools in the country.

The government of Kenya attaches great importance to education as evident from annual expenditure in education; it was instructive to carry out a research to assess the role of the existing sources in financing day secondary schools as related to expenditure on school infrastructure. Understanding the adequacy and quality of facilities in PDSS can guide the financing decisions on construction of new facilities to be conducive for learning.

1.8 Assumptions of the Study

In this study, it was assumed that: -

i. Education resources were affected by financial sources.
ii. The respondents understood the purpose of the study and answered the questions appropriately.
iii. Day schools had several sources of finances.
iv. Quality of resources were determined by the respondent's perceptions.
v. Principals kept records of finances in schools
vi. Adequate financing of educational resources would improve the quality of learning in PDSS.

1.9 Delimitations and Limitation of the Study

1.9.1 Limitations

i. Kisii Central District (2007) is a large district which was later subdivided into four districts; covering all the school the researcher could have faced financial problems. It was necessary to sample the schools.
ii. Financial information is sensitive. Some principals were reluctant to give information thus requiring the researcher to provide intensive briefing of the purpose of the study.

iii. This study was limited to the information from the respondents.

iv. Findings from this study may not be generalized for public boarding secondary schools.

1.9.2 Delimitations

The study was confined to public day secondary schools. Firstly, these schools besides having similar financial resources, were previously Harambee secondary schools. Secondly, in relating to the implications on learning, the study focused on physical facilities, teaching and learning facilities in the day secondary schools since the financial sources have a direct bearing on the adequacy of resources. Thirdly, the study covered the years 2005 to 2010, a span of five years which brought out the trend of financing in day secondary schools. Fourthly, the study covered public day secondary schools in line with the government policy in favor of day schools as an option to escalating costs of education hence the recommendations provide useful information on the adequacy of financing and quality of learning. Fifth, on assessing the outcomes of education quality, this study will use performance in academic achievements (examination results).

1.10 Theoretical Framework

This study employed the Education Production Function (EPF). The EPF postulates that education outcomes are a function of inputs to the education process that are provided primarily by student families, students, community and schools. A variation of schools inputs is most likely to have an effect on the outputs.

Psacharopoulous (1985) gives an illustration of a simple function for the education as:

A= f (T, B, E_ _ _ _ _ _) where:

A= Achievements.

T=Teacher –pupil ratio.

B=books and other materials.

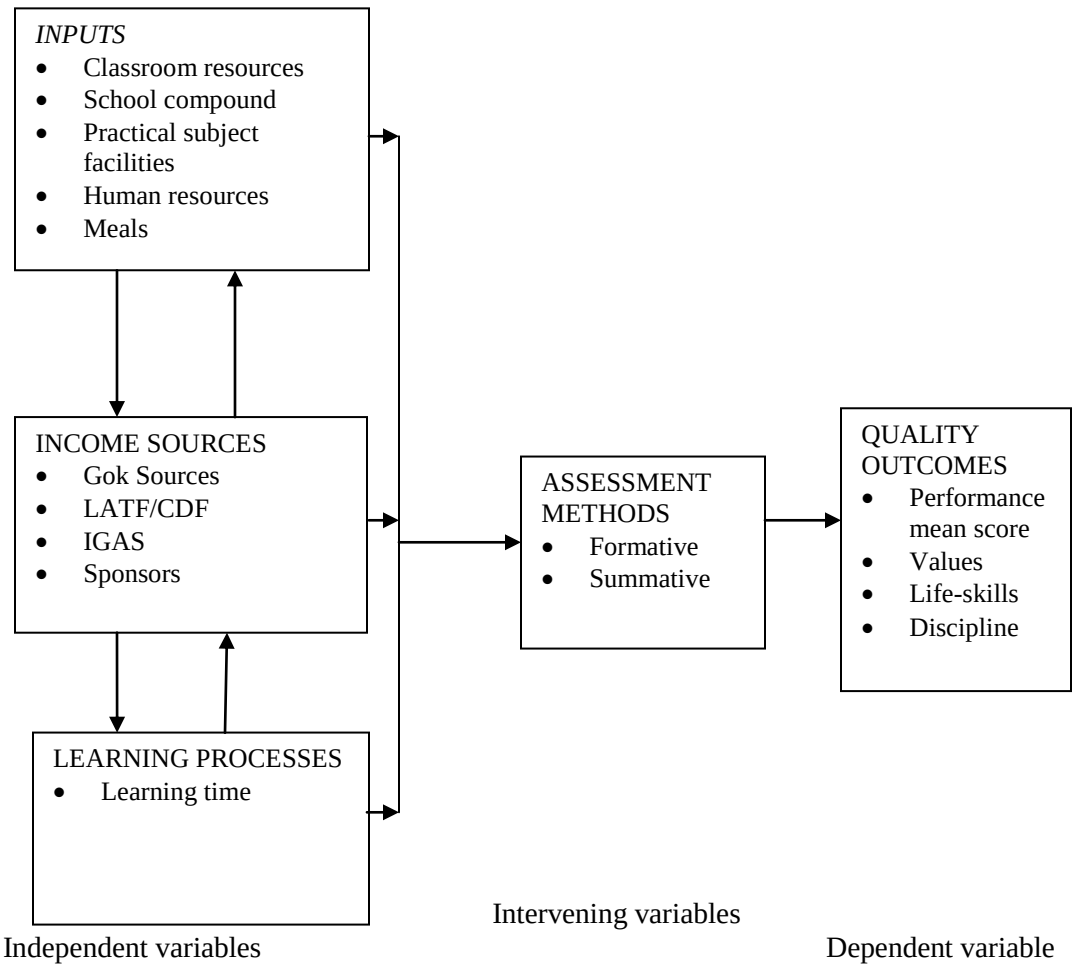
E=equipment and so on.

The “Education Production Function Theory” conceives schools as enterprises in which raw materials (students) and other inputs (teachers, time, books, libraries, laboratories, physical facilities and financial allocations) are combined to produce certain outputs. It is usually a function mapping quantities of measured inputs to a school and student characteristics to some measure of school output.

Education at whatever level is costly and investment in education claims a substantial share of national resources in most countries. Besides the direct costs, there are private and social indirect costs that are incurred whenever investments are made in education. In order to assess the efficiency of an education system, one must have knowledge of the effectiveness and quality of the variables that are used in educational processes.

1.11 Conceptual Framework

A conceptual framework according to Orodho(2009;120) is a diagrammatic relationship between the dependent and independent variables of a study. In the current study, figure 1.1 depicts the envisaged relationship between the dependent and independent variables.



Source: Modified from Orodho(2009:120) model

Figure 1.1: Conceptual Framework relating inputs, resources and process to quality outcomes

In developing the conceptual framework for the study depicted in Figure 1.1; the following variables guided the design of the study. The independent variables are;

i. The sources of income for day secondary schools.

ii. The adequacy of inputs in day secondary schools.

iii. The quality of inputs

iv. Learning processes

The dependent variable for the study was the quality outcomes of the schools measured as performance.

Samer (2003) in a study that explored the relationship between public education spending and education outcomes at primary school level in developing countries demonstrated that improving the public expenditure management system is important in strengthening the link between public spending and education outcomes. This study though done at primary school level does not show the effect of various school inputs.

The study rests on the assumption that educational sector is engaged in a production process hence children, families, schools, community, staff, physical resources, instruction materials, buildings, teacher quality and class size are viewed as inputs to a production function. This can be expressed algebraically as:

A= f (F, I, S, T, C _ _ _ _) where

A= Education Outcome

F= Family inputs

S= school resources

T= Teacher- pupil ratio

C= Community factors

Even though the production function is derived from technical, not behavioral relationship, there is a need to understand the results of estimating a production function since an increment to output from additional input may not be constant. Further, it is a must to test the level of productivity of inputs at the current level of application besides testing whether they are "inputs" at all (Lant and Deon 1997). Schools are also subject to influence of external forces that affect their

functioning. For example, the wealth of a society and its attitude towards education affect the quality of the resources that are devoted to education and their management within schools.

The study conceptualizes the financing of educational inputs as a partnership between the government, parents, school and other partners. The outcome of school financing is a joint responsibility between stakeholders.

Figure 1.1 shows the conceptual framework on which this study was based. It identifies the various stakeholders involved in financing of day secondary. These include; Government, parents, community, donors and the institutions. The framework conceptualizes the school community as a complex partnership involved in the financing of education and whose contribution will determine the quality of learning.

The financial demands of the school system are diverse and shared among the stakeholders. The parents are supposed to pay fees, buy uniforms, textbooks and provide food for the learners. The government is supposed to pay salaries, offer grants and bursaries and assist in putting up physical facilities.

Institutions are supposed to source for income through income generating activities, donations and fundraisings. While the other "partners" who may include non-government organization sponsors and well wishers may provide donations to supplement financing in day schools. The sourcing of funds from partners depends on initiatives taken by the institutions and communities.

According to Bray (1987) community provision often starts at a time when government resources are not available. Today, government does recognize its responsibilities but many communities are unable to stretch their resources far enough. Most communities prefer governments with their greater resources to

provide all the facilities and staff for their schools but when funds are short, communities may decide to bridge the gap so that their children do not suffer.

According to World Bank (1988) the quality of a school is defined by the performance of students and graduation. In practice however, quality is often gauged by inputs. Through recent studies, there is increasing evidence that increasing the provision of institutional materials is the most cost effective way of raising the quality of education. The study concluded that the safest investments in educational quality in most countries are to secure adequate books and other supplies. This study conceptualizes that the resources provided by the stakeholders are utilized to improve the quality of learning through purchase of necessary equipment and physical facilities.

1.12 Operational Definition of Central Terms

Adequacy refers to mobilization of sufficient resources to support a desired level in terms of both quality and quantity of education services

Assessment is the evaluation of the current status of educational finance in day schools

Cost Sharing is the system practiced in Kenya where government and the beneficiaries of education share the educational expenses.

Day Schools are schools where students do not stay in schools.

Educational facilities are the buildings and grounds that house and support the instructional programs of individual day schools.

Implication is how the financing of schools affects quality achievement.

Learning environment is the environment for education which include the physical and human aspects of the school that affect the learning process.

Learning Resources are facilities required in schools to facilitate the learning process.

Non Governmental Organizations these are institutions outside the government involved in financing day secondary education.

Public Secondary Schools are those schools that are managed, maintained and funded by the government.

Quality is the degree of goodness or worthiness in expressing success in educational standards.

Resourcing is the process of searching for resources of funds to finance education.

Revenue refers to the income, which the school receives to finance the teaching and learning process.

School Infrastructure is the total school learning environment including the human and physical resources necessary for quality education.

Stakeholders people who are directly or indirectly involved in financing education. These include parents, guardians, students, sponsors, managers (BOG and PTA) supporters and the general leadership of the area.

Supplementary Income Sources are the extra income sources of income besides the government and parents' contributions mainly institutional based infrastructures.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The purpose of this study was to assess the financing of public day secondary schools education and it implications on quality in Kisii Central District. This chapter presents theoretical and empirical literature with specific focus on financing education, role of resources in learning, quality in education and strategies of enhancing quality of education. The gap in the literature is examined in relation to the present study.

2.2 The concept of financing and quality in education

2.2.1 The concept of Financing education

Education finance has been a topic of debate for a longtime. Countries commit very different levels of resources to education. The Human Development of the World Bank launched an initiative called System Assessment and Benchmarking for Education Results(SABER) which sought to document and evaluate the characteristics of school finance systems, policies and programs across education system. The team identified five key core areas related to education finance notably;

i. School conditions and resources whereby schools should meet minimum quality standards that include teaching inputs, instructional conditions and other resources to attract teachers and students besides providing adequate environment conducive for learning.

ii. Education spending, the amount invested in education provides the basis for achieving the learning goals.

iii. Revenue sources, the sources of funding and the mechanisms through which revenue are reused have implications for adequacy, quality and equity in education finance.

iv. Allocation mechanism denotes that the rules that govern revenue flow and the amount allocated affect the level of performance.

v. Fiscal control and capacity used to monitor the use of budgeted resources for education.

From the areas stated, it can be concluded that assessment of education finance systems should be in terms of ensuring adequacy, promoting equity and quality.(The World Bank,2011).

Applied in the context of PDSS education, financing of education refers to the funding of school conditions and resources to meet quality standards, spending on education inputs to achieve learning goals, allocating adequate revenue flow to enhance performance and monitoring the budgeted resources for education.

Abu-Ghaida(2010), argues that the amount of resources available for current, non-teacher salary items may have important effect on education quality. In most cases the pressure of teachers salaries squeezes out other inputs especially non-salaried expenditures. In countries experiencing large growth in the school age population like Kenya, capital investments must be sufficient for physical infrastructure and maintenance of school buildings. Spending on ICTs should be considered, due to their potential role in improving learning outputs.

2.2.2 The concept of quality in education

Quality education, though a common goal in education, is hard to define. Definitions are elusive and become more complicated since quality change over time and vary for different individuals and groups (Riley 1994). Greaviey and Kellaghan (1996) support the view by Riley by stating that several indicators are required to provide the necessary information on quality and warns that care must be taken to provide a profile of current conditions that can metaphorically be regarded as reflecting the 'health' of the education system.

Various schools have defined quality differently. The most elaborate and relevant to this study is by UNICEF education for All global monitoring report(2005) framework which identified five variables of education analysis;

i. Learner characteristics, which is influenced by socio-economic background, health, place of residence, cultural and religious background, and the amount and nature of prior learning. Potential inequities among students, deriving from gender, disability, race and extinct should be recognized. The difference in learner characteristics require special responses if quality is to be improved.

ii. Context, which denotes that links between education and society are strong and each influence the other. This shows whether education takes place in the context of an affluent society or one where poverty is widespread. In the later opportunities to increase resources for education are likely to be constrained.

iii. Enabling inputs where the main input are material and human which are often measured by expenditure indicators.

iv. Teaching and learning which is closely nested within the support of inputs and contextual factors. It also includes student time spent learning, assessment methods for monitoring students progress, styles of teaching and classroom organization strategies.

v. Outcomes-the outcomes of education should be assessed in the context of it's agreed objectives. They are most easily expressed in terms of academic achievements (examinations). Other process for learners achievements and for broader social or economic gains can be used; an example is labour market success.

2.3 Financing Education

2.3.1 Secondary Education and development

Secondary education is a crucial stage for the education system. This is where future students of higher education are scheduled and taught. Whereas universal primary education is significant to national development, as countries develop this is the most accessible form of higher education.

Todaro (1985) shows that educational expansion promotes or even determines the rate of overall GNP growth as evidenced by numerous quantitative studies of sources of economic growth in the west. This proposition compelled newly independent states of Africa and Asia to build rapidly the human as well as physical capital infrastructure in order to provide leadership for national development. It is clear that expansion of educational opportunities at all levels has contributed to aggregate economic growth among others by creating a more productive labour force endowing it with increased

knowledge and skills and Providing widespread employment and income generating opportunities.

Findings from several studies have confirmed that investment in human capital produce high economic return (Mingat and Lie-peng, 1996: Psacharopoulus, 1994)

These returns have also been analyzed whether they are social or private at different levels of education. In the case of private returns and costs, the difference between the two is higher at the high level of education because government policies of spending is more at this level.

Manda, Mwabu and Mwangi (2002) in a study to analyze the effect of human capital externally on earning and returns to education in Kenya, established that human capital has a positive effect on earnings. The study indicated that a general increase in the level of education benefits all workers. The study concurs with Todaro(1985) that private return to education generally increase with the level of education. Taking into account human capital externality reduces returns to primary education but increases returns to university. The study concluded that in Kenya, the rate of return is 7.9 % for primary, 17.2% for secondary education and 32.5 % for university education.

Further, returns to primary education in the rural areas are higher than those of urban areas, those with secondary education do not lose much when employed in rural areas.

McMahon & Walter (2002) has shown the impact of secondary education on development by analyzing the social benefits, among them:

i. Higher secondary enrollment rates have a direct positive relation to greater political stability as well as indirect contribution through democratization. The large numbers of uneducated, poverty stricken people in rural areas are the face of civil

wars in Rwanda, Mali, Chad, and throughout sub-Saharan Africa, where secondary education has not been extended to rural areas. This can also be accompanied by urbanization such as big cities like Karachi, Chicago, Los Angeles ghettos where groups of uneducated, largely unemployed people from the countryside who have migrated to urban slums.

ii. Absolute poverty in the rural areas is reduced by per capita economic growth. Poverty is found to be lower when there are higher primary but more significantly higher secondary education enrollment rates.

iii. As secondary education lowers rural poverty, it also reduces deforestation. It further contributes to urbanization and the economic growth which provides the political base for regulation of those aspects of lumbering and agriculture that are destructive as well as the economic capacity to support national parks.

iv. Water pollution increases as development begins, but it responds significantly to reduction in the rate of population growth (a function of education) and reduction in the amount of urban poverty. These are purely non-market indirect effects of education. Similarly, our pollution is consistently and positively related to rising per capita income and hence positively related to economic growth. It also responds in the opposite fashion to population growth. The reduced correlation of secondary and higher education to lessen our pollution.

v. Violent crimes as measured by homicide rates worldwide are lower when inequality of income distribution is lower. The relation of homicide to per capita income is negative, so the indirect structural effects of secondary education through higher per capita income and less inequality both operate to reduce crime.

It is clear from the literature above that secondary education plays a significant role in national development. The studies reviewed had limitations in assessing the relationship between the financial inputs and the quality of education more especially in day secondary schools in rural settings. This study filled the literature gap by assessing the financial inputs and how they relate to quality of education in rural areas. However, this study benefited from studies done in supporting the financial investments in secondary education as primary education is almost becoming universal. The policy shift now in Kenya is towards day secondary education.

2.3.2 Justification for Investing in Education by Governments and Families

Todaro (1982) ascertains that educational expansion promotes or determines the rate of overall GNP growth. Education provides middle and high skilled manpower through the formal education system that provides leadership to plan and manage the economy. Vaizey (1962) lists the supply of skilled manpower and technicians among the chief roles of education for sustained economic growth an educated and skilled labour force is a necessity. Therefore, the need for skilled manpower on the various sectors of the economy justifies Governments funding of education.

Higher lifetime earnings are the most direct financial benefit to an individual. Psacharopoulas and Woodhall(1985) articulates that higher incomes are the most direct benefits for educated workers than those who are less educated. He further established a strong relationship between earnings and education using age earning profiles both in developed and developing countries. The average lifetime earnings of educated workers are higher than the average earnings of illiterate workers, or those with lower levels of education. Coombs (1968) points out that individuals look on education as a means of

getting a good job. This is an investment benefit of education. Families invest in education with a hope that the educated person will easily get employment than the illiterate person.

Atkinson (1987) stated of a relationship between education and crime. Thus he asserted that education reduces unemployment and the employed commits fewer crimes. Prisoners have lower educational achievements than the average person and higher illiteracy rates. Hence families and government will fund education since education attempts to inculcate acceptable social values in children and affects behavior.

A major problem in third world countries is poverty. Education contributes towards eradication of poverty both directly and indirectly. Psacharopoulas and Woodhall (1985) argues that the attack of poverty was a fundamental goal of development policies during the 1970's. The 1980 world development report for instance noted that the underlying purpose of the attack in poverty itself was to increase employment; meet basic needs reduce inequalities in income and wealth and raise the productivity. All these can be achieved through education.

A review carried out by the World Bank to explore the relationship between education and agricultural efficiency and productivity, measured in terms of crop production concluded that if a farmer had completed four years of elementary education, his productivity was an average 8.7 percent higher than that of a farmer with no education (Psacharopoulas and Woodhall 1985). The effect is even greater when inputs such as fertilizers or new type of seeds are available. Further studies by World Bank in Korea, Malaysia and Thailand indicated that the effects of education on agriculture are positive, statistically significant, and quantitatively important hence governments and families

invest in education. Psacharopoulas and Woodhall (1985) explored the factor of equity and equality of opportunity as being a justification for government funding education. He argues that if education was provided under market conditions only those who could afford to pay for tuition could enroll. Not only would there be under investment from the social point of view, but income inequalities would be preserved from one generation to the next since education itself is a determinant of lifetime income. If all individuals had access to private capital markets, then those who could not afford to pay tuition fees could borrow; the private rate of return to investment in education was higher than the cost of borrowing it could still be profitable private investment; Many imperfections can be found in capital markets; however, individual students cannot normally borrow to finance their education without providing collateral and investment in education is risky and uncertain. Therefore governments in many countries provide loans or loan guarantee to help students finance their education.

Ayot and Briggs (1992) lists non- economic benefits of education, which accrue to society such as intergenerational effect, regulation of women fertility, and promoting inquiring minds. In addition better education or high literacy rate among women and men have been associated with social economic benefit such as lower infant and maternal mortality, longer life expectancy and address gender equity issues in development (Abagi 1999, Coclough, 1980 Cochrane, 1979).

2.3.3 Methods of financing Secondary School Education

In developed countries the major source of financing Public Institutions is through income from government taxes. For example in Britain, education is a Public and Private

Investment where the central government gives grants to local authorities to finance education through vouchers (Atkinson, 1987). In Africa public schools are funded through partnership between the government and the beneficiaries of education (UNESCO, 1997).

A study by the World Bank (1989) established that in Malaysia in some areas, communities financing arise from demand for alternative forms of education. The Chinese communities have formed schools that teach basic curriculum required by the National Government but also provide a firm grounding in Chinese language, history and culture. In Indonesia schools with religious bias are run and financed by Islamic communities and by mid 1980s they formed 21% of the lower and upper secondary schools levels (World Bank, 1989).

Bray (1996) argues that in South East Asia, existing payment for schooling are the most obvious indicators that many parents are willing to pay for schooling. This willingness is particularly evident in countries where governments do not make satisfactory quantitative provision. He further established that in addition to demonstrated demand, in some countries, some households are willing to spend even more for secondary education. In Peru for example the views of parents whose children live close to secondary schools have been compared with views of parents whose children have to travel two or more hours each day to attend school and found out that households in the second group were willing to pay fees that would more than cover the costs of opening new schools in their village.

Bray (1996) citing further examples of community financing of education, in South East Asia, parents or other family members within the Public education system pay official

fees demanded by secondary schools besides paying for uniforms, transport and other items. In addition to the already mentioned fees, parents in many third world countries pay levies to Parents Teachers Association (PTA) and in rural areas households contribute labour and materials in lieu of cash. In addition to direct costs, families must bear opportunity costs, which is the time their children devote to school.

Oluyele and Kunene(2001), in a case study of Swaziland on education financing and budgetary reforms in Africa, observed that despite the government provision of almost all expenditure, other sources are utilized to finance education. These included:

(i) Local communities in the form of school construction and land donations.

(ii) Foreign aid mainly in the form of scholarships and capital investment.

(iii) Families and individuals in the form of grants, donations, fees and PTA contributions.

(iv) Enterprises, corporations and estates.

(v) Non-governmental organizations and missionary institutions.

According to the report on the state of education in Africa (UNESCO, 1997) in a majority of African countries, secondary education is organized in partnership with voluntary agencies, religious groups, NGO`s and communities or individuals. The degree of partnership varies from one country to another. For example in Seychelles over 60% of schools are privately owned while in Nigeria 90% of schools are state owned. Even in countries where in principle all schools are state owned, all schools cost are borne by the state. The local communities and local NGO`s through community boards, PTAs and other voluntary associations make direct or indirect contribution to the cost of education. The report went further to indicate that in Africa and partly sub-Saharan Africa, the

economic difficulties have resulted in the inability of a majority of the countries to finance education.

Munyae (2002) seemed to agree with the UNESCO report and attributed Africa's economic woes to the implementation of the structural Adjustment Programmes (SAPs), which had a major impact on the provision of basic social services like education, health and nutrition among others. Since 1990s many African governments have had pressure from the World Bank/ International Monetary Fund (IMF) and their supporters to cut spending as part of reforms towards economic revival. These institutions have pushed for cuts in government expenditure (or subsidies) on social welfare programmes such as education, housing, health and food coupled with reductions in the public sector. For the educational sector, this is happening at a time when more resources are needed to make it effective.

Bray (1996) cites examples from African countries where communities were involved in financing education and explained that this occurred where demand for schooling is strong but government inputs are inadequate. He cited the following examples; first, in Uganda the government provision of education for all collapsed during the 1970s and remained deficient during the 1980s and1990s. The gap was partly bridged by parents and broader communities who at the primary level met 65 – 90% of the total cost while at secondary level household inputs were estimated at 70%. Second, Togo also experienced a major crisis in governmental funding hence parents and communities have had to provide one-to-two thirds of the resources needed to operate Public Sector schools while in Malawi, community ran schools unassisted by government made up to 20.5% of all primary schools.

A study carried out by Ogeta (2004) in South Nyanza on the contribution of parents to the cost of upper primary and its implications for free primary education in Kenya established that parents had low financial abilities in meeting the costs of upper primary education because of their low income. However he observed that despite the low income and inability to meet the cost of upper primary their contributions were necessary due to inability of the government to meet the primary schools financial needs. He recommended for soliciting of funds from community members, foundation bodies, and through cost sharing activities. Though the study was for primary schools level, the findings can be applied to secondary schools. The present study examined all parties involved in financing public secondary education.

Ogachi (2002) carried out a case study in Kajiado and South Kisii Districts on community financing of primary schooling in Kenya and its implications on quality. The study established that community financing of primary schooling led to the deterioration in quality of both the physical facilities and learning process. He further observed that the socio-economic backgrounds of committees affected household demands and ability to pay the required schooling level. He recommended that the government should institute various affirmative strategies to ensure quality primary schooling. Though this study was for primary schools level, the findings benefited the present study, as communities are involved in financing secondary education. The present study covers all the stakeholders involved in financing of education in day secondary schools, unlike this study which examined the community role in financing primary education.

2.3.4 Financing of Education in Kenya

In Kenya, the history of cost sharing between the government and the public dates back to early colonial period. Since 1963, the role of the community in initiating and financing development has greatly expanded. In the past the government used to shoulder the equipping schools with materials for learning and buildings. Individuals and communities also are aware that higher education enhances prospects for wage employment in the modern sector and therefore a great demand at all levels hence they contribute to meet the cost of education.

Republic of Kenya (1999) pointed that the Government under the structural Adjustment Programme, implemented the cost sharing policy in the provision of Social services including Education. The policy, though meant to revitalize planning and management of education created the following problems:

(i) All controls on amounts of fees to be charged were removed and currently head teachers charge any amounts of fees.

(ii) The significant expansion of education at all levels has been complemented by increase in teaching force, and high salary bill. The government's role has consequently become increasingly limited to provision of teachers salaries.

(iii) Parents have been left to meet the rest of the recurrent costs, which include maintenance, physical facilities development, vehicles, electricity, water and other services as well as employments for all support staff.

(iv) Lowered enrollment rates and increased dropout rates.

(v) The policy has increased inequalities, as regions with nothing to share have been unable to contribute to educational development.

Odongo (1996) in a study on the effects of cost sharing at Olare and Ligisa secondary schools in Homabay District established that cost sharing had affected the performance of students in KCSE examinations due to consistent lack of facilities and equipment. He further argued that parents met the bulk of the costs of developing the school besides payment of the costly school fees. The quality of facilities put up by parents does not facilitate learning as they are poor. Students spend much time at home after being sent away from school. This study, though carried out in local day schools, is limited in the number of schools covered and hence cannot be generalized to a large population. The study examined day schools in the whole district and in a different geographical region with different economic resources.

Abagi and Wasunna(2000) in a study on cost sharing in education and health in Kenya acknowledged that the education sub sector is at crossroads due to low enrollment, poor retention and low transition rates and poor quality education. The study established that cost sharing in education lacks policy guidelines from the Ministry of Education on implementation, which has led to wide divergence in costs applied by schools across and within the region. The study declared the figures from the ministry as unrealistic, arbitrary and unresponsive to needs and conditions of individual schools. This view is supported by the Chairman of the Kenya Secondary Schools Head teachers Association who dismissed the fees guidelines set by the government as unworkable, outdated having been formulated in 1998. He wondered how head teachers were to implement the same eight years later without considering inflation and economic hardships (Kenya Times 11th May, 2006). .

Makau (1985) in a study on state community partnership in financing secondary education in Kenya acknowledged the increasing pressure on the central government's finances in meeting the growing demand on education. He argued that whereas decentralization is an option, communities in the periphery do not have the ability to adequately meet the expenses required in schools given the differing levels of economic development between regions and great inequalities in household incomes, which characterize developing countries. The study revealed the existence of disparities between the regions in the distribution of secondary school opportunities and indicated that a large proportion of the population were under – represented in secondary education because the incomes of the majority of Kenyan households cannot meet current costs. The study suggested that the Government rationalize and streamline the periphery if the new policy is to lead to increased efficiency and quality learning. This study discusses the impacts on the quality when financial responsibility is shifted to the periphery. Though the study did not give the options for financing secondary education. The present study gave recommendations on viable alternatives for supplementing financing of secondary education.

To provide quality education, there is need to allocate more resources to public schools. Due to the limitation of the amount of fees collected, and economic hardships of parents, schools are compelled to initiate institutional strategies to secure additional funds for education. Gravenir (1991), while assessing the trends of public financing of education in Kenya, suggested that a combination of alternative methods of financing education including cost sharing and the generation of extra funds by institutions of learning seemed unavoidable, particularly in secondary schools. He did not identify the activities

that could generate funds and what the contribution of such sources could be. The emphasis of Gravener(1991) is crucial in pointing out the need for institutions to seek more funds. The present study, besides investigating the adequacy of financing also suggests the strategies to improve financing of education in order to enhance quality.

A study done by Olembo (1986) investigated the methods by which schools are financed. The study revealed that a larger amount of money needed to run a school come from the Ministry of Education, at central and or local level, and is raised through taxation. The study regretted that there was not always enough funds for school requirement. It also found that head teachers of schools were involved in fundraisings to supplement money from government sources. Sifuna (1990) and Bogonko (1992) made similar observations. The generation of supplemental funds is of interest to this study.

Kiogora (1990) studied the initiatives that primary schools engaged in to generate income in South Imenti. The study revealed that primary schools that utilized their farms well generated an average of Ksh 29,742 annually. The activities undertaken included growing of coffee, napier grass, tobacco, tea and rearing of livestock. The study further revealed that head teachers were willing to undertake diversified income generating projects. The research issues raised in the study are applicable to this study. The only major difference is that Kiogora`s study was on primary schools whereas the present is on secondary ones.

Wesonga (1996) studied supplementary sources of funds for secondary education in Kakamega District. The purpose was to identify school based economic activities, and to find out the uses of the money accruing from the sources. The study revealed that many

schools had made an effort and were generating funds from school based economic activities to supplement existing sources.

Riechi (2003) carried a study of Revenue Diversification in Kenya's Public Universities. He established that non-governmental sources contributed between 19% and 40% of the recurrent expenditure budget. Further, revenue diversification initiatives increased the amount of income of Kenyan public universities hence enabling them to meet part of their rising budgetary deficits in their institutions. The study revealed that diversification of revenue sources appears to have a stabilizing effect on universities by reducing their vulnerability to fluctuation in government funding and by broadening the range of stakeholders so that the influence of any single interest group is being lessened. The study though done in universities relates to the current study which assessed the contributions of various income sources besides the government in financing day schools.

A study by Getange (2005) on institutional initiatives in supplementing the financing of secondary school education in Kisii District revealed that schools in Kisii Central Districts initiated diversified income generating and resourcing activities. The funds realized from the activities were spent in supplementary government efforts in financing education. This study covered all categories of schools while the present study focused on day secondary schools.

Free secondary education was launched in 2008 to increase transition rate from primary to secondary schools. The government made a commitment through Sessional paper N0. 1 of 2005 to increase transition to 70%.

According to a circular by Ministry of Education (2008) on guidelines for the implementation of FSE, every child is entitled to free day secondary education from the

government at a cost of Ksh.10,265 per year. The breakdown of the allocation is shown in Table 2.1.

Table.2.1:Government allocation to FSE

Vote head	Amount in Ksh
Tuition	3600
Repair, maintenance and improvement	400
Local travel and transport	400
Administration cost	500
Electricity, water and conservancy	500
Personal emolument	3965
Activity fee	600
Medical fee	300
Total	10265

Source: Ministry of Education(2008)

The funds to support the programme were to be disbursed to schools in three tranches. The tranches consist of 50% to be disbursed in January, 20% in April, 30% in August. The funding as indicated in Table 2.1 shows limitation in allocation of funds towards development of day school infrastructure facilities. However, the guidelines stipulated that parents should continue to meet the cost of school uniforms, lunch for day scholars and expansion of infrastructure. Further, CDF and LATF to supplement government funding to day secondary schools. In addition, the government advised the schools to start income generating activities(IGAS).

Kippra(2007) points out that to provide FSE the government should have to increase the program's administrative costs which will be covered under operations and maintenance. Schools could benefit from this allocation to meet the general purpose expenses while the office of the DEO and DQASO could use some funds to monitor implementation of FSE in schools.

In Kenya, the CDF act allows the use of CDF funds to improve schools infrastructure. Specifically 3% of the government's revenue is earmarked for CDF and the act allows upto 50% of these funds to be spent for education(Government of Kenya, 2001). However, availability of these funds is largely influenced by political considerations.

2.4 Resources and learning

Modern research continue to verify that educational resources and facilities have an impact on the learning environment and learners achievement (Stevenson, 2001).

Classroom lighting plays a particularly critical role in student performance (Philips 1997). Jago and Tanner (1999) cite results of seventeen studies from middle 1930's to 1997. The consensus of these studies is that appropriate lighting improves test scores, reduces off-task behavior and plays a significant role in the achievement of students.

Lemaster (1997) synthesis of 53 studies pertaining school facilities; student achievement and student behavior, reports that daylight fosters higher student achievement. The impact of lighting is well studied and documented. Students must have appropriate lighting in order to learn and thrive in their learning environment. Schneider(2002) cites 17 studies from 1930s to 1997 concerning lighting. The conclusions of these studies was that appropriate lighting improves test scores, reduces poor behavior and plays an important role in students achievements. It also affects mental attitude, class attendance and performance.

UNESCO (2000) delineates teaching learning conditions which have a bearing on quality as:

1. Learner background (gender, age, home language)

2. Home background (distance to school, meals recurred, parent in the house) prevent education
3. Home learning support (assistance of homework, activities other than school related work, parent education)
4. Teacher background(age, gender, training experience)
5. Teaching conditions (furniture, learning material availability of chalk boards and chalk)
6. Teacher work environment and activities (availability of teacher resources, teacher activity a fees school)
7. School head background (gender, qualifications and experience)
8. School characteristics (school safety, school size, school facilities and amenities.

An analysis of nine countries (Botswana, Madagascar, Malawi, Mali, Mauritiaus, Morocco, Senegal, Uganda and Zambia.) was made in order to associate learner performance, (score) with the eight variables. The findings revealed that the issues that had a bearing on quality are: teacher background, teaching conditions, teacher work environment and school characteristics.

Obadara and Alaka (2010) in a study in Nigeria on the influence of resource allocation on secondary school student outcome revealed a correlation co-efficient (r) of 0.6s which is significantly at 0.05 level. The result indicated that financial resource allocation to school significantly influence students performance. The study further revealed that human resource allocation to secondary schools significantly influence student's performance. The study concluded that resources are vital factors that make a system function. Therefore, resources are very important in the development of qualitative

education. The success of an educational system depends on manpower, money and materials available to it.

Bell and Rhodes (1996), noted that school facilities include administrative offices, staff rooms, classrooms, laboratories, workshops, equipment, stores. Libraries, staff houses, offices and the school grounds. Consequently, for quality learning the school has o utilize these facilities.

Onyango (2001), emphasizes that human resource is the most important in a school organization, and adds that teachers comprise the most important staff in the school. However, the contribution made by other staff members such as secretaries, bursars and support staff is equally important.

Earthman (2002) points out that the capacity of the school influences learning. When the capacity exceeds it puts pressure on teachers and administration, further increasing discipline problems unlike small class size.

Students with special needs presented a greater diversity of needs, including physical, cognitive and behavioral, which require additional spending to address(Harr et al, 2008).

A library is expected to increase the quality to access information as well as to develop reading and comprehension skills(World Bank Working Paper No.126, 2004)

There is evidence that school infrastructure is important for creating positive learning environments and improving student performance.(Duflo, 2001). In addition, school infrastructure is associated with school attendance.

Studies on textbook usage have consistently been shown to have a positive effect on students learning.(World Bank Working Paper No.130, 2004)

These studies benefits the current study in view of the learning environment in rural day schools which suffer from poor lighting, overcrowding and inadequate facilities occasioned by lack of funds

2.5 Quality in education

According to the World Bank (1988), on policy of education in sub-Saharan Africa, quality of a school or education system is properly defined by the performance of students and graduates. The study suggested that in practice the inputs into the teaching process are generally easier to measure than outputs hence quality is often gauged by inputs. The study laments that the quality of education in sub-Saharan Africa is well below world standards and the major explanation is that expenditure per student is quite low and declining.

The study further points to the following as determinants of school quality:

i). Class size within broad limit units between 25 and 50 pupils.

ii). The provision of instructional materials especially textbooks as the most cost-effective way of raising the quality of education. The scarcity of learning materials is the most serious impediment to education quality on Africa.

iii). Dilapidated buildings, missing desks and chairs and lack of good ventilation and sanitation facilities are a common place in Africa.

The study concluded that the safest investment in educational quality in most countries is to secure adequate instructional and learning materials. This study benefited the current study since the findings were based on schools in rural areas in Africa, which is the case in Kisii District. The only difference is that the study gave a general picture of education in Africa while the current study will dealt specifically with day schools.

Nevo (1995) in an attempt to develop a comprehensive framework of school quality indicators identified six groups of evaluation variables that can be used to assess the quality of schools for summative and formative purposes. These included:

i) The community and students served by the school. The nature of the community in which the school is located and the characteristics of its students are important indicators of its quality. The socioeconomic level of the pupils is a major determinant of student achievement.

ii) Good schools are expected to have a vision. The school vision encompasses school perspective regarding goals and objectives, instructional approaches and policies for admission, retention and integration of students from various backgrounds. Apart from the nature of the vision, the fact that a school has a vision is in itself an indicator of quality. It can be judged by its coherence, the support it receives in the school and the extent to which it reflects the need of its students.

iii) School personnel are a human factor, which has an impact on the quality of the school. Good schools have high standards of selecting their principals and teachers and are willing to invest in their continuous professional development and growth. The quality of their teachers can be evidenced by their professional credentials, their level of formal education, experience and areas of specialization. Staff development activities, staff turnover and student/teacher ratio are also important considerations on school quality.

iv) Material resources, such as budget, space, quality and equipment are indicators of school quality; obviously rich school facilities provide useful clues to the school's management style and its educational priorities.

v) Educational programs and activities are a direct reflection of the schooling process. The existence of a wide variety of programs and projects within a school is an important indication of the nature of its educational process.

vi) School achievements are clearly a major indicator of school quality, but are not limited to student achievements as expressed by scores on standardized tests. The holding power of the school, parent's satisfactions, judgment of school inspection, accomplishment of school graduates and awards earned by the school are indicators of school achievement, which is a reflection on school quality.

Lillis (1988) seemed to agree with Nevo on the quality of student intakes and in reference to Kenya established that Harambee schools which are mainly day schools, admit students who have failed to get places in government schools. Apart from the factors of quality, he concluded that when community support supplements the existing government system, it may be assumed to improve quality. Communities which construct good teachers houses and which are able to make staff feel valued and productive by giving them a higher level of support are more likely to be able to attract and retain well qualified staff than other communities. In rural Kisii, teachers commute from long distances to schools, and this is likely to affect the quality of teaching.

The quality of school facilities seemed to have an indirect effect on learning, an effect that is hard to measure. A study in India sampled 59 schools and found out that of these

only 49 had buildings, and of these 25 had a toilet, 20 had electricity, 10 had school library and 4 had a television(Carron and Chau, 1996). In this case, the quality of learning environment was strongly correlated with learners environment.

In Latin America, a study that included 50,000 students in grade 3 and 4, found out that the children whose classrooms lacked classroom materials and had inadequate library were significantly more likely to show low test scores and higher grade repetition than those whose schools were well equipped(Willms D. 2000). Other studies carried out in Botswana, Nigeria and Papua Guinea concur with these findings(Pennycluick, 1993).

2.6 Strategies of enhancing quality of education

Peter Buckland(2003) points out that the state must reassert its role as a principal funder of education with ultimate accountability for quality. This requires a more strategic approach to the decentralization effective role in setting and monitoring standards and greater transparency in cost and financing issues. He gives a further powerful argument for continuity central role for the states in financing education on the grounds that there are many externalities associated with education provision. This puts the government at the centre of financing education and enhancing quality of education.

UNESCO(2010) while pointing out the challenges of secondary education in Kenya such as inadequate teachers, high cost of learning and poor quality education, recommended that, Bursary funds in secondary schools could enhance transition from primary to secondary education. Further, parents and communities need to provide infrastructure and operational costs. Apparently it is evident that the Government may not meet all the costs that may reduce the cost, hence cost sharing will continue to be used as a strategy for funding education.

Republic of Kenya (2007), in its vision 2030, projection admits the challenge for meeting the physical facilities and providing for learners with special needs and special talents. To enhance quality, the projection aims at recruiting more teachers to attain the required national standard of 1:40 teacher to student ratio. And improving the ratio of textbook to learners by increasing the textbook grants to schools. While lamenting the minimal role of parents in school financing, the projection recommended for the strengthening of the BOGs and legally incorporating PTA to expand and develop secondary schools.

2.7 Summary

From the literature reviewed the following gaps in knowledge are evident that the present study filled. First, day schools are thought to be more cost effective than boarding schools. No study has been done to establish the facilities and financing abilities of parents in day schools and how this affects quality. A description of the process variables that are dependent on the financial provision of stakeholders was missing.

Second, studies done on supplementary income source are centered on primary and general secondary education level. This study specifically focused on day secondary school. The study explored the supplementary sources in day schools and how they can be used to supplement school revenue.

Thirdly, limited studies have been done to investigate the effects of finances on quality on day secondary school. A study by Ogachi (2002) centered on the role of the community financing. This study was done in Primary school level and methodically it was a comparative study of schools from Kajiado and South Kisii. The present study focused on day secondary school and no study has been done so far to determine the impact of existing sources on financing day secondary school in Kenya.

Fourth, previous studies done analyzed the effects of single sources on cost sharing. This study revealed the level of inputs from other income sources and effects on quality. Further the study examined the adequacy of government financing under FDSE.

Fifth, there exists a gap in literature between what is known about day secondary facility needs and information was needed on what makes an adequate high quality educational facility at secondary school level. This study contributed to the closure of this in providing information on day secondary school financing facility adequacy, resource adequacy, resource utilization and educational quality.

Sixth, this study focused on the financing of many sources unlike previous studies done on single sources. Finally, few studies have shown the linkage between income sources and quality of learning. In Kisii District Central, there are no known studies on the same.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the research design, location of study, target population, sampling procedures, instrumentation, procedure of data collection and method of data analysis.

3.2 Research Design

This study adopted a descriptive survey design. According to Abagi (1995) a survey design gives a description of how things are, stating for example, "the state of the art". In a survey design, data specified in the problem are obtained from a sample selected from a clearly defined population to describe the population in terms of the variables to be studied. Kerlinger (1969) points out that descriptive surveys are not only restricted to findings, but may often result in formulation of important principles of knowledge and solution to significant problems. Information in descriptive survey is collected by interviewing or administering a questionnaire to a sample of individuals (Orodho, 2009).

The survey design suited this study because the performance of public day secondary schools remain poor in Kisii Central District, raising the problem of quality of educational achievement in these schools. The study sought to understand and describe the financing of public day secondary education. The researcher reported the findings of the state of affairs as they exist. The respondents in the study included: Principal's, Bursars, BOG Chairpersons, PTA chairpersons and District Quality Assurance Officers. In data collection, questionnaires were administered on the school Principals while the interview schedule was administered on the Principals, BOG chairpersons, PTA chairpersons and District Quality Assurance Officers. Observation checklists were used

to give a view of the reality. These instruments yielded statements of references concerning the population; which enabled the researcher to draw valid and objective answers to research problem. Data analysis was done using descriptive statistics such as measures of central tendency, graphs, measures of variability and correlation.

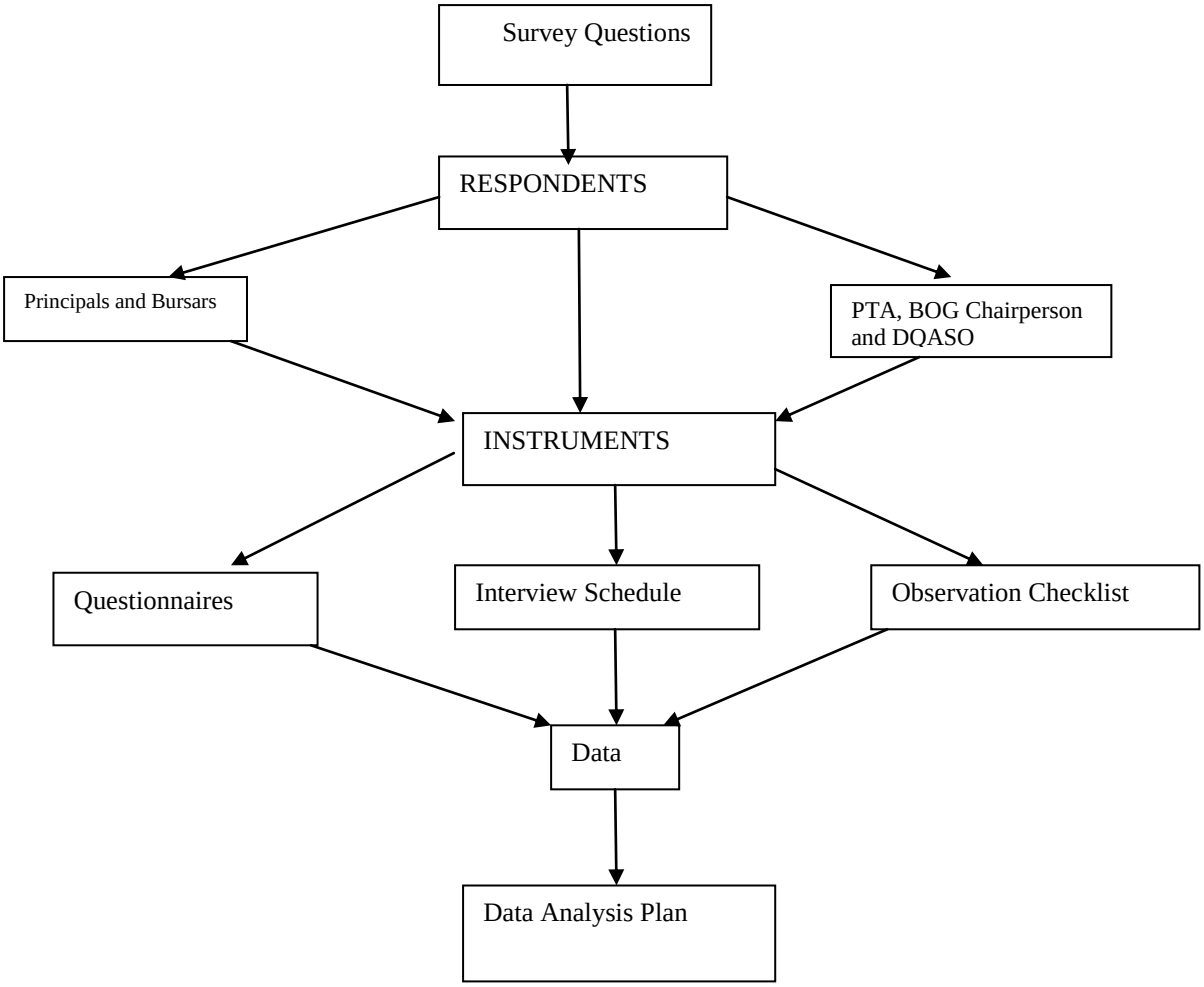
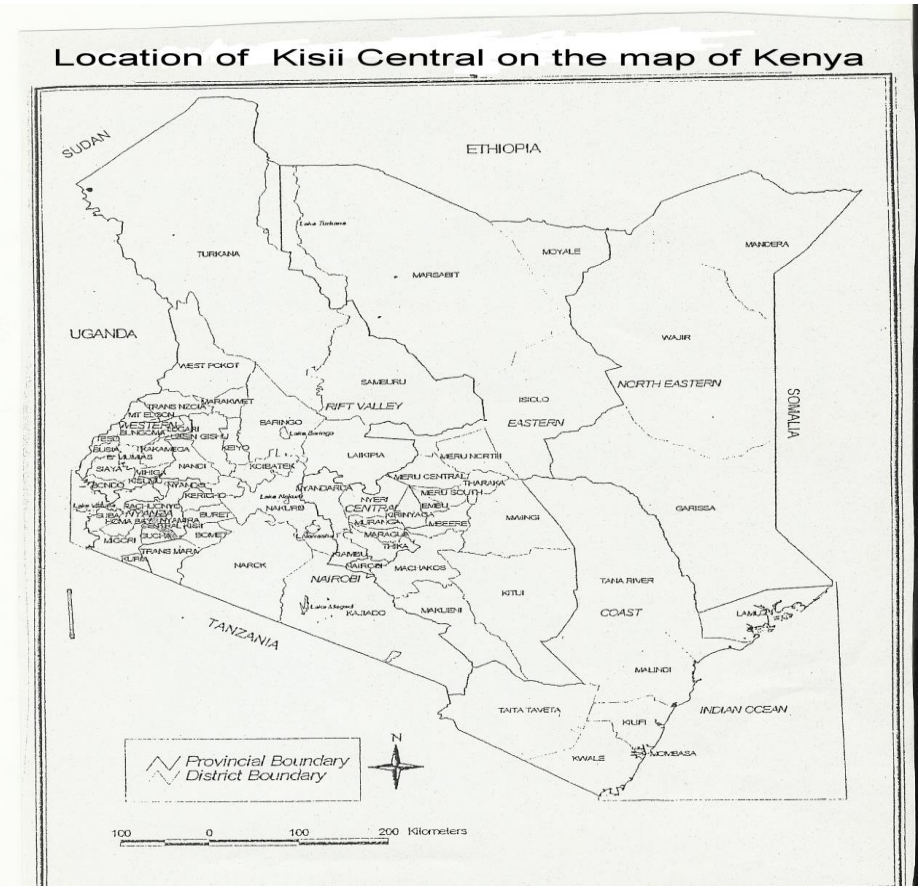


Figure 3.1: Design of the study

3.3. Location of the Study

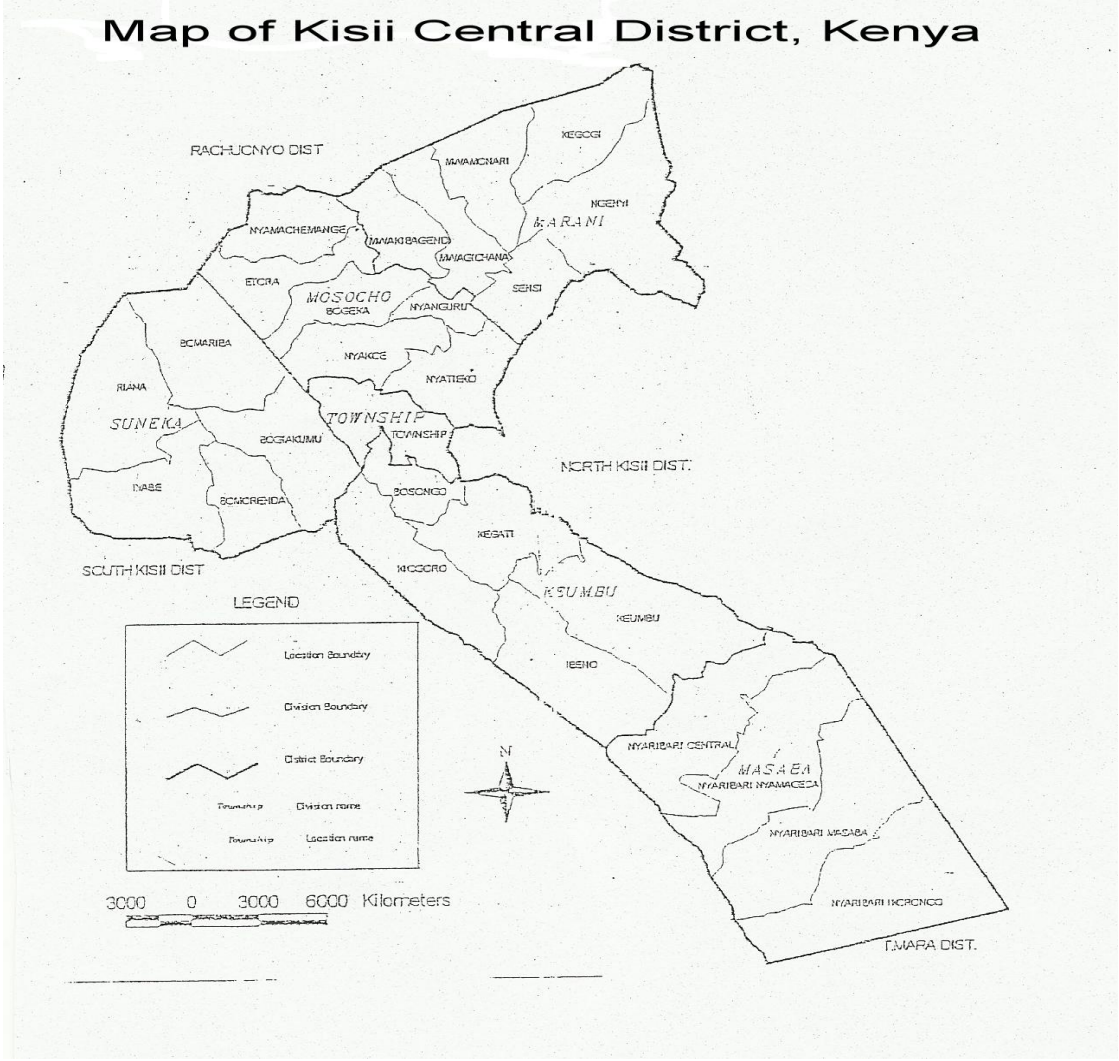
The study was carried out in the former Kisii Central District, now comprising of four districts; namely Masaba North, South Gusii, Kisii Central and Marani districts as shown in Figures 3.2 and 3.3.

Figure 3.2: Location of Kisii Central District on the map of Kenya



The then former Kisii Central was one of the twelve districts in Nyanza Province. It shared a common border with Nyamira District to the East, Trans- Mara District to the south, Migori District to the southwest, Rachuonyo District to the north and Gucha to the southwest. The District covered an area of about 648.9km, which is divided into seven divisions; thirty-one locations and ninety-two sub locations. The District lies between latitude 0º 39' and 0º 58' south and longitude 34º 42' and 35º 05' East. The study started before Kisii Central District was divided into the four districts.

Figure 3.3: Map of Kisii Central District, Kenya



Kisii Central is mainly hilly with several ridges in the eastern part. It is divided into three main topographical zones. The first zone covers the area below 1500m above sea level. The area includes Western region and Northern parts of Suneka and Marani Divisions. The second area covers the area lying between 100m and 1800m above sea level. This area covers parts of Keumbu and Marani Divisions. The last Zone covers areas above 1000m above sea level and includes most parts of Keumbu and Marani Divisions. The major rivers in the district include Kuja, Mogusii and Riana. These rivers flow throughout the year and drain into Lake Victoria.

The district has a highland equatorial climate. It receives an average of over 1500mm of rainfall per year that is well distributed throughout the year. The annual maximum air temperature of the highland is 24^0c with a mean annual of 14^0C (Republic of Kenya, 2001). The soil types found in Kisii Central District are categorized as clay, sand, loam and red. There are also black cotton soils and organic peat soils in the bottom of the valleys.

According to 1999 Kenya population census, the district had 491, 786 persons. The district is the forth densely populated in Nyanza Province *Republic of Kenya, 2001). The district is divided into seven main administrative divisions namely: Keumbu, Marani, Masaba, Mosocho, Suneka, Kiamokama and Kiogoro.

The crops grown in kisii Central District include coffee, tea, maize, pyrethrum, beans, finger millet, potatoes, bananas and groundnuts. The crops grown are for both subsistence and commercial purposes. The organic peat soils found in valley bottoms are used in making tiles and bricks. The district has no gazetted forests and afforestation has been taking place in swamps and hilltops. The climate makes it possible to practice dairy

farming. The district has one tea factory, which create employment opportunities for citizens. Commerce and trade services are mostly concentrated in Kisii town. In the informal sector comprises of *Jua Kali* activity like carpentry, shoe making and mending, brick making, tailoring, motor vehicle repair and charcoal selling.

The selection of Kisii Central District for the study was prompted by the following considerations. First, in spite of the diverse economic activities carried out in the district it is among the districts with schools lacking the basic learning facilities and the cost of education is high (Republic of Kenya, 2001). Secondly, a study of this nature had never been conducted in the district. Thirdly, the district performs poorly in KCSE (Kenya Certificate of Secondary Education). Examinations, for instance in 2001 out of the 5862 candidates who sat for KCSE examinations, only 297 scored grade B and above which was only 5%.

Kisii Central District was chosen for the study due to the following considerations. First, the area has a number of economic activities, which can be harnessed, to support schools in order to, promote quality in schools. The economic potential of the district is assumed to foster positive attitude of the stakeholders to finance education. Second, the district has been performing consistently poorly in national examinations, which raises questions of financing levels and quality of education in the schools. Table 3.1 shows the performance of schools in Kisii Central District between the years 2001 and 2006.

Table 3.1: School Performance in KCSE of Kisii Central District 2001-2006

YEAR	ENT	SCH	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	E	X	Y	MSS
2001	5862	90	0	24	85	85	325	392	540	774	1094	1309	1016	83	32	0	4.4045
2002	7094	102	3	33	134	134	350	411	516	813	1243	1645	1590	225	44	76	3.9576
2003	7127	108	7	44	158	158	399	476	597	862	1191	1511	1265	112	57	177	4.434
2004	8185	118	4	16	101	101	476	529	472	738	687	3096	1581	149	45	1	4.0517
2005	94330	129	8	114	241	241	477	667	862	1133	1462	1946	1797	269	509	6	4.4984
2006	7170	130	7	69	141	141	377	453	594	743	1055	1478	1578	373	43	14	4.2307

Source: DEO, Kisii Central District (2007) on KCSE School Performance

From Table 3.1 it is clear that there is a concentration of candidates in grade C and D. It can be concluded that the quality of performance in the district is low and the graduates may not be admitted to competitive careers. Thirdly, district day schools constitute a major portion of secondary schools in Kisii, that is 87%. Fourth, a study of this nature has never been conducted before, hence information on the problem is nonexistent. Therefore, this study contributes knowledge to the problem. According to Abagi and Wasunna (2000) there are limited policy oriented studies on cost sharing on the willingness and ability to pay for education by parents and communities in the cost-sharing Programme. He further pointed out the impact of user fees based on geographic distribution of existing educational institutions at the provincial, district and community levels. This study attempted to establish the magnitude of the contributions of the stakeholders and the implications on quality in day secondary schools. Besides time, access and cost, the researcher is familiar with the geography, culture and the people of the area.

3.4. Target Population

The target population for this study was 102 public day secondary schools (PDSS) in Kisii Central District. Private schools were left out since they have different sources of financing and the government does not regulate their school fees schedule while the boarding schools were left out since they have a historical advantage of facilities as the government assisted them. In Central Kisii, there are 17 public boarding secondary schools comprising of 13% of the total population while day schools comprise of 87% of the total public secondary schools in the district. The schools are distributed per division as indicated in Table 3.2. Public day schools in this study as they comprise the majority of the schools in the district and their performance is poor as shown in table 3.1

Table 3.2: Study Sample

Subject	**Number N=148**
Principals	36
School bursars	36
PTA Chairpersons	36
BOG Chairpersons	36
DQASO	04
Total	**148**

3.5 Sample and Sampling Procedure

In selecting the sample, day secondary schools in Kisii Central District were stratified. A proportionate random sampling technique was used to ensure fair representation of the targeted group in all the nine divisions. The number of secondary schools in each division were multiplied by the representative index (36=0.36) to select the sample.

This sampling technique ensured fair representation of the study population since a proportionate number of schools were randomly sampled from each division depending on the number of schools in the division.

The number of schools selected as a sample from each division is shown in table 3.3

Table 3.3*:* School Sample

Division	Number of Public Day Schools in each Division	Number of Schools to be Selected	%
Getembe	5	2	5.6
Kegogi	8	3	8.3
Marani	11	4	11.1
Mosocho	11	4	11.1
Suneka	14	5	13.9
Kiogoro	7	2	5.6
Keumbu	12	4	11.1
Kiamokama	17	6	16.7
Masaba	17	6	16.7
Total	**102**	**36**	**100.0**

The 36 principals of the sampled day schools were purposively sampled in the study since the Principals are the ones charged with the responsibility of managing the school finances. 36 Bursars, 4 DQASOs, 36 PTA and 36 BOG chairpersons were also purposively sampled in the study since they are involved in the provision of physical facilities. The four Quality Assurance Officers were involved in the study to provide information on school quality and the state of financing education from the existing data yielding a total sample size of 148 respondents.

3.6 Research Instruments

The researcher used the following research instruments to elicit information for the study:

3.6.1 Questionnaire

A questionnaire is a research instrument that gathers data on a large sample, save on time, and can uphold confidentiality. According to Lovell and Lawson (1970), questionnaires are widely used in education to obtain information about current condition and practice, and to make attitudes and opinions. Further, Best and Khan (1992) points out that a questionnaire enables a person administering them to explain the purpose of the study and to give meaning of the items that may not be clear. They have the advantage of asking specific questions which call for specific answers. The answers can be classified and the information contained in the responses quantified. In this study the questionnaires elicited information from head teachers on the financial contributions by stakeholders and how the money has been used to promote the quality of day schooling.

3.6.2 Principals' Questionnaire

The head teachers were chosen because they are the financial managers in schools. This questionnaire sought to get data on the adequacy and quality of teaching and learning in day secondary schools in Kisii District. It also sought information on the real and expected annual expenditure per stakeholder, the responses of the respondents on cost sharing, and the constraints of financing day secondary education. It further sought information on the institutional and other supplemental resources of funding day schools, and real data on possible strategies for generating extra funds for day schools.

3.6.3 School Bursars Questionnaire.

The school bursars were chosen due to their role in keeping school accounts. This questionnaire sought data on the amount of money collected by each income as percentage of the annual budget. It also sought information on fees arrears and

established the amount spent on various items. It also revealed the income and expenditure in PDSS between 2005-2010

3.6.4 Interview Schedules.

a) Interview schedule for chairpersons of PTA.

Interviews are crucial means of gathering information that has direct bearing on the research objectives. Interviews can also be used as an explanatory device to help identify variables and relationships besides being used in conjunction with other methods in research undertaking to validate other methods, and to follow up unexpected results (Cohen and Manion, 1995). In the present study the PTA chairpersons were interviewed, since the role of the PTA chairpersons include resourcing for school funds for development.

An interview schedule was administered to PTA chairpersons since many would have been too busy to answer questionnaires, others would have been semi-illiterate, and others would not understand the questions. The interview sought information on their role in provision of teaching and learning resources. It also sought information on financial constraints faced by parents in financing day schooling.

b) Interview schedule for Principals

An interview schedule was administered to school principals to establish the influence of the financing sources on learning. The interview schedule also elicited information on the improvement of financing sources strategies to enhance quality.

c) Interview schedule for Quality Assurance Officers (DQAS)

Quality assurance officers were interviewed to seek information on the state of the financing of day secondary education and its effects on quality in day secondary schools.

d) Interview schedule for BOG chairpersons.

The instrument sought information on income sources as perceived by the mangers and expenditure in PDSS. The views on constraints and strategies on enhancing financing were sought. The BOG are charged with the responsibility of managing the school funds hence their inputs was considered crucial.

3.6.5 Observation Checklist on Public Day Secondary School Financing

This instrument sought information on:

i) The quality of physical facilities.

ii) Adequacy of the learning resources.

iii) School based income-generating activities.

Observation makes the observer to detach himself from the social setting being investigated and allows him to gain a more objective view of the reality being investigated (Scott and Usher, 2004). The current study observed the physical manifestation of the financing of day schools and then assessed the effects of the revenue on quality. Therefore observations of school physical conditions, learning resources and teaching facilities are a subject of this study. Examination of the quality of school buildings, adequacy and availability of learning resources benefited this study.

3.7 Piloting

Before collecting data, the researcher carried out a pilot study in four day schools which were part of the sample. The schools were randomly selected for piloting. In this case four head teachers, four PTA chairpersons were involved. The schools involved for the piloting were not part of the schools for the main study. The researcher administered a checklist on the four schools. The pilot study was necessary to refine the research

instruments before administering them to the sample. Piloting was also necessary to check whether the respondents understood the questions. According to Kombo and Tromp (2006) and Orodho (2009), piloting enables the researcher to find out if the items in the instruments not only measuring what they are supposed to measure but also consistent a cross repeated measures of the same constant.

3.7.1 Validity of Instruments

According to Singh (1986) and Orodho (2012), validity refers to the degree to which a test measures what it purports to measure. Validity is an important characteristic of a scientific instrument. It is correlation of a test with some outside independent criteria which are regarded by experts as the best measure of the trait. Singh (1986) and Orodho(2009) tend to concur that validity is concerned with general ability. When a test is valid, it means its conclusion can be generalized in relation to the general population.

To ensure validity of the instruments, a pilot study was carried out on one day school in Kisii Central District and was excluded in the final study sample of schools. From the pilot school, the principal and PTA chairperson was given the instruments and the relevant items in the questionnaire and interview schedule were considered. The instruments were also given to the two supervisors and selected professionals in the department of educational management, policy and curriculum studies and their inputs incorporated.

3.7.2 Reliability of Questionnaires

Reliability refers to the extent to which a test in the research is internally consistent and yields consistent results upon testing and retesting (Koul, 1996; Orodho, 2012). This study used the test-retest method. In this method the same instrument is re-administered

shortly after the first administration and the two sets of results are correlated to obtain the reliability of the test.

The test-re-test approach is intended to determine the stability of the instrument. The reliability is the correlation between the scores on the two instruments. If the results are consistent (stable) over time, the scores should be similar. To determine stability, the relationship between the two scores obtained from the *test* and the *re-test* must be considered. This is done using the Pearson product- moment correlation coefficient (*r*).

The Pearson product-moment correlation coefficient (r) is calculated using the formula;

$$r = \frac{\sum (x - \bar{x})(y - \bar{y})}{\sqrt{\sum (x - \bar{x})^2 \sum (y - \bar{y})^2}}$$

Where:

x = the first observations(*test*)

y = the second observations(*re-test*).

In the pilot study, 4 Principals and 2 DQAS Officers participated. It was established that the correlation coefficient of 0.86 and 0.87 for the Principals and DQAS respectively was indicated. Considering Guilford's and Fruchter (1978) values, the correlation value of greater than 0.80 can be considered as high, indicating acceptable reliability(Orodho, 2012). Therefore the instruments were considered suitable for research use.

3.8 Data Collection Procedure

Before proceeding to conduct the study, an introductory letter was obtained from the university's Graduate school. This facilitated the issuance of research authorization permit from the Ministry of Education, Science and Technology. The permit enabled the collection of the necessary information from the Public day secondary schools, District

Quality Assurance Officers and school PTA chairperson. Consent was sought from the District Commissioners and District Education Officers.

In order to collect the required data, four Research Assistants were trained and stationed in the four districts which comprised Kisii central District (2006). The training involved briefing the Research Assistants on key terms used in the tools and the main information targeted for collection by the tools. All the items of the questionnaires were discussed with the Research Assistants.

A 'delivery and collection' method of data collection was used instead of the mailed questionnaire. The approach was preferred based on a deliberate attempt to control the number of respondents and or any possible source of biaseness at this stage (Sary 2002) besides improving the return rate. The interview schedule for the Headteacher and PTA Chairperson was done conveniently by the research Assistants. The researcher introduced the Research Assistants to all the schools. The researcher carried out the interview schedule for the District quality assurance officers besides taking part in collection of data from zone of the school.

All the 36 questionnaires were returned – representing 100% response rate. According to Mugenda and Mugenda (1999), many authors feel that the response rate or 50 percent is adequate for analysis and reporting, a response rate of 60 percent is good and a response rate of 70 percent and above is very good. However, a non-response of 30 percent or more non-respondents who are similar in characteristics that could be critical to the study could affect the result and they should be acknowledged as a limitation. The response rate for this study was very good at 100%.

3.9 Data Analysis

The data generated by interview schedules were of qualitative nature and were analyzed through interview transcriptions and thematic analysis. The dominant themes were captured and presented through narrative and direct quotes. The data collected from questionnaires and observation checklists were of quantitative nature and were coded and tabulated for computer analysis. The procedure for data analysis entailed the following steps; First the researcher collated the questionnaires. Second, data code book was prepared by the researcher for data coding. This facilitated the entry sheets of the data into the computer data entry sheets. Third data were keyed into statistical Package for social sciences (SPSS) software package version 20.0. Data from questionnaires on school description was tabulated according to distribution, school age, enrolment, gender, academic qualifications, teaching experience. This enabled the use of descriptive statistics in description of schools characteristics and respondents. Data on the income sources, reliability, adequacy and trends was analyzed using frequencies and percentages. t-test and analysis of variance(ANOVA) were used to determine whether the difference in means were significant. Table 3.5 Summarizes the variables and analytical tools and tests.

Table 3.4:Variables and Statistical Tools of Analysis

RQs/Hos		Variables		Analytical
		Independent	Dependent	**tools**
$H_0$1	There is no statistically significant difference between PDSS income sources	Income Source	Amount	One-way Anova
$H_0$2	There is no significant relationship between projected and actual expenditure in PDSS	Actual expenditure	Projected expenditure	Regression Anova
$H_0$3	There is no statistically significant difference between income amount to PDSS and expenditure	School	Income/expenditure	Paired t-test
$H_0$4	There is no statistical relationship between income and expenditure in PDSS	Income	Expenditure	Regression Anova
$H_0$5	There is no significant difference in performance before and after FSE in PDSS in KCSE.	Time	Performance	Independent t-test

3.10 Ethical and Logical considerations

Before proceeding to conduct the study, an introductory letter was obtained from Kenyatta University Graduate school. This facilitated the issuance of research authorization permit from the Ministry of Education, science and Technology(Appendix I). The letter of authorization enabled the researcher to obtain necessary permission from the DEO and District Commissioner in Kisii Central district. The permit was also used in

the field to introduce the researcher to the respondents namely; Principals, PTA chairpersons and DQASOs.

The researcher personally with the research assistants administered the questionnaires and asserted the respondents the confidentiality and anonymity of the information given. Confidentiality was handled by giving instructions on the questionnaire assuring confidentiality. Secondly, by not requiring the respondents to indicate their names. Thirdly, the principals were instructed to seal the questionnaires in individual envelopes this ensured confidentiality of their responses.

According to Creswell(2008) in research, individuals participating need to know the purpose and aims of the study, how the study will be used and the likely consequences the study will have on their lives. When they participate and provide information, their anonymity should be protected and guaranteed by the researcher. The information collected from the respondents was treated with strict confidentiality and was only used for the purpose of this study. The researcher's citations from the original sources were recognized appropriately.

CHAPTER FOUR

DATA, PRESENTATION,ANALYSIS AND DISCUSSION

4.1 Introduction

This chapter presents data analyses, presentation and discussion of the findings of the study. Analysis was done using thematic analysis, the descriptive statistics, tabulated using the statistical package for social sciences (SPSS). The contents of the findings are presented in form of tables and graphs.

The research questions that guided the study were as follows:

i. What is the contribution of income sources in financing PDSS in Kisii Central District?
ii. How are the income sources utilized in financing the teaching and learning resources in Kisii Central District?
iii. How has the income influenced quality of learning in PDSS in Kisii Central District?
iv. How can the income sources in PDSS be improved to enhance adequacy of resources and quality of learning in PDSS in Kisii Central District?

4.2 Description of schools and respondents of the study

4.2.1 Year of establishment of Schools

The category of schools involved in the study was public day secondary schools (PDSS) in Kisii Central District. The number of the schools in the study was 36. The schools were proportionately selected to represent the population from the 9 administrative divisions which comprised Kisii Central District. Two schools were selected from Getembe and Kiogoro divisions, three schools from Kegogi, four schools from Marani,

Mosocho and Keumbu, five schools from Suneka, six schools from Kiamokama and Masaba divisions. The response rate was 100% from the sampled schools.This distribution was representative of the general distribution of PDSS in Kisii Central District per division.

The study sought information on the age of the school as this was likely to influence the provision of learning resources as shown in Table 4.1

Table 4.1: Year of establishment of School

Year School was established	Frequency	Percentage
1961 – 1970	4	12.1
1971 – 1980	5	15.2
1981- 1990	6	18.2
1991 – 2000	8	24.2
2001 – 2010	10	30.3
Total	**33**	**100.0**

Table 4.1 shows an increasing trend in the establishment of day secondary schools in Kisii Central District. Between 1961 and 1970, 4(12.1%) of the current day schools were established, 5(15.2%) were started in 1971- 1980, 6(18.2%) were started in 1981- 1990, 10(24.2%) of the schools were started in 1991-2000 while 10(30.3%) of the schools were started in the year 2001-2010. The age of the school is significant since it determines the cumulative quantity of facilities.

The study established the number of teachers, gender and qualifications of teachers in the PDSS in Kisii Central District. On the number of teachers, it was revealed that 33.3% of day schools had number of TSC teachers below 10, 52.8% between 11-20 teachers and 13.9% of the schools had teachers between 21-30.

It was further established that each of the PDSS had less than 10 BOG teachers. The BOG teachers were necessary due to shortage of teachers. The interview schedule revealed that these BOG teachers were being paid a gross salary of between Ksh 10,000 and Ksh 15,000 per month.

On the issue of qualification of teachers in PDSS in Kisii Central District, the majority of teachers in both TSC (74.7%) and BOG (59.1%) were professional and degree holders. Diploma were TSC(19.4%), BOG (11.8%) while untrained were TSC(6.9%) and 29.1% were BOG teachers. From the interview schedule it was revealed that some of the BOG teachers were O' Level untrained teachers. Some schools recruited former O' Level students to teach. This undermined the quality of education as these untrained teachers do not posses the professional skills and pedagogic knowledge to teach. Hence affecting quality.

The enrolment of teachers by gender in PDSS was indicated as that 97.2% of the schools had female teachers below 10 in number, while 61.1% of the schools had male teachers below10 in number. 2.8% of the schools had between 11 and 20 female teachers, 36.1% had male teachers between 11 and 20 in number. Only 2.8% of the schools had male teachers between 21-30 in number. No school had female teachers between 21-30 in number.

The enrolment of PDSS is shown in Table 4.2.

Table 4.2: School Enrollment

	Form one		Form two		Form three		Form four			
School enrolment	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**	**Total**	**%**
Below 10	0	0	1	0	0	0	2	3	6	2.09
11-19	0	4	4	4	3	1	4	11	31	10.76
20-30	12	12	5	12	3	11	5	9	69	23.96
Above 30	24	20	26	20	30	24	25	13	182	63.19
Total	**36**	**36**	**36**	**36**	**36**	**36**	**36**	**36**	**288**	**100**

Table 4.2 shows the distribution of the students in PDSS in Kisii Central District. The data shows that majority of the schools 63.19% had a class enrolment of over 30 students while 23.96% of the schools had an enrolment of 20-30 students, 10.76% had an enrolment of between 11-19 students and 2.09% had an enrolment of below 10 students.

4.2.2 General Information on Respondents

The respondents were principals, PTA chairpersons and District Quality Assurance Officers. The principals in the study were 36. They responded to the questionnaire and interview schedules. PTA chairpersons were from the 36 sampled schools. They all responded to the interview schedules. The distribution was assumed representative of the PDSS in Kisii Central District.

4.2.2.1 Background information of Principals

The sought general information of the principals based on gender, qualifications and experience. The study established that the majority of principals in the sample 35 (97.2%) were male while only 1(2.8%) was female. The study further established that 1(2.8%) of the principals had a Diploma,28 (77.8%) had a degree and 7(19.4%) had a degree .Figure 4.1 shows the distribution of the principals qualifications

Table 4.3: Qualification of the Principals

Qualification	Frequency	Percentage
Diploma	**1**	**2.8**
Degree	**28**	**77.8**
Masters	**7**	**19.4**
Total	**36**	**100.0**

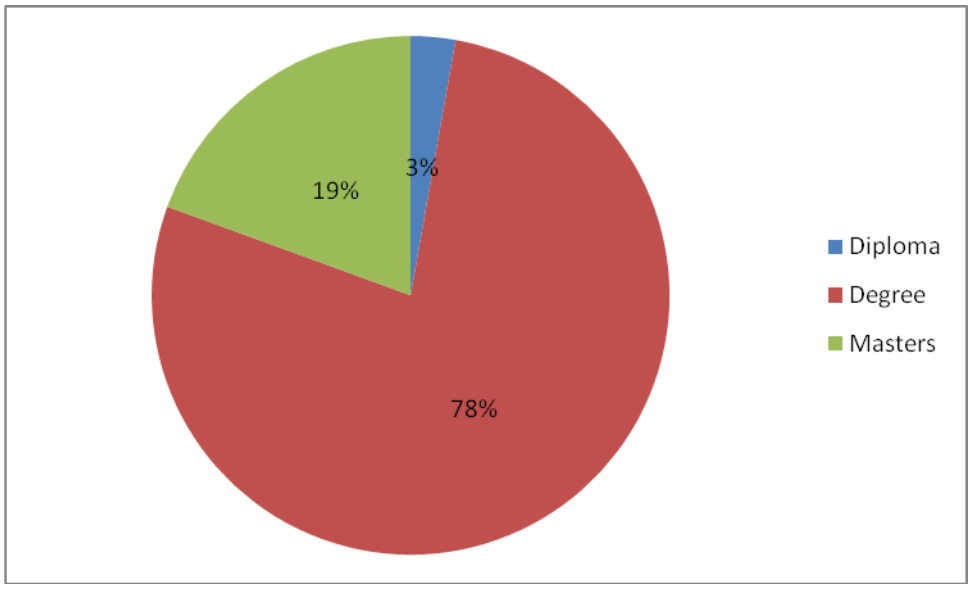


Figure 4.1:Qualification of the Principals

Table 4.3 and Figure 4.1 shows the qualification of principals 2.8% of the schools had principals with diploma, 77.8% schools had principals with degree and 19.4% with masters.

The study also revealed that 47.2% of the schools had principals in job group M and 52.8% of the schools had principals in job group N.

The principals experience progression is shown in Table 4.4

Table 4.4 Principals experience progression

Number of years	Principal	Deputy principal	HOD	Class teacher
Less than 5 years	36.1	58.6	67.9	21.2
6 - 10 years	36.1	37.9	32.1	33.3
11 - 15 years	19.4	3.5	0.0	6.1
16 - 20 years	8.4	0.0	0.0	18.2
Above 21 years	0.0	0.0	0.0	21.2
Total	100.0	100.0	100.0	100.0

Data from Table 4.4 and Figure in Appendix M show the experience of the current principals as principals. 36.1% of the schools had principals who had worked for less than 5 years, 36.1% between 6 and 10 years, 19.4% had worked between 11 and 15 years and 8.4% with principals who had worked between 16 and 20 years. This shows that majority of principals' in PDSS had enough experience to manage the schools.

Table 4.4 further reveal that 21.2% of the school had principals with experience as teachers between 1 and 5 years, 33.3% between 6 and 10 years, 6.1% between 11 and 15 years, 18.2% between 16 and 20 years and 21.2% of the schools had teachers with experience over 21 years.

Further, Table 4.4 shows the experience of principals as HODs being 67.9% of the schools had principals who had worked as Head of Department for 1-5 years and 32.1% had principals who had worked has head of department for 6 and 10 years. Also, it shows the experience of principals as deputy principals. 58.6% of schools had principals who had served as deputy principals between 1 and 5 years, 37.9% between 6 and 10 and

3.5% had between 11 and 15 years. From the data it is clear that most principals had risen through the ranks to become school managers.

4.2.2.2 Occupation of PTA chairpersons

An interview schedule was administered on all the PTA chairpersons of the sampled schools. The profile of their education level and occupation showed that 16(44.4%) of PTA chairpersons had education below O' level, 17(47.3%) had O' level certificate of education while 3(8.3%) had first degree and above level of education. The occupation of the PTA chairpersons is shown in Table 4.5

Table 4.5: Occupation of PTA Chairpersons

Occupation	Frequency	Percentage
Farmer	16	44.4
Retirees	8	22.2
Businessmen	5	13.9
Teachers	4	11.1
Clergy	3	8.4
Total	**36**	**100**

Table 4.5 shows that 44.4% of the PTA Chairperson were farmers, 22.2% were retirees, 13.9% were businessmen, 11.1% were teachers while 8.4% were clergy

4.2.2.3 Other respondents.

The study sought information from BOG chairpersons, School Bursars, and DQASOs. These were chosen on the basis of their involvement on school finances, quality assurance and financial management in PDSS.

4.3 The income sources in PDSS

4.3.1: The income sources in public day secondary schools.

The first research question focused on the various source of income which PDSS resourced. The purpose of this question was to enable the researcher to establish the various sources of revenue to public day secondary schools. This was significant because it was these sources which schools depended on to finance the resources in public schools. The researcher was also able to establish the adequacy and reliability and trend of income amounts between 2005-2010. This enabled the researcher to determine the income amount, reliability, adequacy and trend of revenue and expenditure between 2005-2010.

The question was analyzed under the following headings;

1. What are the sources of income to public day secondary schools?

2. How reliable and adequate are the income sources?

3. What is the trend of income sources to PDSS between 2005-2010?

The questions were further investigated using the following hypotheses;

$H_0$1: There is no statistically significant difference between PDSS income sources

$H_0$2: There is no significant relationship between projected and actual expenditure in PDSS

$H_0$3: There is no statistical relationship between income and expenditure in PDSS.

$H_0$4: There is no statistically significant difference between amount of income to PDSS and expenditure

$H_0$5: There is no significant difference in performance before and after FSE in PDSS in KCSE.

Table 4.6: Frequency of response on sources of income to schools

Source of income	Responses	
	Frequency	Percentage
Government	36	33.3
PTA/Parents	35	32.4
Donors	3	2.8
School income generating activities	2	1.9
Sponsor	1	.9
CDF	28	25.9
LATF	3	2.8
Total	108	100.0

Data from Table 4.6 revealed that 33.3% of funding came from the government, 32.4% from PTA/Parents, 2.8% from donors, 1.9% from school income generating activities, 25.9% from CDF, 2.8% from LATF and sponsor gave 0.9%. The data contained in Table 4.6 indicates that a majority of the respondents cited the sources of income for the PDSS as Government, PTA/Parents and CDF consisting 33.3%, 32.4% and 25.9%, respectively. Table 4.7 shows the amount collected from the various income sources in PDSS between 2005-2010.

Table 4.7: Amount per income source in PDSS(2005-2010) in Ksh '000

Income sources	2005		2006		2007		2008		2009		2010	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
Government	0	0.0	1324	3.1	7360	16.5	95898	82.7	104020	79.4	114190	76.8
Parents	30400	87.9	31845	74.6	32660	73.3	14909	12.9	18408	14.1	22818	15.3
CDF /LATF	2180	6.3	6325	14.8	2229	5.0	3100	2.8	5680	4.3	8150	5.5
Sponsor	0	0.0	0	0.0	0	0.0	150	0.1	0	0.0	2000	1.3
IGAS	2000	5.8	2500	5.9	1500	3.4	1200	1.0	1400	1.1	1600	1.1
Donations	0	0.0	700	1.6	800	1.8	600	0.5	1500	1.1	0	0.0
Total	**34580**	**100.0**	**42694**	**100.0**	**44549**	**100.0**	**115857**	**100.0**	**131008**	**100.0**	**148758**	**100.0**

The data contained in Table 4.7 shows that in 2005, the major sources of income in the PDSS were parents constituting of 87.9% of the total followed by CDF constituting of 6.3% and Income generating activities constituting of 5.8%. There was no income from

government, sponsors and donations in that year. The trend was nearly the same in the subsequent years where the income from parents was 74.6% and 73.3% in the year 2006 and 2007, respectively. In the same period there was no contribution from sponsors.

There was a dramatic shift in 2008 and 2009 where the government finance shot up from 16.5% in 2007 to 82.7% in 2008 and 79.4% in 2009. The contribution from parents dropped sharply from 73.3% in 2007 to 12.9% in 2008 and stagnated at slightly 14% in 2009 and 2010. The income sources show the diminishing contribution by parents and the increasing participation of the government. Before the introduction of FSE, parents and communities were playing a greater role in financing education but after the introduction of FSE the government contributions increased.

The objective was further investigated using the hypothesis;

$H_0$1: There is no statistically significant difference between PDSS income sources

The findings were reported in table 4.8 and 4.9.

Table 4.8: Analysis of Variance model for income sources

Sources of variation	Type III Sum of Squares	df	Mean Square	F	Sig.
Income sources	1.388	5	2.776	5.183	.002
Error	1.607	30	5.356		
Corrected Total	2.995	35			

a. R Squared = .463 (Adjusted R Squared = .374)

From Table 4.8 a statistically significant difference within the income sources was established at P(<0.05). Table 4.9 shows the difference among the different income sources.

Table 4.9: Multiple Comparisons of income sources

(I) source	(J) source	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
cdf/Latf	Donors	4010.67	13361.247	1.000	-36628.83	44650.16
	Gov	-49188.00*	13361.247	.011	-89827.49	-8548.51
	IGAS	2910.67	13361.247	1.000	-37728.83	43550.16
	Parents	-20562.67	13361.247	.643	-61202.16	20076.83
	Sponsor	4252.33	13361.247	1.000	-36387.16	44891.83
Donors	cdf/Latf	-4010.67	13361.247	1.000	-44650.16	36628.83
	Gov	-53198.67*	13361.247	.005	-93838.16	-12559.17
	IGAS	-1100.00	13361.247	1.000	-41739.49	39539.49
	Parents	-24573.33	13361.247	.457	-65212.83	16066.16
	Sponsor	241.67	13361.247	1.000	-40397.83	40881.16
Gov	cdf/Latf	49188.00*	13361.247	.011	8548.51	89827.49
	Donors	53198.67*	13361.247	.005	12559.17	93838.16
	IGAS	52098.67*	13361.247	.006	11459.17	92738.16
	Parents	28625.33	13361.247	.294	-12014.16	69264.83
	Sponsor	53440.33*	13361.247	.005	12800.84	94079.83
IGAS	cdf/Latf	-2910.67	13361.247	1.000	-43550.16	37728.83
	Donors	1100.00	13361.247	1.000	-39539.49	41739.49
	Gov	-52098.67*	13361.247	.006	-92738.16	-11459.17
	Parents	-23473.33	13361.247	.507	-64112.83	17166.16
	Sponsor	1341.67	13361.247	1.000	-39297.83	41981.16
Parents	cdf/Latf	20562.67	13361.247	.643	-20076.83	61202.16
	Donors	24573.33	13361.247	.457	-16066.16	65212.83
	Gov	-28625.33	13361.247	.294	-69264.83	12014.16
	IGAS	23473.33	13361.247	.507	-17166.16	64112.83
	Sponsor	24815.00	13361.247	.447	-15824.49	65454.49
Sponsor	cdf/Latf	-4252.33	13361.247	1.000	-44891.83	36387.16
	Donors	-241.67	13361.247	1.000	-40881.16	40397.83
	Gov	-53440.33*	13361.247	.005	-94079.83	-12800.84
	IGAS	-1341.67	13361.247	1.000	-41981.16	39297.83
	Parents	-24815.00	13361.247	.447	-65454.49	15824.49

Table 4.9 further established that there was statistical difference between; the government and other sources with ($P<0.05$) except with parents where it was statistically not significant ($P>0.05$), while the difference among other sources was not significant ($P>0.05$).

Table 4.10 shows the projected, actual and deficit in expenditure between 2005-2010

Table 4.10: Trend in PDSS Projected and Actual Expenditure.

Year	Projected Amount	%	Actual Amount	%	Deficit Amount	%
2005	48404	100.0	39594	81.8	8810	18.2
2006	52274	100.0	42812	81.9	9462	18.1
2007	61649	100.0	50209	81.4	11440	18.6
2008	108185	100.0	94033	86.9	14152	13.1
2009	128778	100.0	110204	85.6	18574	14.4
2010	148915	100.0	132669	89.1	16246	10.9

Data from Table 4.10 shows that the actual expenditure and deficit in PDSS in 2005 was 81.8% and deficit of 18.2%. In 2006 the actual expenditure was 81.9% while deficit was 18.1%. In 2007 the actual was 81.4% and deficit was 18.6%. In 2009 the actual was 85.6% and deficit was 14.4% while in 2010 the actual was 89.1% and deficit was 10.9%. The data shows that the deficit declined with the contributions from the government in 2008 when the government introduced FSE. The question was further investigated using the hypothesis that there is no significant relationship between projected and actual expenditure in education between 2005-2010.

$H_0$2: There is no significant relationship between projected and actual expenditure in PDSS

The data in Table 4.10 indicates that the trend of projected and actual expenditure has been nearly consistent ranging from a deficit of 18.6% in 2007 to 10.9% in 2010. On average, the mean deficit over the years was 17.5%.

A correlation between projected and actual expenditure was done using spearman rank correlation coefficient and yielding a strong correlation coefficient of r=0.999. The actual correlation model over the years on projected expenditure and the years yielded

R^2=0.999,which is statistically significant at 0.05% level of significance. The model explains 99% of the variance in expenditure.

4.3.2: The reliability and adequacy of the income sources

The researcher under the same objective sought to ascertain whether the various income sources were reliable and adequate to sustain the quality of learning in PDSS.

To determine the reliability and adequacy of income sources, a four point Likert scale was developed for this purpose. Table 4.11 presents information on the reliability of income sources. In the Likert scale, 1 represents 'extremely reliable', 2 represents 'very reliable', 3 represents 'reliable', and 4 represents 'not reliable'.

Table 4.11: Reliability of income sources to PDSS in Percentage

Source of income	Extremely reliable.		Very reliable		Reliable		Unreliable	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Parents	0	0.0	0	0.0	15	41.2	21	58.8
Donors	0	0.0	3	8.0	4	12.0	29	80.0
IGAS	0	0.0	0	0.0	4	10.0	32	90.0
Sponsors	0	0.0	0	0.0	9	25.0	27	75.0
CDF	0	0.0	2	5.9	13	35.3	21	58.8
PTA	0	0.0	1	2.9	17	48.6	17	48.6

From Table 4.11 shows that 58.8% of the respondents indicated that income from parents were unreliable while 41.2% indicated that income from parents was reliable. The researcher found that parents were to pay levies like lunch, development fee and even extra fees. The head teachers indicated from the interview schedule that parents were to pay in cash or any kind in day secondary schools. 41.2% of the respondents reported that school funds from parents were reliable, while 58.8% said that funds from parents were

unreliable. 80% of the respondents agreed that funds from donors were very reliable, 12.0% said that they were reliable while 80.0% said that they were unreliable. 10.0% of the respondents reported that funds from school income generating activities / sources were reliable, while 90.0% said that they were unreliable. 25.0% of the respondents reported that school funds from sponsor were reliable while 75.0% reported that they were unreliable. 5.9% of respondents reported that funds from CDF were very reliable, 35.3% said that they were reliable while 58.8% responded that they were unreliable. 2.9% of the respondents reported that funds from PTA were very reliable, 48.6% said that funds were reliable while 48.6% reported that funds from PTA were unreliable.From the interview schedule, the PTA chairpersons reported that 11.4% of respondents agreed that they were adequate while 88.6% disagreed.

Table 4.12: Overall Reliability of income sources

Overall Reliability of sources	**Responses**	
	Frequency	**Percentage**
Extremely reliable	1	.5
Very reliable	13	6.4
Reliable	74	36.3
Unreliable	116	56.8
Total	204	100.0

On the question of reliability of sources, 0.5% of the respondents reported that the overall reliability of income sources were extremely reliable, 6.4% reported that they were very reliable, 36.3% were reliable while 56.8% were unreliable.

On the adequacy of FSE, 8.8% of the headteachers agreed that FSE is adequate while 91.2% disagreed from the interview schedule administered to them. On the reasons of the inadequacy of FSE, 2.9% of respondents cited that the government does not provide

for inflation hence incomplete projects, while 97.1% pointed out that high prices of goods is the reason for inadequacy of FSE.Table 4.13 shows the responses on the adequacy of income sources.

Table 4.13: Adequacy of income sources

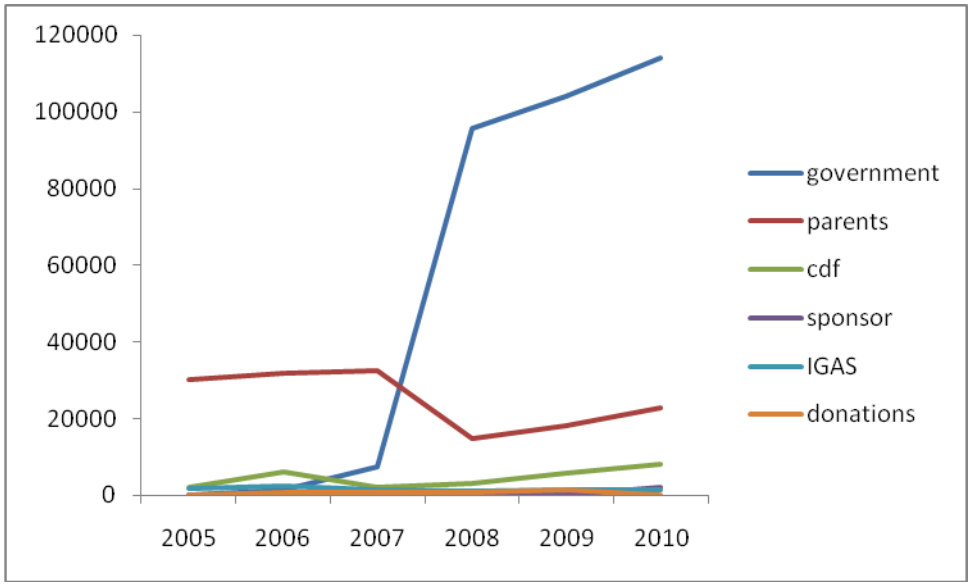
Source of income	Very adequate		Adequate		Fairy adequate		Not adequate	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Gok	1	2.8	7	19.4	20	55.6	8	22.2
Parents	0	0.0	3	8.4	16	44.4	17	47.2
Donors	0	0.0	0	0.0	14	38.9	22	61.1
Harambees	0	0.0	0	0.0	8	21.4	28	78.6
PTA	0	0.0	2	6.5	14	38.7	20	54.8
IGAS	0	0.0	1	3.5	9	24.1	26	72.4
CDF	0	0.0	1	3.8	17	46.2	18	50.0

Data on Table 4.13 shows that 2.8% of respondents reported that government sources of income to schools were very adequate, 19.4% said the source was adequate, 55.6% reported that the source was fairly adequate while 22.2% of respondents said that the government source was not adequate. 8.4% of respondents reported that parents sources of income were adequate, 44.4% said that the source was fairly adequate and 47.2% of respondents said that parents source of income was not adequate. 21.4% of respondents reported that Harambee source of income to schools is fairly adequate while 78.6% of them said that the source is not adequate. 6.5% of respondents said that PTA source of income to schools is adequate, 38.7% reported that the source is fairly adequate while 54.8% of respondents reported that the source is not adequate. 3.5% of the respondents said that IGAS source for income was adequate, 24.1% said IGAS sources were fairly adequate while 72.4% said IGAS sources were not adequate. 3.8% of respondents reported that CDF source of income was adequate, 46.2% said CDF source of income

was fairly adequate while 50% of respondents said CDF source of income was not adequate. 0.5% of respondents agreed that school income sources were very adequate, 6.6% said that the sources were adequate, 36.6% said that the sources were fairly adequate while 56.3% reported that the sources of income were not adequate.

4.3.3 The trend of income sources and expenditure in public day secondary Schools.

Figure 4.2: Trend of income sources from 2005-2010 in '000



Source: Drawn from data in table L in appendix

Figure 4.2 shows that there was a gradual increase in government contributions to PDSS. The rise was occasioned by the introduction of FSE in 2008.Figures in appendix K reflects that parents' contributions show a declining trend with a contribution of Ksh 30,400,000 in 2005 to Ksh 14,909,000 in 2008 and rising again to Ksh 22,818,000 in 2010. The CDF/LATF contributions have been varying between Ksh 2,180,000 in the year 2005 and Ksh 8,150,000 in 2010. The contribution of the sponsors to school financing is normal with occasional contribution of Ksh 1,200,000 to Ksh 2,500,000 during the period under study. Schools have also been receiving donations ranging

between Ksh 700,000 to Ksh 1,500,000 in 2008 and Ksh 2,000,000 in 2010. Income from IGAS has been varying between Ksh 1,200,000 to Ksh 2,500,000 during the period under study. Schools have also been receiving donations ranging between Ksh 700,000 to Ksh 1,500,000 during the period under study. All these indicated that the major sources of income to PDSS are the government and the parents. There is need to resource more funds from the other income sources. Graphically the trend is shown in Figure 4.2

Generally figure 4.2 indicates that there was an increasing trend in annual income from the government and a decreasing trend on the other income sources to PDSS between 2005-2010.

Table 4.14 shows the projected, actual and deficit in annual expenditure in PDSS between 2005-2010.

Table 4.14: School Income expenditure in PDSS in Kshs'000 2005-2010

Year	Projected	Actual	Deficit
2005	48404	39594	8810
2006	52274	42812	9462
2007	61649	50209	11440
2008	108185	94033	14152
2009	128778	110204	18574
2010	148915	132669	16246

From table 4.14 it is evident that all PDSS had a deficit in their expenditure. In 2005 the projected expenditure was Ksh 48,404,000, the actual was Ksh 39,594,000 with a deficit of Ksh 8,810,000. In 2006, the projected expenditure was Ksh 52,274,000, actual Ksh 42,812,000 with a deficit of Ksh 9,462,000. In 2007 the projected expenditure was Ksh 61,649,000, actual Ksh 50,209,000 and deficit was Ksh 11,440,000. In 2008, the projected was Ksh 108,185,000 actual was Ksh 94,033,000 and deficit of Ksh 14,152,000. In 2009 the projected was Ksh 128,778,000, actual Ksh 110,204,000 and deficit of Ksh 18,574,000. In 2010 the projected was Ksh 148,915,000 actual Ksh

132,609,000 and a deficit of Ksh 16,246000. All these indicated that there is a rising trend in projected and actual expenditure in PDSS. It also shows that there is an increasing trend in deficit in all schools and consequently the quality. This trend is graphically shown in figure in appendix L

The relationship between income and expenditure was tested using the following hypothesis.

$H_0$3: There is no statistical relationship between income and expenditure in PDSS

Table 4.15: Regression Analysis of income and expenditure in PDSS

Correlations

		Income	Expenditure
Income	Pearson Correlation	1	.993**
	Sig. (2-tailed)		.000
	N	6	6
Expenditure	Pearson Correlation	.993**	1
	Sig. (2-tailed)	.000	
	N	6	6

**. Correlation is significant at the 0.01 level (2-tailed).

This hypothesis was tested by using the regression analysis and it was shown that income and expenditure are highly correlated(r=.993). The hypothesis that there is no statistically significant difference between income and expenditure was tested using the Anova which revealed that the relationship is significant.($P<0.05$). Appendix I, Model(a)

A further hypothesis to establish the difference between income amount and expenditure was developed.

$H_0$4: There is no statistically significant difference between income amount to PDSS and expenditure

Table 4.16: T-test of income and expenditure in PDSS

Paired Samples Test

		Paired Differences				
		95% Confidence Interval of the Difference				
		Lower	Upper	t	Df	Sig. (2-tailed)
Pair 1	income - expenditure	-5633.65793	21608.65793	1.507	5	.192

The difference was established using the t-Test where the annual income (M=Ksh.86,241.0, SE=20,890.98) expenditure was (M=Ksh.253.5, SE=16,091.43). This was not statistically significant {t(5)=1.507, P<0.05}. Appendix I, model(b). Therefore the hypothesis was rejected as it is evident that there is a difference between income and expenditure. From interview schedule principals indicated that most schools had debts. Hence financial deficit.

Financing of education underlies the themes of the current education policy of quality access and efficiency. However, the spending on education is notably low at 16% (233.1billion) of the spending in the years 2012-2013. The ambitious plan of free primary education (FPE) increased the number of the pupils completing primary education and failure to expand secondary education will compromise quality and consequently jeopardize economic recovery and development.

In the present study, the government and parents are the main sources of revenue to public day secondary schools, while donors, IGAS, Sponsors, CDF/LATF indicate insignificant and highly fluctuating revenue. Data from the present study gave an accurate contribution of each source of revenue. In the present study, the revenue from the income sources is inadequate and unreliable to meet the corresponding financial

needs at secondary school level. The income trend indicated quantitative increase of the government revenue from 2008 and declining trend by parents. Prior to 2008, parents contribution was higher than the other sources of income.

The findings concur with KIPPRA (2006) that the costs of provision and expansion of quality secondary education have been escalating while resources for secondary education have been dwindling. The report projected the enrollment in secondary education to rise from 0.92 million in 2004 to 2 million and 2.7 million students by 2010 and 2015 respectively. The report further concurs with the present study that the main sources of secondary school funding are households and the government while the other sources of funds include private sector, religious organizations, NGOs and development partners. Public sources mainly fund teachers' personal emoluments and bursary to students, while household meet cost for provision of suppliers and equipment, operations, maintenance, repair and physical infrastructure. Whereas earlier studies indicate projections of enrolment and costs the present study is a representative accurate sample of educators (principals) reporting on their individual schools. All the principals reported that the income sources were inadequate and unreliable.

Resources for schools can be raised in a variety of ways but the major sources of funding should be based on sources that generate stable and growing revenue to schools. Sources that generate small and highly fluctuating revenues are not desirable for supporting the major operational expenses of schools. With the increasing demand for secondary school as a result of FPE programme, it is becoming increasingly important to improve programs of income sources that reduce the financial barriers to secondary schooling.

Mbelle (2008) reporting on a research on educational quality postulates that increasing access to education is only one aspect of addressing human resources capacity. It is importance to ensure high quality cognitive achievement, skills, values are attained. Quality aspects in education covers such issues as adequacy of having and teaching resources, which is a function of finances.

In this study, the contribution of parents towards meeting the costs of public day secondary schools were fairly adequate shown by 44.4% and not adequate by 47.2% hence cannot be sufficient to run the costs of having at this level. The finding agreed with that of Ogeta (2004) who found out that in South Nyanza, Kenya parents contributions towards meeting the costs of upper primary education were below what each of them expected to pay, the study attributed this to low average annual income per parent from their occupations. Similarly, in this study poor home background has contributed as a cause of parents inability to pay for learning.

It was also found in this study that Donors as a source of funding PDSS was 100% inadequate. Most schools did not seek donor support due to level of information by principals on donors who can support the education programme.

In this study, "Harambee" as a source of funding was found to be inadequate. This concurred with a study findings of Ogachi (2002) on community financing of primary schooling in Kenya and its implications on quality in Kajiado and south Kisii Districts. The study established that community financing led to deterioration in quality of both physical facilities and learning. This was attributed to poor social economic background. The harambee though is being initiated by the schools, not one schools has used it to raise

money for education. The current government policy of providing funds to schools has discouraged this model of financing education.

In this study, the IGAS as a source of income was also found to be inadequate. This finding agrees with the findings of Ho ming Ng'(2000) who in his study pointed out that: the ability of schools to create income positively correlates to the schools status. It was established that high status schools engaged in agricultural based IGAS. The study further pointed out that high status schools normally make profits because they are supported by alumni, influential parents and large enterprises. In this study it was established that most PDSS in Kisii Central have a the land size of between 1-2 acres which is not enough to engage in large scale agricultural production. The social economic status of the parents and community is low hence the contribution to schools income is low. The study established that schools initiative supplement finances of secondary education.

This findings also concurred with that of Getange (2005) who found out that in Kisii Central District secondary schools cultivated beans, coffee, Napier grass besides dairy farming and poultry keeping. It is evident from this study that none of the schools have modern facilities like swimming pools, halls and school buses for hire, hence the income from IGAS is insufficient and fluctuating.

The study also found PTA as a source of income to be inadequate. This was attributed to poverty of the households.

The overall adequacy and reliability of the income sources was found from this study to be inadequate.

In this study, the trend of income-sources over the years shows a gradual increase of the government contribution and decrease of the parents contributions. The introduction of FSE in 2008 saw withdrawal of parents' support with the excuse that education is free. However, this is not the reality on financial demands. The income from other sources is minimal and shows a fluctuating trend.

The income and expenditure trends shows a deficit over the years. However, there is significant difference between income and expenditure. KIPPRA (2003) coheres with the study that the patterns and trends of education financing in Kenya is based on partnership between the state, household and communities. The FDSE is a new dimension on the depth and volume of government, community and household expenditure on education services.

4.4 The utilization of existing income sources in financing the teaching and learning process in Kisii Central District.

The second research question analysed how the income were utilized in providing adequate teaching and learning resources in PDSS in Kisii Central District?

4.4.1 Adequacy of classroom resources

On classroom resources 63.9% of the respondents agreed that classrooms were adequate while 36.1% disagreed, further 16.7% of respondents agreed that desks were adequate while 83.3% disagreed.

Further, it was reported by 16.7% of respondents that there was enough space to sit while 83.3% reported that the space was not enough.

On chalkboard quality, it was indicated by 5.6% of the respondents that overall quality of chalk wall was very good, 61.1% of them reported that it was good and 33.3% said it was average.

Table 4.17: Adequacy of classroom resources

Adequacy	Wall display	Lighting	Seating	Security	Floor	Ventilation	Wall quality
Most adequate	5.6	8.3	11.1	5.6	0	8.6	8.3
Adequate	38.8	69.5	58.3	72.2	68.6	82.8	72.2
Less adequate	41.7	13.9	30.6	22.2	31.4	8.6	19.5
None	13.9	8.3	0	0	0	0	0
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

From table 4.17 it is revealed that 5.6% of the respondents said that the wall display was most adequate, 38.8% of the respondents said it was adequate, 41.7% of the respondents reported that wall display was less adequate while 13.9% were undecided. On the question of lighting, 8.3% of the respondents reported that lighting was most adequate, 69.5% of the respondents said it was adequate, 13.9% said it was less adequate and 8.3% were undecided. Respondents reported as follows concerning seating space; 11.1% was most adequate, 58.3% was adequate, 30.6% was less adequate. Pertaining security the response was as follows; 5.6% was most adequate, 72.2% was adequate while 22.2% was less adequate. On the adequacy of the floor, 68.6% of the respondents reported that the quality of the floor was adequate while, 31.4% of the respondents said it was less adequate. On the ventilation adequacy, 8.6% of respondents said that ventilation was most adequate, 82.8% said it was adequate while 8.6% said it was less adequate. 8.3% of the respondents said the quality of the wall was most adequate, 72.2% said it was adequate while 19.5% said it was less adequate.

The study sought to establish the adequacy of school compound resources and the findings are shown in Table 4.18

Table 4.18: school Compound infrastructural resources

Adequacy	Fence	Gate	Notes board	Security	School Grounds	Flower beds	Building safety	Worship place	Boys urinal	Toilet space	Toilet privacy	Toilet ventilation	Washing places
Most adequate	0	8.3	5.6	8.3	2.8	0	0	5.7	0	5.7	2.9	0	0
Adequate	66.7	50.0	38.9	63.9	38.9	52.8	61.1	34.3	61.8	62.9	60.0	77.1	35.4
Less adequate	25.0	27.8	41.7	25.0	47.2	38.9	38.9	37.1	26.5	25.7	37.1	22.9	32.3
None	8.3	13.9	13.9	2.8	11.1	8.3	0	22.9	11.7	5.7	0	0	32.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

From table 4.18, 66.7% of the respondents reported that school fencing was adequate, 25.0% reported that it was less adequate while 8.3% were undecided. On the adequacy of school gate, 8.3% of the respondents said that the school gate was most adequate, 50.0% said it was adequate, 27.8% said it was less adequate while 13.9% were undecided. On the issue of notice board, 5.6% of the respondents reported that the school notice board was most adequate, 38.9% said it was adequate, 41.7% reported it was less adequate while 13.9% were undecided. On security matters, 8.3% of the respondents reported that security was most adequate, 63.9% said it was adequate, 25.0% was less adequate while 2.8% of the respondents were undecided. On the school grounds, 2.8% of the respondents reported that the school grounds were most adequate, 38.9% reported that school grounds were adequate, 47.2% said it was less adequate while 11.1% were undecided. On the question of Flower beds, 52.8% of the respondents reported that the flower beds were adequate, 38.9% of respondents said that flower beds were less adequate while 8.3% were undecided. On the other hand, 61.1% of the respondents reported that safety of buildings was adequate while 38.9% said it was less adequate. Further, 5.7% of the most respondents said that worship place was most adequate, 34.3% said the worship place was adequate, 37.1% reported it was less adequate while 22.9% was undecided. On the adequacy of boys urinal pits, 61.8% of the respondents reported that urinal for boys was

adequate, 26.5% said it was less adequate while 11.8% were undecided. On the issue of toilet space, 5.7% of the respondents agreed that toilet space was most adequate, 62.9% of respondents reported that toilet space was adequate, 25.7% said it was less adequate while 5.7% were undecided. 2.9% of the respondents reported that toilet privacy was most adequate, 60.0% said it was adequate while 37.1% of respondents said it was less adequate.77.1% of respondents reported that toilet ventilation was adequate while 22.9% reported it was less adequate 54.3% of respondents reported that cleanness were adequate, 31.4% said cleanness were less adequate while 14.3% were undecided. 35.5% of respondents reported that washing places were adequate, 32.4% said the washing places were less adequate while 32.4% were undecided.

Table 4.19: Number of Latrines

Number of latrines	Girls		Boys		Staff	
	Frequency	%	Frequency	%	Frequency	%
1-5	10	29.4	11	31.4	32	91.4
6-10	15	44.2	17	48.6	3	8.6
11-15	6	17.6	4	11.4	0	0
Over 15	3	8.8	3	8.6	0	0
Total	34	100.0	35	100.0	35	100.0

Concerning number of latrines, it was established that 29.4% of the schools had less than 5 latrines for girls, 44.2% had 6 to 10 latrines for girls and 8.8% had over 15 latrines for girls. The number of latrines for boys was found to be distributed as 31.4% of the schools having less 5 latrines for boys, 48.6% had 6-10 latrines, 11.4% had 11-15 latrines while 8.6% had more than 15 latrines.

It was established that most schools,70% do not have permanent clean water, while 30% reported availability of permanent clean water supply.

The study sought to establish facilities for special needs students in PDSS. The responses are shown in Table 4.20.

Table 4.20: Facilities for the special needs students

	Frequency	%
Yes	7	19.4
No	29	80.6
Total	36	100.0

From table 4.20, Most schools were found to lack special physical facilities for the physically challenged students which was indicated by 80.6%, while only 19.4% indicated that the schools have the physical facilities.

It was further reported that schools do not provide special latrines for the physically challenged students as indicated by 94.3% , and only 5.7% of the schools were found to provide the facilities.

The study also sought to establish whether the PDSS offer practical subjects as shown in Table 4.21.

Table 4.31: Proportion of practical subjects offered in PDSS

Subject	Number of schools	%
Agriculture	27	19.1
Physics	35	24.8
Chemistry	35	24.8
Biology	34	24.1
Home science	2	1.4
Computer science	3	2.1
Drawing and design	2	1.4
Power mechanics	1	0.7
Music	1	0.7
Metal work	1	0.7
TOTAL	141	100.0

Table 4.21 and Figure in Appendix N shows the proportion of practical subjects offered by the PDSS in Kisii Central District. From the table the PDSS in Kisii Central District, offered the following practical subjects out of the many options in practical subjects. It was indicated that 27(19.1%) of the schools offered Agriculture, 35(24.8%) offered physics, 35(24.8%) offered chemistry, 34(24.1%) offered Biology. The other practical subjects offered by the school were: Home science 2(1.4%), computer science 3(2.1%), drawing and design 2(1.4%) while power mechanics 1(0.7%), Music 1(0.7%) and metal work 1(0.7%). The reason advanced for the lean choice of practical subjects was lack of finances to purchase the required equipments.

Consequently, it was deducted that 9(4.1%) of PDSS do not offer Agriculture, 1(0.5%) physics, 1(0.5%) chemistry, 2(0.9%) biology, 34(15.5%) home science, 33(15.1%) computer science, 34(15.5%), drawing and design 35(16.0%) power mechanics, music 16% and metal work 35(16.0%). Financial consideration limited PDSS from offering diverse technical courses hence affecting the quality of the curriculum.

To determine the perception of principals on the adequacy of laboratories and practice subject facilities and equipment, a Likert scale was developed for the purpose with most adequate, adequate, fairy adequate and not adequate.

Table 4.22: Adequacy of Practical subject facilities and equipments

Adequacy	Laboratories								Equipments and facilities							
	Chemistry		Physics		Biology		Home science		Chemistry		Physics		Biology		Home science	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Most adequate	0	0	0	0	0	0	0	0	3	8.6	3	9.1	3	3	0	0
Adequate	14	41.2	11	31.4	11	31.4	0	0	11	31.4	9	27.3	8	8	0	0
Fairy adequate	15	44.1	13	37.1	12	34.3	2	5.6	18	51.4	19	57.6	21	21	0	0
Not adequate	5	14.7	11	31.4	12	34.3	34	94.4	3	8.6	2	6.1	3	3	36	100.0
Total	34	100.0	35	100.0	35	100.0	36	100.0	35	100.0	33	100.0	35	35	36	100.0

Table 4.22 shows that laboratories for chemistry, 0% were most adequate, 41.2% adequate, 44.1% fairy adequate and 14.7% showed not adequate. Physics was indicated by 0% most adequate, 31.4% adequate, 37.1% fairy adequate and 31.4% not adequate. Biology was shown by 0% most adequate, 31.4% adequate, 34.3% fairy adequate and 34.3% not adequate. Home science was indicated by 0% most adequate, 0% adequate 5.6% fairy adequate and 94.4% not adequate. Table 4.41 indicated the principals' perceptions on the adequacy of equipments and facilities using the same Likert scale. From the table it is evident that responses on equipment and facilities in chemistry 8.6% most adequate, 31.4% adequate, 51.4% fairy adequate and 8.6% not adequate. In physics 9.1% most adequate, 27.3% adequate, 56.6% fairy adequate and 6.1% not adequate in home science most adequate 0% adequate 0% fairy adequate 0% and not adequate 100%.

The same Likert scale was developed to show the perception of principal on the status of the laboratories in terms of ventilation, storage and maintenance as shown in Table 4.23.

Table 4.23: Status of Laboratories in PDSS

Adequacy	Ventilation		Storage and safety		Maintenance	
	Freq.	%	Freq.	%	Freq.	%
Most adequate	2	5.7	1	2.9	0	0.0
Adequate	21	60.0	11	31.4	4	11.1
Fairly adequate	8	22.9	3	8.6	17	47.2
Not adequate	4	11.4	20	57.1	15	41.7
Total	35	100.0	35	100.0	36	100.0

Table 4.23 shows that the ventilations in the laboratories in PDSS shows 5.7% was most adequate, 60.0% was adequate, 22.9% fairy adequate and 11.4% not adequate. The storage and safety of the equipments in the laboratories was shown by 2.9% most adequate, 31.4% adequate, 8.6% fairy adequate and 57.1% not adequate. The maintenance of the laboratories was shown from the sample to be 0% most adequate, 11.1% adequate, 47.2% fairy adequate and 41.7% not adequate.

The study sought to establish the source of lighting in the PDSS. The findings are as shown in Table 4.24.

Table 4.44: Sources of Energy in PDSS

Source of energy	Frequency	%
Generator	2	5.6
Electricity	32	88.8
Natural light	2	5.6
Total	36	100.0

Table 4.24 shows the source of energy which is also used for lighting and reading in PDSS. From the table 2(5.6%) of the schools use generators, 32(88.8%) use electricity, 2(5.6%) use natural light.

It was further established that expenditure on energy varied between Ksh 1000 and Ksh 15000 in PDSS. It was indicated that 5(13.9%) spent between Ksh 1,000-5,000, 14(38.9%) spent an average of Ksh 6,000-10,000 while 17(47.2%) spent an average of Ksh 10,000-15,000 on energy per month.

Information on availability of school offices was revealed in Table 4.25.

Table 4.25: Availability of Offices in PDSS

Office	Yes		No	
	Freq.	%	Freq.	%
Principal's office	34	94.4	1	5.6
Deputy principal's office	33	91.7	3	8.3
Staffroom	32	88.9	3	11.1
HOD offices	19	52.8	17	47.2

Table 4.25 shows that 34(94.4%) of sampled PDSS had an office for the principal, 33(91.7%) had offices for deputy principal, 32(88.9%) had staffroom for teachers while 19(52.8%) had offices for HODs. On the other hand 1(5.6%) had no office for the principal, 3(8.3%) for deputy principal, 3(11.1%) staffrooms and 17(47.2%) had no offices for HODs**.**

To determine the availability of communication facilities, a closed ended question was used. The respondents were to indicate 'yes' or 'no'. It was indicated that 5.6% of the PDSS used landlines, while 94.4% had no landlines. However, 75% had mobile telephones for the school and 25.0% didn't have. No PDSS school had a fax machine. The internet was only available in 2 schools represented by 5.6% of the sample.

Information from the study on the availability and use of school plans revealed that 13(36.1%) of the PDSS had school plans while 23(63.9%) had no site plan hence no clear economic planning of the school development.

To assess the quality of physical facilities, a Likert scale was developed with extremely good, good, average and poor as shown in Table 4.26.

Table 4.26: Quality of Physical facilities in PDSS

Facility	Extremely good		Good		Average		Poor	
	Freq.	%	Freq.	%	Freq	%	Freq	%
Classroom	1	2.8	13	36.1	21	58.3	1	2.8
Laboratory	0	0	16	47.1	18	52.9	0	0
Science equipment	0	0	15	42.9	20	57.1	0	0
Fields	0	0	13	37.1	18	51.4	4	11.4
Office facilities	0	0	16	44.4	19	52.8	1	2.8
Administrative resources	1	2.9	11	31.4	20	57.1	3	8.6
Latrines	0	0	11	31.4	22	62.9	2	5.7

Table 4.26 shows that from the sample 1(2.8%) of the classrooms were of extremely good quality, 13(36.1%) were of good quality, 21(58.3%) were average and 1(2.8%) were of poor quality. The quality of laboratories was indicated as 0% extremely good, 16(47.1%) good, 18(52.9%) average and 0(0%) poor. Science equipments, 0(0%) extremely good, 15(42.9%) good, 20(57.1%) average and 0(0%) poor. The fields 0(0%) extremely good, 13(37.1%) good, 18(51.4%) average and 4(11.4%) poor. Office facilities were shown by 0(0%) extremely good, 16(44.4%) good, 19(52.8%) average and 1(2.8%)poor. Administration resources 1(2.9%) extremely good, 11(31.4%) good,

20(57.1%) average and 3(8.6%) poor. The quality of the latrines was shown by 0(0%) extremely good, 11(31.4%) good, 22(62.9%) average and 2(5.7%) poor.

Table 4.27: Proportion of teaching staff in PDSS

Teachers	Less 5		6-10		11-15		16-20	
	Freq.	%	Freq.	%	Freq.	%	Freq	%
Number of teachers	0	0	21	58.3	8	22.2	7	19.4
TSC teachers	12	33.3	19	52.8	4	11.1	1	2.8
BOG teachers	24	66.7	10	27.8	2	5.6	0	0

Table 4.27 shows from the sample that in PDSS, 21(58.3%) of the PDSS in Kisii Central District had number of TSC teachers between 6-10, 8(22.2%) had between 11-15 teachers while 7(19.4%) had between 16-20. The number of BOG teachers was shown by 24(66.7%) had less 5 teachers, 10(27.8%) had between 6-10 teachers while 2(5.6%) had between 11-15 teachers.The study further showed that the monthly income varied between Ksh.5000 and Ksh.15000 for the BOG teachers.It was reported that the monthly income for the BOG teachers in 5(13.9%) of the schools indicated that they pay BOG teachers an amount of less than ksh.5000, 23(63.9%) indicated an amount of between Ksh 6000-10000 per teacher per month and 8(22.2%) indicated over Ksh 11,000.

Table 4.28: Proportion of support staff in PDSS

Staff	Most adequate		Adequate		Less adequate		Not adequate	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Watchman	4	11.4	22	62.9	7	20.0	2	5.7
Bursar	2	6.7	16	53.3	2	6.7	10	33.3
Secretary	2	6.5	18	58.1	5	16.1	6	19.4
Messenger	3	8.6	27	77.1	2	5.7	3	8.6
Groundsman	3	9.7	12	38.7	8	25.8	8	25.8
Cooks	2	5.9	18	52.9	11	32.4	3	8.8

A Likert scale was developed to show the proportion of the support staff in PDSS as shown above in Table 4.28. Table 4.28 shows that in PDSS 4(11.9%) had most adequate number of watchmen, 22(62.9%) had adequate, 7(20.0%) had less adequate, 2(5.7%) not adequate. School bursars were reported to be 2(6.5%) most adequate, 16(53.3%) adequate, 2(6.7%) less adequate and 10(33.3%) not adequate. The secretaries 2(6.5%) most adequate, 18(58.1%) adequate, 5(16.1%) less adequate, 6(19.4%) not adequate. School messengers 3(9.7%) most adequate, 27(77.1%) adequate, 2(5.7%) less adequate and 3(8.6%) not adequate. Grounds men 3(9.7%) most adequate, 12(38.7%) adequate, 8(25.8%) less adequate, 8(25.8%) not adequate. Cooks 2(5.9%) most adequate, 18(52.9%) adequate, 11(32.4%) less adequate and 3(8.8%) not adequate.

Table 4.29: Adequacy of departmental teaching staff

	No deficit		Excess		Shortage	
Adequacy	**Freq.**	**%**	**Freq.**	**%**	**Freq.**	**%**
Mathematics	4	11.1	2	5.6	30	83.3
Sciences	4	11.1	2	5.6	30	83.3
Humanities	7	19.4	2	5.6	27	75.0
Creative arts	5	13.9	2	5.6	29	80.6
Languages	5	14.3	2	5.7	28	80.0

From Table 4.29 it is clear that in Mathematics department, 4 schools out of the possible 36, representing 11.1% had no deficit, 2 schools out of the possible 36 representing 5.6% had excess teaching staff while 30(83.3%) had a shortage. In the science department, 4 out of 36 which was 11.1% had deficit, 2 out 36 (5.6%) had excess and 30 out 36 (83.3%) had no deficit. In humanities, 2 out 36 (5.6%) had excess and 7 out of 36 (19.4%) had no

deficit and 27 out of 36 (75.0%) had shortage. In languages, 5 out 35 (14.3%) had no deficit, 2 out 35 (5.7%), and 28 out 35 (80.0%) had a shortage.

Information was sought on the utilization of PTA funds in provision of learning resources as shown in Table 4.30 and Figure 4.6.

Table 4.30:Utilization of PTA finances in the provision of school facilities

Projects	**Frequency n=36**	**%**
Classroom construction	20	22.7
Library	2	2.3
Dinning	15	17.0
Electricity installation	8	9.1
Salaries	36	40.9
Office	7	8.0
Total	**88**	**100.0**

Figure 4.2: Utilization of PTA Finances

Data from Table 4.30 indicates that classroom construction and salaries consume most of the PTA finances. The study further established from BOG interview schedule that schools had ongoing projects of various types. It was evident from the interview report and observation 10(26.3%) of the schools had classroom projects, 6(15.8%) had computer laboratory and science laboratory projects, 5(13.2%) had library project, 4(10.5%) had dining hall and 4(10.5%) had no ongoing projects and 3(7.9%) had a Kitchen project.

Further it was clear that PDSS had stalled projects as was indicated by, 7(19.4%) being classrooms, 3(8.3%) being halls, 2(5.6%) being laboratories, and 1(2.8%) being plot purchase and 1(2.8%) being latrine and 22(61.1%) without stalled projects.

Also PTA had completed projects as was indicated by, 44.9% classrooms, 31.0% water tanks, 10.3% gate construction, 6.9% kitchen and land purchase respectively.

From the findings of the study, the teaching and learning resources in PDSS were inadequate. The classroom resources like desks, wall displays, sitting space and lighting were inadequate. This was due to the inadequate funds. The large number of students enrolled to FSE put a strain on the already available resources. The school compound facilities like toilets are below the required ratio i.e. 1:25 for female and 1:30 for boys (MOE;2010). Due to this scarcity, many students line up to use the available toilets while others seek permission to go to the toilet during learning time this leads to time wastage, hence affecting quality of learning.

In this study, it was found that most schools did not have special facilities for the learners with special needs. This affected the learners with disabilities. The resources for learners with special needs are expensive and schools in their budgets had not made provision for such cases.

In this study most schools were connected with electricity, but the school expenditure were low as they made minimal use of electricity. This was because the schools did not offer subjects like power mechanics, electricity ,Home science, and computer studies which consume a lot of energy. Besides, PDSS have not initiated income generating projects which utilize electricity. The study also established that all the PDSS had a shortage of staff which compelled the school management to hire B.O.G teachers who were paid between Kshs. 6,000-10,000. This amount is below the normal salary of graduate teachers. Some schools hire their former form four students awaiting to join universities. These teachers do not have the necessary skills for teaching, consequently affecting the quality of schooling. Information from the BOG chairpersons interview

schedule revealed that all the schools had scarcity of teachers and hence they employed BOG teachers at negotiable terms which were far behind the expected salary.

In this study it was found that PDSS offered a lean curriculum, with most schools offering chemistry, biology, agriculture and physics as practical subjects. This makes the choice of learners limited hence giving the graduates a narrow choice in professional and technical courses at middle and higher levels of learning. The choice of subjects is controlled by inadequate income to PDSS. Most schools in the study sample were found as not having required facilities for having provided by the schools. That was so because most schools lacked the required funds which would be utilized in purchasing the necessary learning facilities.

The study also found out that most schools lacked adequate science laboratories and equipment. This led to poor performance in national examinations in practicals and science related subjects further affecting the quality of curriculum in PDSS and the national goal of realizing vision 2030 which states that:-

> "Throughout the education system, learning will include the use of knowledge in science, technology and innovation to create wealth, improve social welfare and promote democratic government" (Republic of Kenya, 2007).

The vision in its projection aims at implementing computers in schools. In this study most schools though connected with electricity, do not have computers, teachers of computer and access to the internet. This closes the window of the PDSS in providing education for the modern sector economy.

The study found that most schools through PTA had initiated projects, few had been completed and some had stalled . Their projects were meant to provide conducive learning environment but they have stalled due to lack of funds to complete them. The projects included classrooms , library, kitchen, water and offices.

In this study it was also found that all the PDSS schools did not have houses for teachers. Most teachers commute from nearby towns or markets, some of which are far away and others in very noisy environments. Teacher contact time is importance for learning, in PDSS most teachers spend much time travelling and hence not able to get time to offer remedial work to the learners.

The study also found that most principals who were in the study sample indicated that learning resources affected the quality of learning. This concurred with Bulimo, Odebero and Musasia (2010) who concluded that availability of adequate learning resources would lead to high quality education in schools hence improvement in performance. Currently the Kenya government has come up with a policy of subsidized day secondary education where the government is providing funds for teachers salaries , purchase of learning facilities such as textbooks, chalk and development. However, with increasing enrollment and inflation there is need for parents and other stakeholders to continue contributing effectively towards meeting the cost of public day secondary education. This concurs with the views of the writers both for the developed and developing countries whose literature on cost sharing were reviewed by the researcher. For example, in 2007, national schools offered an average of 16 KCSE examinable subjects compared to 11 subjects in other schools. Apparently this was due to the costs involved in offering the extra subjects (Lucas & Mbiti; 2011).

4.5 Quality implications of the facilities provided by income sources

The third question analyzed how the income has influenced quality of learning in PDSS in Kisii Central District?

A summary of 4.31 shows a summary of the analysis of the qualitative data from the interview schedule administered to school principals on the effect of the facilities on learning quality.

Table 4.31: The implication of financing day secondary schools on quality of learning

THEME	SUB-THEME	FREQ.	TOTAL	%
1. Lighting	-Adequacy	24	31	77
	-Enhances learning, more reading time, no eye strain more conversation	07	31	23
2. Sitting Space	**Adequate** –seats comfortable Encouragement of easy movement in class, Improves enrolment	10	31	30
	Inadequate –congestion during exams leading collusion and cheating	20	31	70
3. Classrooms	Adequate-Cleanliness, well ventilated, comfortable reading specter from rain and wind, learners security	9	34	26
	Inadequate-uncomfortable, no classes for optional lessons	25	34	74
4. Facilities for practical subjects	Adequate – participation of approach of learning, improves performance in science and practical subjects, enough practice	30	36	83
	Inadequate – Lack of exposure to science tools, poor performance	6	36	17
5. Office	Adequate – Convenient for administration, provide privacy and confidentiality, storage and security of equipment co-ordinates departments	0	0	0
	Inadequate –Leads to sharing of files, poor storage, lack of confidentiality	36	36	100
6. Physical facilities	Adequate – Enough space improves quality, Comfortable i.e learning, promotes teaching	2	36	05
	Inadequate – Limited space, Not Effective teaching	34	36	95
7. Human resources	Adequate – Assist in administration, influence student contact improvement of academic performance optimum work bad.	0	36	0
		36	36	100
8. Text Books	Adequate – Improves students mastery of contact student are able to borrow, learning becomes easy. Defense becomes easy.	0	36	0
	Inadequate- leads to sharing of books undone assignments poor performance, affect learning.	36	36	100
9. Co-curricular facilities for co-curricular Activities	Adequate – Affect learning, for marital and physical development, enhance relation, talent exploitation	0	36	0
	Inadequate –students bored, lazy and indiscipline	36	36	100
10. Time	Adequate – more contact time for teaching	0	36	0
	Inadequate –leads to wastage of time in travelling while commuting to school	36	36	100
11. Water and Sanitation	Adequate- saves time for fetching water, cleanliness obsence of diseases improves health of learners, treatment of water when available	6	36	17
	Inadequate – wastage of time looking for water prenance of water borne diseases vulnerability to stomach infection	30	36	83

1. Lighting

From Table 4.31 the study sought information on the level of adequacy on lighting 77% of the respondents said that lighting was adequate, whereas 23% said that lighting in PDSS was inadequate. Majority of the schools relied on natural lighting and few others used electricity as a source of lighting. The cause for non-availability of electricity in these schools was due to the financial constraints. Those who said that lighting was adequate attributed it to more reading time, few eye stress and more concentration by students.

2. Sitting space

From Table 4.31 it is evident that sitting space is inadequate. 70% of the respondents reported that inadequate sitting space led to congestion during examinations which facilitated collusion and cheating. 30% of the respondents said that sitting space was adequate. This meant that the seats were comfortable and movement in class was easy. This environment improved enrolment of students. The overall effect is that due to inadequacy of sitting space, there were examination irregularities which affected the quality of education offered.

3. Classrooms

From Table 4.31, 74% of the respondents said that classrooms were inadequate. The classes were uncomfortable and extra classes for optional subjects, 26% of the respondents said that the classes were adequate. This meant that they were clean, well ventilated, comfortable reading, shelter from rain and wind and the security of the learners provided. However, the majority of the respondents indicated an inadequacy of classrooms which is due to lack of finances for construction of the classrooms. This affect in providing quality education.

4. Facilities for practical subjects

Table 4.31 indicated that 83% of the respondents reported these facilities as being inadequate. This led to lack of exposure to science, tools hence poor performance in sciences. 17% of the respondents said that the facilities were adequate. They enabled participation approach to learning enough practice and improved performance in science. Lack of facilities for practical subjects has an effect in the provision of quality education as students are ill prepared in the acquisition of practical skills. This is due to financial constraints as no money is set aside to purchase the necessary facilities and tools.

5. Office

The respondents reported 100% that the there is inadequate office in schools. This led to sharing of offices, sharing of files, and poor storage of items and lack of confidentiality.

6. Physical facilities

From Table 4.31, 95% of the respondents said that the physical facilities had limited space leading to non-effective teaching. However, 5% reported adequate facilities meaning that there was enough space. This promoted comfortability hence promoting teaching and learning.

7. Human resources

From Table 4.31 it is evident that 100% of the respondents said that human resource was inadequate. This affected teacher-student contact hence affecting optimum work.

8. Text books

It is clear from Table 4.31 that all the respondents said that textbooks were inadequate. This leads to sharing of books, undone assignments and poor performance. These affect the quality of learning in schools.

9. Co-curricular facilities for co-curricular activities

From Table 4.31, all the respondents reported that the co-curricular facilities were inadequate. This led to students not being involved in co-curricular activities, being bored, becoming lazy and undisciplined.

10. Time

Table 4.31, gives 100% of the respondents having said that time was inadequate. This is because there was a lot of time wastage on travelling/commuting to school.

11. Water and sanitation

The research sought to find out the effect of water and sanitation on teaching and learning. From Table 4.31, it is evident that 83% of the respondents said that water and sanitation was inadequate. This is because there is a lot of time wastage in looking water, there is prevalence of water borne diseases and vulnerability to stomach infections.

The study sought information on the quality of performance in view of the provisions from the sources as shown in Table 4.32.

Table 4.52: Performance in PDSS 2005-2010

Year	Less 2		2-3		3-4		4-5		Above 5	
	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%
2005	1	2.9	7	20.0	10	28.6	9	25.7	8	22.9
2006	0.0	0.0	7	19.4	15	41.7	10	27.8	4	11.1
2007	0.0	0.0	6	16.7	7	19.4	13	36.1	10	27.8
2008	0.0	0.0	6	16.7	13	36.1	14	38.9	3	8.3
2009	0.0	0.0	7	19.4	11	30.6	12	33.3	6	16.7
2010	0.0	0.0	2	5.6	11	30.6	13	36.1	10	27.8

Table 4.32 indicates that in 2005 (2.9%) of the PDSS in Kisii Central District had a mean score of less than 2, 7(20%) had a mean score of between 2-3, 10(28.6) had a mean score of 3-4, 9(25.7%) had a mean score of between 4-5 while 8(22.9%) had a mean score of above 5. In 2006, 7(19.4%) of PDSS had a mean score of 2-3, 15(41.7%) had a mean score of between 3-4, 13(36.1) had a mean score of 4-5 while 10(27.8%) had a mean score of above 5. In 2008, 6(16.7%) of PDSS had a mean score of 2-3, 13(36.1%) had a mean of 3-4, 14(38.9%) had a mean score of 4-5 while 3(8.3%) had a mean of above 5. In 2009, 7(19.4%) of the PDSS had a mean of 2-3, 11(30.6%) had a mean of 3-4, 12(33.3%) had a mean of 4-5 while 6(16.7%0 had a mean of above 5. In the year 2010, 2(5.6%) of PDSS had a mean between 2-3, 11(30.6) had a mean between 3-4, 13(36.1%) had a mean of 4-5 while 10(27.8%) had a mean of above 5.

Table 4.33: Status of the Physical facilities

Physical facility	Permanent		Temporay/semi-permant	
	Freq.	%	Freq.	%
Class	35	97.2	1	2.8
Workshop	5	13.9	31	86.1
Teachers houses	10	27.8	26	72.2
Latrines	34	94.4	2	5.6
Offices	34	94.4	2	5.6
Stores	22	61.1	14	38.9
Canteen	23	63.9	13	36.1
Staffroom	32	94.3	2	5.7

Table 4.33 shows the status of the physical facilities in PDSS. The facilities were grouped into permanent and temporary structures. From the information on the Table 4.33, 97.2% of the classes in PDSS were permanently constructed while 2.8% were temporary. Workshops were represented by 13.9% were permanent while 72.2% were semi permanent structures. In PDSS 72.2% of the teachers' houses were semi-permanent while 27.8% were permanent. It was further observed that 94.4% of the latrines in PDSS were permanent while 5.6% of the latrine in PDSS was temporary. Most of the offices in PDSS 94.4% were permanent while 5.6% were semi-permanent. Most of the school canteens in PDSS, 63.9% were permanent while, 36.1% were semi permanent. The study established that 94.3% of the staffrooms in PDSS were permanent while 5.7% were semi permanent. All these indicated that of the available facilities, majority were constructed on permanent basis. This was made possible by the contributions from parents and the government.

Presence of resources

The following facilities were observed and reported on the basis of being present or not present.

Table 4.34: Observed facilities

Facility	Present		Not present		Shared	
	Freq.	%	Freq.	%	Freq.	%
Workshop	5	13.9	31	86.1	0	0.0
Play fields	10	27.8	0	0.0	26	72.2
Canteen	8	22.2	28	77.8	0	0.0
School bus	0	0.0	36	100.0	0	0.0
Library	0	0.0	36	100.0	0	0.0
School farm	10	27.8	26	72.2	0	0.0
Day watchman	18	50.0	18	50.0	0	0.0
Land for expansion	12	33.3	24	66.7	0	0.0
IGAS Possibility	13	36.1	23	63.9	0	0.0

The study also observed the physical presence of some of the facilities in PDSS as shown in Table 4.34. From the table, 13.9% of the PDSS had workshops, while 86.1% had no workshops. 27.8% of the PDSS had their own play fields while 72.2% shared playfield with the nearby primary schools. None of the PDSS had a school bus(100%). It was also observed that (100.0%) of the PDSS had no functional library. 27.8% of the schools had a school farm, whereas 72.2% had no school farm. This affected the ability to farmers onions from the school farm**.** 50% of the PDSS had a day watchman while 50% had no day watchman. 33.3% of the PDSS were observed to have room for expansion, while 66.7% had no

room for the same. The IGAS possibility in the PDSS was 36.1%, while 63.9% presented no possibility for IGAS.

The size of the school compound of PDSS was indicated and observed to be 27(75.0%), having a land size of between 1-2 acres, 8(22.29%) had a land size of 3-4 acres while 1(2.8%) had a land size of 4-6 acres. It was also observed that 25 (69.4%) of the schools were fenced while 11(30.6%) were not.

From the interview schedule the principals were to respond on their perception of the relation between resources and quality of learning. It was established that 30(96.8%) of the principals felt that there was a relationship between provision of facilities and quality of learning while 1(3.2%) indicated that there was no relationship.

The study further sought to establish whether there was any relationship between performance before introduction of FSE and after introduction of FSE.

$H_0$5: There is no significant difference in performance before and after FSE in PDSS in KCSE.

The hypothesis was tested using independent t-Test. On average more schools recorded an MSS of less than 2 before the introduction of FSE (M=0.333, SE=0.333) and after FSE(M=0.00, SE=0.00). This difference was significant t(4)=1.00, P<0.05 with a medium effect size r= $\{t^2/(t^2+df)\}^{0.5}$ =0.447. Appendix I, Model(c).

A statistical significant impact of FSE in performance improvement was established on the MSS of less 2. On average, many schools recorded a mean of 2-3 in KCSE before FSE (M=6.67, SE=0.33) while after the introduction of FSE few schools recorded an MSS of 2-3(M=5.00, SE=1.53). The difference was not statistically significant t(4)=1.066, P>0.05 with a size effect r=0.47.

On average, few schools recorded an MSS of 3-4 before FSE(M=10.67, SE=2.33) while after FSE more schools recorded a mean of 3-4(M=11.67, SE=0.67). This was not statistically significant t(4)=-0.412, P<0.05 with an effect r=0.20.

Before the introduction of FSE, few schools recorded an MSS of 4-5(M=10.67, SE=1.20) while after more schools recorded an average of 4-5(M=13.00, SE=0.58). This was not statistically significant t(4)= -1.75, P>0.05 with an effect r=0.66

On average, before FSE, more schools recorded an MSS of above 5(M=7.33, SE=1.75) while after few schools recorded an average of above 5.(M=6.333, SE=2.0). this was not significant t(4)=0.37, P<0.05 with an effect r=0.18.This was due to high inflow of students to PDSS with the introduction of FSE as revealed by interview schedule.

From the findings of the study, the income sources do not enhance the quality of learning in PDSS. The classrooms are overcrowded due to free education policy which led to an increase in enrollment in PDSS. The classes are stuffy and ventilation is poor. In most schools the floor is cracked, and walls are not painted. This is due to insufficient funds to repair and maintain the buildings. The facilities for practical subjects present insome schools are of poor quality. Their facilities include such items as, furniture, office machines, office space and office environment.

In co-curriculum activities, the study found out that most schools have no playing field. Schools shared with neighbouring primary schools and most of the PDSS were curved from existing primary schools, so the fields have to be used in rotation and when it's games time, not all the learners participate in games. In

most schools the fields are uneven, poorly marked and not to standard. This affects the quality of co-curricular activities. The fields cater for Athletics and ball games. The available facilities do not cater for other co-curriculum activities like swimming, rugby, tennis and badminton .

The study also found out that water and sanitation are of poor quality as most schools harvested rain water and fetched untreated water for use. The toilets are of pit latrines which do not encourage hygiene due to the large number of users.

The study found that most of the PDSS performed poorly in KCSE national examination. The trend is constant that most schools have a mean of D over the years, therefore, it is apparent that these schools are centres of wastage. The introduction of FSE did not yield a significant relation to performance when compared with the previous years. These findings on quality implications concur with studies reviewed in literature on the teaching and learning conditions which have a bearing on quality.

4.6 Suggestions on improving financing PDSS

4.6 .1 Constraints facing the income sources and strategies in financing PDSS.

The fourth research question sought information from principals, PTA and BOG chairpersons and quality assurance officers on the constraints facing the income sources in financing public day education. Table 4.35 presents the principals' responses and Table 4.36 the PTA chairpersons' responses. Before the strategies for improving the financing of education, in response to the fourth question, it was necessary to establish the constraints facing the income sources.

Table 4.35: Principals responses Constraints facing the income sources in financing PDSS education

Income source	Constraint	Frequency	Total	%
1. Government	-inadequate	36	36	100
	-frequent delays	36	36	100
2. Parents	-fees arrears	36	36	100
	-inadequate funds	34	36	94
	-Poverty	33	36	91
	-Delayance of fee payment	30	36	83
	-Reluctance to pay	28	36	77
3. CDF/LATE	-Dalliance of fund disbursement	32	36	88
	-unreliable funds	30	36	83
	-inadequate funds	34	36	94
	-irregularly disbursed of funds	36	36	100
4. Sponsor/donors	-No support in finances	36	36	100
	-Inability to solicit funding	36	36	100
5.Institutional income activities	- lack of funds	36	36	100
	-Lack of land for expansion	34	36	94
	-Lack of entrepreneurial skills foe exploitation of resources	36	36	100
6.Community Support	-Poverty	36	36	100
	-lack of awareness to supplement	36	36	100

From Table 4.35 it is evident that the government financial support is inadequate by 100%, and all the principals head teachers reported delayance in the disbursement of the funds which affected learning in the schools.

The parents contributions had constraints as shown by all responses that parents owe schools arrears and all the principals felt that their contribution is inadequate 33(91%) of the respondents poverty of parents to meet their financial obligations, 30(83%) reported that parents delayed in their fee payment and 28(77%) indicated that parents were reluctant to pay.

CDF/LATF as income sources (32) 88% showed that the payment is delayed, 30(83%) responses showed that the fund was unreliable, 34(94%) felt that the fund was inadequate and 36(100%) felt that the fund was irregularly disbursed.

Sponsors and donors as income sources, 36% of the responded indicated lack of sponsor support and 36(100%) of the respondents felt that they had the responsibility to seek for funds.

Institutional income generated activities (IGAS) as a source of income had the following constraints all responded that there are no funds set aside for IGAS, 34(94%) showed no land for expansion all felt that they lacked entrepreneurial skills to carry out the IGAS in the schools.

Community as a method of financing education all respondents felt that poverty was a cause affecting this method and all of the respondents felt that community lacked awareness on the need to supplement school income. Data is presented in table 4.36

Table 4.36: PTA financing Constraints

Constraints	Frequency	Percentage
Inflation	36	24.3
Technology demands	10	6.8
Poverty	36	24.3
Delayed payment	36	24.3
Illiteracy	30	20.3
Total	148	100.0

Table 4.36 shows the PTA chairpersons on the responses towards constraints affecting financing. From the table 36(24.3%) reported inflation, poverty and delayed payment as the constraints facing financing by PTA, illiteracy 30(20.3%) and demands by technology 10(6.8%).

The study sought information from BOG chairpersons on financing constraints affecting quality of education in Kisii Central District and their responses were summarized as follows:

i. High inflation
ii. Delayed payment from the government in disbursement of the funds
iii. Limited land for initiating income generating activities
iv. Many of the students who are in PDSS came from poor socio-economic backgrounds, hence payment of levies and money for infrastructural development is poor.
v. PDSS share facilities with adjacent primary school
vi. Poor perception of parents on FSE, whereby they have misconception that the government should pay all the expenses in PDSS.

Quality assurance and standards report on constraints

The study sought financial information affecting the quality of learning in the four districts from district quality assurance officers and their responses were summarized as follows;

Constraints affecting quality;

1. Understaffing due to loss of teachers due to natural attrition and voluntary retirement
2. Low content time between the students and teachers
3. High population of students
4. Mass rooming of Many secondary schools of low quality
5. Inadequate resources
6. Community unwillingness to support education
7. Limited land
8. Chronic absenteeism of teachers
9. Village culture; teachers drawn from the surrounding community
10. Sharing of facilities with primary schools

11. Poor performance
12. High dropouts
13. BOG management and PTA do not add economic value to schools since they are based on political affiliation to benefit from the school
14. Understaffing and poor facilitation of quality assurance officers

4.6.2 Suggestions on the financing of public day secondary education

The study analyzed the strategies on the improvement of income sources in enhancing adequacy quality of learning in PDSS. The researcher found out this question necessary for investigation because it was important to find out the various ways in which financing can be improved to enhance quality in PDSS.

The recommendations were analyzed by the researcher as; principal's recommendations which were analyzed on the frequencies of the themes which emerged on each of the six income sources. The PTA chairperson's information is analyzed in Table 4.37 while the researcher identified 12 strategies from the District quality assurance officers. Table 4.38 presents the principal's strategies on how the financing of schools can be improved.

Table 4.37: Principals' Suggestions on Strategies of improving financing of PDSS

	Strategies	Freq	Total	%
1. Government	-To increase its funding	36	36	100
	-Timely Fund Disbursement	36	36	100
	-Provide More Teachers	36	36	100
2. Parents	-Cost-sharing	36	36	100
	-Sensitization of parents on financing Education	36	36	100
	- To finance Motivation Fee	34	36	94
3. CDF/LATF	-Choosing efficient and effective CDF Committees	30	36	83
	-Increase of CDF and LATIF funds to school	34	36	94
	-Source for more funds from	34	36	94
4.Sponsors/Donors	donors	36	36	100
	-Sponsors to support schools financially			
5.Institutions	To Diversify income	30	36	83
	generating activities	10	36	30
	-Elimination of corruption and embezzlement of funds			
6. Community	-Mobilization of community through fundraising	30	35	85
	-Provision of more land for day secondary schools	35	36	97

The following strategies emerged on each income source:

a). Government

From Table 4.37, it is evident that the government as a source of financing education needs to increase its funding since the arrears amounting to (1062) has remained constant over the years despite the inflation and economic difficulties. This theme was indicated by (36)100% of the principals. The government also needs to disburse the funds timely as indicated by (36)100% of the principals. It was reported that the funds are disbursed late from the government, hence affecting the procurement of the necessary resources. From

Table 4.37, (36)100% of the principals reported inadequate staffing hence the need for the government to add more teachers. This brought about a situation where PDSS employed B.O.G teachers who are underpaid.

b). Parents

From Table 4.37, (36)100% of the principals recommended the method of cost sharing which rests on the premise that the government is unable to meet all the costs of education at secondary school level. (36)100% of the principles recommended the sensitization of parents to supplement education. It was reported that parents released on supplementing education when the government introduced Free secondary education. 34(94%) of the principles recommended that parents finance motivation fee.

c). CDF/LATF

From Table 4.37, 30(83%) of the principals recommended the need to choose efficient and effective CDF committees as the principals recorded that the funds were not effectively and efficiently spent. 36(100%) of the respondents felt that there is need to increase the CDF/LATF allocations to financing education.

d). Sponsors/Donors

From Table 4.37, 34(94%) of the respondents indicated that the sponsors as stakeholders in education need to source for more funds from donors since some of the sponsors have attachment to foreign donors. 36(100%) of the respondents also indicated that sponsors besides being involved in management of school should support the school financially as some felt the sponsors were as expenditure.

e). Institutions

The principals indicated that in order to improve financing of schools, 30(83%) indicated that there is corruption and embezzlement of funds which need to be eliminated.

f) Community support

From Table 4.37, 30(85%) of the respondents recommended the mobilizing of the community through fundraising. 35(97%) indicated that the community should provide more land for PDSS.

The study identified the following strategies on improving quality of financing from the BOG chairperson.

1. The government to increase it's funding under the FSE. This was in view that the amount has remained constant over the years despite the high inflation and rising costs of services and facilities.
2. Cost sharing policy to be continued at a minimal level and parents to be sensitized on the need to supplement the PDSS school income.
3. Schools to establish a department of school enterprises which will take responsibility of fundraising, proposal writing for funding, liaising with BOG to organize fundraisings and managing the school IGAS.
4. Harambee contributions to continue as a source of community mobilizing to provide resources to PDSS.
5. PDSS school located close to each other to be combined so as to finance one school and put resources together and establish more streams in PDSS instead of more schools. For example a three streamed school will be equivalent to three PDSS schools. The managing and operating of the schools became expensive.

The researcher was able to identify six recommendations on improving the financing sources to improve quality from the PTA chairpersons of the schools as shown in Table 4.38. The impact of each recommendation was established by adding the total and calculating the percentage of each recommendation.

Table 4.38: PTA Strategies on financing sources to improve quality of learning

Strategy	Frequency	Percentage
Seeking donor support	30	14.6
Fundraisings	36	17.6
IGAS	33	16.0
Gok to increase funding	36	17.6
Increase parents contribution	34	16.6
Sensitization on the need to finance education	36	17.6
Total	205	100.0

From table 4.38, the responses that schools should hold fundraisings, government to increase funding and sensitization on the need to finance education was represented by 17.6% each. The PTA chairpersons also recommended the need for schools to initiate IGAS as shown by 16.0%, the need to increase contribution from parents was shown by 16.6% while the recommendation to seek donors support was shown by 30%.

The researcher was able to identify the following 12 recommendations from DQASO on how the income sources can be improved to finance PDSS;

DQAS suggestions;

1. Additional staff to handle the large population of students
2. Increase of government funds to reflect the current economic trends
3. Diversification of income sources
4. Need for a policy for maintenance of available physical infrastructure

5. More Community involvement
6. Strengthening of PTA
7. Continuation of cost sharing
8. Donor involvement
9. Increase of land
10. Economic establishment of schools to have more than one streams in PDSS
11. Minimum qualification of PTA members to be Diploma holders and above
12. Provision of computers to schools

The study found that there were several constraints facing the financial sources to PDSS. The study found out that the sources of revenue to PDSS were inadequate, and that the parents owe the schools fees arrears. This is due to poor home background which affect the ability of parents to pay the levies required by the schools. The introduction of FSE led to unwillingness of parents to pay fees with an excuse that education is free. The government funding is inadequate and it is disbursed to schools late, hence affecting the operations of the schools thus affecting the quality of learning. The school income generating initiatives were affected by land, lack of funds and entrepreneurial skills. This concurs with a study by Omukoba, Simatwa & Ayodo (2011) on income generating acitivities to finance secondary education in Kenya.

From the study, the District quality assurance and standards officers observed that the PDSS schools are too many often situated near to each other. There is high dropout rates, the quality of B.O.Gs and PTAs is low and are not facilitated by the

government to monitor the quality of the schools. These constraints are due to lack of enough funds to enhance the quality of learning.

From the study findings, it was established that parents and the government have the responsibility of meeting the cost of education to enhance quality of learning. This can be done by: sharing the cost of education between the government and the beneficiaries.

This concurs with KIPPRA (2006) which asserts that the government alone cannot meet the education cost. This is further reinforced by the inflation rate and poor performance of the economy which have led to non increment of the per student allocation of Kshs.10262 per year. Schools also need to diversify their income sources in order to generate supplementary income to finance learning in schools. Schools can also solicit donor support, while the government appoints well informed committees in the CDF and LATF. This concurs with KIPPRA(2007) which recommends that the government should increase the allocation to FSE to cater for the cost of the DEOs and DQASO who monitor the implementation and quality of learning in the schools.

The study recommended the use of parents, harambee fundraisings and sponsors in improving financing. This is in line with KIPPRA(2007) suggestion that out of the school direct cost, the parents should meet such costs as uniform, transport and personal effects. In addition, Harambee and private sector avenues to be explored devoid of abuse as a strategy of raising revenue to support the development of the school infrastructure.

The study suggested the use of IGAS to generate income. This concurs with the ministry of education(2008), which suggested that schools start income generating activities where there are none, and improvement of existing IGAS to generate income which will be utilized for infrastructural development.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS.

5.1 Introduction

This chapter presents summary of findings, conclusions and recommendations. The presentation was done in tandem with the research objectives.

The objectives of the study were:

i. To find out the adequacy, reliability and trends of income sources in financing day secondary schools in Kisii Central District
ii. To analyze the utilization of existing income sources in the teaching and learning process in Kisii Central District.
iii. To find out the implications of financing day secondary schools on the quality of learning.
iv. To devise strategies on how the income sources in public secondary schools can be improved to enhance the adequacy and quality of teaching and learning resources in day secondary schools.

The research questions were;

i. What is the contribution of income sources in financing PDSS in Kisii Central District?
ii. How are the income sources utilized in financing the teaching and learning resources in Kisii Central District?
iii. How has the income influenced quality of learning in PDSS in Kisii Central District?

iv. How can the income sources in PDSS be improved to enhance adequacy of resources and quality of learning in PDSS in Kisii Central District?

Hypotheses formed in relation to question 1;

$H_0$1: There is no statistically significant difference between PDSS income sources

$H_0$2: There is no significant relationship between projected and actual expenditure in PDSS

$H_0$3: There is no statistically significant difference between income to PDSS and expenditure

Hypotheses formed in relation to question 3;

$H_0$4: There is no significant difference between income trend and performance trend in PDSS.

$H_0$5: There is no significant difference in performance before and after FSE in PDSS in KCSE.

Descriptive Survey design was used in conducting this study. The sample selected for the study consisted of 36 PTA chair persons, 36 Principals, 36 Bursars, 36 BOG chairpersons and 4 District quality assurance officers, data was received from all respondents.

The instruments used in the study were Principal and Bursars questionnaires and interview schedule to gather information from principals. Interview schedules were also administered to PTA and BOG persons and the district quality assurance officers.

In analyzing data, frequencies, percentages, means and Anova were used. The level of significance for the hypothesis was set at α=0.05 level of significance.

5.2 Summary of the Research findings

From data presentations and analysis the following findings emerged:

5.2.1 The income source and expenditure in public day secondary schools.

The analysis of the principals' responses who were in the study sample regarding the source of income in the public day secondary schools indicated that:

i) The major source of income to PDSS is the government represented by 33.3% of total sources of income. The parents, through PTA and paying of school levies were represented by 32.4%. Donations were represented by 2.8%, income generating activities by 1.9%, the sponsors by 0.9%, CDF by 25.9% and LATF 2.8%

ii) During the six year period (2005-2010), there was an increasing trend in the amount of money received from the government.

The increase was from '0' in 2005 to Ksh 114,190,000 in 2010. This was due to the fact that before 2008, the government contribution to PDSS was minimal but with, the contribution of FSE in 2008, there was a gradual increase of student population and the corresponding government funding.

iii) The income of the parents to PDSS showed a declining trend. This decline was due to the fact that with the introduction of FSE gave relief to parents, the financing responsibility was shifted to the government hence the increase in the government income to PDSS.

iv) The income from the CDF/LATF Varied between Ksh. 632,500(14.8%) of the total annual income in 2006 and Ksh. 3,100,000 (2.8%) in 2008. CDF/LATF as sources of income are not reliable methods as they are given for special projects identified by CDF/LATF committee; hence they are not continuous and constant income sources to PDSS.

v) The income from the sponsor is quite negligible. This shows that sponsors' contribution to the PDSS is negligible, despite their administrative roles in the school B.O.Gs. According to the interview schedule administrated to principals, the sponsors are an expenditure in the PDSS.

vi). The income from the school IGAS is indicated annually and varied over the study period. PDSS have a capacity to generate income but this source has not been exploited maximally by the PDSS in Kisii Central district.

vii) PDSS received minimal income from donations which Most of the donations were sourced through harambee fundraising. However, they seem to be declining due to the government intervention through FSE.

b). Expenditure

i. PDSS projected expenditure showed an increasing trend due to curriculum demands, inflation and the increasing number of students under FSE.
ii. The actual expenditure was below the projected expenditure due lack of funds
iii. All the PDSS had a deficit in their budget.
iv. The relationship between projected and actual expenditure was established to be significant with $P<0.05$.

5.2.2 The reliability and adequacy of the income sources

To determine the reliability and adequacy of income source, a four point Likert scale was developed for this purpose.

The findings indicated that:

a) Reliability of income resource

i. From the study the reliability of income from the government was shown as an unreliable due to delayance in disbursement hence affecting the

operation and quality of learning

ii. The reliability of income from parents was shown to be unreliable due to poverty and reluctance of parents to support the schools.

iii. Donations as a source of income was shown to be unreliable.

iv. The income generating activities as a source of income was shown to be unreliable due to lack of land entrepreneurial skills and funds to implement the IGAS.

v. The reliability of sponsors in financing PDSS was indicated as unreliable they felt it was the government responsibility to finance education.

vi. The reliability of CDF/LATF was rated as unreliable.

vii. The PTA as a source of income was shown to be unreliable due to poverty of parents.

viii. The overall reliability of the income source was shown by 56.9% .

b) Adequacy of the income sources

The four point Likert scale was used to establish the adequacy of income sources. In the scale developed, 4 represented 'very adequate', 3 represented 'adequate', 2 represented 'fairly adequate and 1 represented ‘not adequate’. The findings were as follows:

i. Generally the respondents perceived the adequacy of financing from the government as inadequate and unable to meet the corresponding demands of financind PDSS education.

ii. The income from the parents was shown as inadequate.

iii. Donors as a source of financing to PDSS was also not adequate.

iv. Harambee and community as a source of financing PDSS was indicated not adequate.

v. PTA as a source of income to PDSS was indicated as not adequate.

vi. The IGAs as a source of income to PDSS were as not adequate.

vii. Income from CDF/LATF was indicated as not adequate.

viii. Generally the income sources do not provide enough funds to meet the financing of PDSS.

5.2.3 Trends and patterns of income sources and expenditure in public day secondary schools ; 2005 – 2010.

The study also investigated the trends in income and expenditure from all sources. It emerged that all PDSS had a deficit in their projected and actual expenditure between 2005 and 2010. The deficit range was between Ksh. 8,810,000 in year 2005 and Ksh 18,574,000 in the year 2009.

5.2.4 The utilization of income sources in providing the teaching and learning resources

The analysis of the resources regarding the utilization of the income resources in providing the teaching and learning indicate that:

a. Classroom resources

Most schools did not have the required classroom resources provided from the income sources. The findings indicated inadequate wall displays ,sitting space security and poor class environment.

b. Adequacy of school compound infrastructural resources.

i.The analysis of the responses regarding the school compound infrastructural facilities indicated that schools lacked toilet facilities,had poor fencing and flowerbeds and building safety and no special facilities for special needs learners

c. Energy source and expenditures

From the study most schools use electricity as a source of lighting but the expenditure showed minimal usage of electricity.

d. Communication systems in PDSS

The facilities available for communication in PDSS showed that: the mobile phones were the most commonly used for communication .

e. Offices availability

The responses from the sample showed that more schools had offices for principal and deputy principals which were poorly furnished.

f. Quality of physical facilities.

The response from the study showed that laboratories, science equipments, school field facilities, office and resource for administration ranged between average and poor quality.

g. Teaching staff

The responses from the study indicated that most schools had shortage of teachers.

The responses from the principals in the sampled schools regarding the physical facilities provided by the means indicated:-

i. Most schools in the sample study sample offered Agriculture physics chemistry and Biology.
ii. Science laboratories were indicated as not adequate to facilitate quality teaching of science practicals.
iii. The equipments and facilities were shown to be inadequate.
iv. Laboratory ventilation was shown to be adequate.

v. The storage and safety of the equipment in the laboratory was shown as inadequate.

vi. The maintenance of the laboratories was indicated as inadequate.

vii. All PDSS employed BOG teachers who earned a gross salary of between Ksh.5,000 to 11,

viii. The study showed that PDSS had inadequate support staff who were underpaid and not well facilitated to undertake their duties.

h). Departmental teaching staff

The responses from the study indicated that:

i) There is a shortage of teaching staff in mathematics

ii) In Humanities, it was indicated by 75% of the sample.

iii) Creative Arts was shown by 80.6% shortages.

iv) In languages it was indicated by 80.0% shortages.

i). Utilization Of PTA Finances

From the responses, the study indicates that all the PDSS had active PTA organization and the PTA funds were utilized for;

i) Classroom construction

ii) Ongoing PTA projects indicated classrooms

iii) Stalled PTA projects

iv) Completed PTA projects

5.2.5 Implications of income sources on quality of learning

From the response on quality implications of income, it was shown that:

i. Majority of the schools had sufficient lighting.

ii. There is poor sitting space.

iii. Majority of the schools' classrooms were poor.

iv. Facilities for practical subjects were poor.

v. Offices were inadequate and poorly furnished.

vi. Physical facilities were inadequate.

vii. Human resources were inadequate.

viii. Textbooks were not relevant.

ix. Co-curricular activities facilities were poorly facilitated.

x. Time usage was poor.

xi. Water and sanitation was poor

Performance in PDSS 2005-2010

i) The responses indicated that in 2005, 20% had a mean score of less than 2, 28.6% had a M.S.S of between 2 and 3, 27.7% had M.S.S of between 4-5 while 22.9% had a m.s.s of above 5.

(ii) In 2006, 19.4% of the schools had a M.S.S 2-3, 41.7% had M.S.S of 3-4, 36.1% had M.S.S 4-5, 27.8% had a mean of above 5.

(iii) In 2007, 16.7% of the schools had a M.S.S between 2-3,19.4% had between a m.s.s of 3-4, 36.1% had between 4-5 and 27.8% had an M.S.S of above 5.

(iv) In 2008, 16.7 % of the schools had between an M.S.S 2-3, 36.1% had between 3-4, 38.9% had between 4-5 and 8.3% had above 5.

v) In 2009, 19.4% of the schools had an M.S.S of between 2-3, 30.6% had between 3-4, 33.3% had between 4-5 and 16.7% had above 5.

vi) In 2010, 5.6% of the schools had an M.S.S of between 2-3, 30.6% had between 3-4, 36.1% had between 4-5 and 27.8% had above 5.

5.3 Suggestions on how to improve financing of PDSS to improve quality of learning.

(a) Constraints.

From the respondents the financing sources constraints were shown as follows:

(i) The government source of income was inadequate .

(ii)The parents as a source of income was poor due to fees arrears, poverty , delayance of payment and reluctance to pay.

(iii) CDF and LATFF was irregular and unreliable.

.(iv) Sponsors gave no financial support .

(v) Institutional income activities were not fully exploited to generate income.

(vi) Community support was affected by, poverty and lack of awareness.

(vii) PTA constraints in financing education was due to inflation,poverty and illiteracy .

(viii) Quality Assurance officers indicated: understaffing, high population of students, classrooms of many schools of low quality, community unwillingness to support education, high dropouts, low quality BOG and PTA, Poor facilitations of quality assurance officers.

b) **Suggestions on the improvement of financing of PDSS to enhance adequacy and quality of learning**

The study made suggestions on how financing can be enhanced to improve quality on public day secondary schools. The following suggestions were made by Principals.

(i) GOK to increase funding .

(ii) Parents to embrace cost sharing .

(iii) CDF/LATF to choose efficient and effective committees .

(iv) Institutions to diversify income .

(v) Community mobilization .

(b) PTA -suggestions were indicated as follows;

i. Seeking donor support.

ii. Organizing Fundraising.

iii. Utilization of IGAS.

iv. Government to increase funding.

v. Parents to increase contribution .

vi. Sensitization of the community on the need to finance education

(c) The DQASO made the suggestions;

i. Addition of staff.

ii. Increase of government funds.

iii. Need for a policy framework on financing FSE.

iv. More community involvement.

v. Strengthening of PTA.

vi. Continuation of cost sharing.

vii. Donor involvement.

viii. Economic establishment of schools.

ix. Provision of computers to schools.

d). BOG chairpersons suggested that the government should increase funding, cost sharing to be continued, fundraisings and IGAS to be enhanced.

5.4 Conclusions

From the foregoing research findings, the following conclusion and generalizations emerged. Specifically, in view of the objectives that were set and from the summary findings given, and the discussions presented on the financing of day secondary school education and its implications on the quality of learning.

5.4.1 Characteristics of Respondents

a) Most of the PDSS in Kisii central District were established between 2001-2010. This is due to the increasing enrollment and declaration of free secondary education.

b) All PDSS had a shortage of government employed teachers and had resorted to employ B.O.G teachers.

c) Most of the TSC teachers were professional and qualified and capable of handling their teaching subjects.

d) Most PDSS schools had more male teachers than female teachers.

e) Most PDSS schools had a class enrollment of over 30 students. This is due to the introduction of FSE.

f) Most schools in the study sample had male principals. Only one school had a female principal.

g) Majority of the principals in PDSS were qualified with a degree and were between job groups M and N and were experienced.

h) Majority of PTA chairpersons had 'O' level education and below, and most of them are farmers and retirees.

5.4.2 Adequacy, reliability and trends of income sources

a) The main sources of income to PDSS are the government and the parents; the other possible income sources were irregular, fluctuating and had minimal contributions.

b) There is a strong relationship between projected and actual expenditure in PDSS.

c) The income sources to PDSS are unreliable and inadequate to meet the learning needs.

d) The FSE introduced by the government is inadequate to finance education due to inflation and escalating prices of commodities and has remained constant since it was introduced.

e) The trend of income sources shows a gradual increase of the government contributions and dwindling of the parents contributions. This is due to the relaxation of the parents that the government will meet all the education costs.

f) All PDSS school have a deficit in their annual budgets.

5.4.3 Utilization of income sources in financing the teaching and learning

a) Most schools do not have enough desks, sitting space and classroom resources for learning.

b) Majority of the schools have inadequate school compounds and infrastructural resources to enhance the quality of learning.

c) Most schools had permanent clean water supply.

d) Most schools do not have special facilities for the challenged students.

e) PTA has ongoing, stalled and completed projects in PDSS.

f) Most PDSS offer agriculture, physics, chemistry and Biology as practical subjects.

g) Most PDSS had inadequate practical facilities and equipment.

g) Most PDSS use electricity as a source of energy with most of the PDSS spending between Kshs. 10,000-15,000.

h) Most PDSS have no school site plan.

i) Most PDSS school have principals' office, deputy principals' office and staffrooms as the main offices.

j) The quality of physical facilities in PDSS is average.

k) All PDSS had a shortage of teachers in all subjects and have hired B.O.G teachers who are paid Ksh. 6,000-10,000 per month.

l) Most PDSS had adequate non-teaching staff who were paid lowly and have salary arrears.

5.4.4 Implications of financing on the quality of learning

a. The source of lighting in PDSS is good with most schools being connected with electricity.

b. Sitting space is poor due to congestion, which leads to collusion and cheating during the exams.

c. Most of the PDSS classrooms have uncomfortable chairs and no classes for optional subjects.

d. Most schools in PDSS have poor quality laboratories and facilities for practical science subjects which affects performance in national examinations.

e. In most PDSS the quality of physical facilities is poor. There is limited space for effective teaching.

f. Majority of PDSS have no library, have a book store with irrelevant books.

g. All PDSS schools have poor co-curricular facilities, leading to boredom and students indiscipline.

h. All PDSS have poor utilization of time e.g. wastage of time through travelling by teachers and students.

i) Most PDSS have poor water and sanitation, this leads to wastage of time to fetch water and vulnerability to water borne diseases as the water is not treated.

j) Most PDSS have poor performance in KCSE with most schools having a mean score of D plain.

k) There is no significant difference in performance before and after introduction of FSE.

5.4.5 Constraints facing income sources and suggestions on improvement of income sources

a) Government contributions to PDSS is inadequate and delayed in disbursement/.

b) Parents contribution is dwindling, parents have arrears, delayed payment and reluctant to pay.

c) The other sources of income to PDSS in most schools are irregular and fluctuating.

d) Most PDSS have High population of students

e) PDSS in Kisii central are increasing in number but are of poor quality.

5.5 Recommendations

5.5.1 Recommendations for policy

Arising from the findings, the following recommendations were made for policy:

1. The financial sources in public day secondary schools are unable to meet the required facilities for enhancing quality education. The government needs to increase the amount disbursed to schools due to inflation and the high cost of living. The government contribution should be disbursed in time preferably before the start of the term to avoid delayance which led to

financial strains which hinder quality achievement in PDSS. Also provide enough funds for quality assurance officers.

2. It was evident from the study that one source cannot meet costs of day secondary school education. Education will need to be supported through multi-sources. The parents should be encouraged to continue to support education and be sensitized on the need to provide the supplementary resources required in education.

3. It was evident from the study that the income provided to school does not provide enough money to purchase the necessary teaching and learning resources. This was due to the unreliable and inadequacy of the income sources. It was also evident from the study that the community financial support is declining due to FSE policy. The community involvement needs to be harnessed more to provide such support like land, contributions in kind for construction and through mobilizing of harambee contributions.

4. It was evident that schools have IGAS, however, their contributions are minimal and schools should be encouraged to venture into lucrative and enterprising ventures which can generate supplementary income namely; brick making, housing units within the school, hire land for crop and animal production, intensive gardening and keeping poultry. Schools can create production units with unit managers who can run the IGAS. Entrepreneural education should be inculcated into the teaching profession.

5. It is evident from the study that the government is unable to meet the financial requirement of day secondary education. The study recommends that cost sharing as a method of financing education be strengthened so as to enhance the quality of education. This can be done by involving the communities, holding harambee fundraisings and encouraging more participation by the beneficiaries of education.

6. It is evident from the study that the quality of resources in day secondary schools is poor. This is due to lack of funds to improve the quality of the learning resources. Schools need to design proposals for securing donor support and also the sponsors contribution is minimal. The sponsors of the schools need to contribute money to the schools they manage and sponsor.

5.5.2 Recommendations for further research

The following recommendations for further research were made:

1. The findings of the study indicated the financial inability of the financial income sources to meet the demands of education in day secondary schools. Further research is therefore necessary to determine the strategies of boosting the income sources to meet the costs of day secondary education.

2. The findings also indicated problems affecting the subsidized secondary education policy. Further research is necessary to establish the impact of free education policies in meeting the financial requirements of the schools.

3. Further research be carried out in more counties with varying socio-economic status to determine the strategy of boosting the income sources in order to enhance quality.

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APPENDICES

Appendix A: Principal's Questionnaire

Introduction

Please answer the questions to the best of your knowledge .The information provided will be kept confidential.

Section A: General information

a). Name of school _____

Location _____Division _____

District_____

Sex: Male _____ Female _____

b) Qualification of the Principal (Tick as appropriate):

Diploma _____

S1…….B.E.D……M.E.D…….BA/BSC/PGDE……

Current grade K ☐ L ☐ M ☐ N ☐ Above N ☐

Number of years in school as principal

1-5 years __6-10 years __11-15 years __16-20 years __21 years and above__

c) Experience (Tick as Appropriate)

Position **Experience**

Teacher 1-5 years __6-10 years __11-15 years __16-20 years ____

21 years and above__

Head of department. 1-5 years __6-10 years __11-15 years __16-20 years ____

21 years and above__

Deputy Head teacher 1-5 years __6-10 years __11-15 years __16-20 years ____

21 years and above__

d). The number of teachers in the school _____Male _____

Female____

e).(I) The qualifications of TSC teachers and numbers

Diploma…….S1…… B.e.d……B.A/BSC…….

M.e.d……untrained……..Any other (please specify)…….

(II) No. of BOG teachers and their qualifications

KCSE____Dip Ed_____ B.E.D_____ PGDE_____ S1_____Diploma

_____

f).Number of students enrolled in the school

F1 M_____ F_____ Total ☐ **F2** M_____ F_____ Total ☐

F3 M_____ F_____ Total ☐ **F4** M_____ F_____ Total ☐

Total M_____ F_____ Total ☐ Grand Total ☐

Section II: Adequacy of resources and utilization of school income

Classrooms

1. Total number of streams

   F1 ☐ F2 ☐ F3 ☐ F4 ☐

2. Are the classrooms adequate? Yes ☐ No ☐
3. Are the Desks adequate? Yes ☐ No ☐
4. Does each student have enough space to sit on? Yes ☐ No ☐
5. Does each class have a teachers' desk? Yes ☐ No ☐
6. What is the overall quality of the chalkboard?

   V. Good ☐ Good ☐ Averag ☐ Poor ☐

Please tick the appropriate position

Table A 1: Classroom resources(please tick as appropriate)

Resource	Most adequate	Adequate	Less adequate	None	Funding source
Wall display					
Lighting					
Seating space					
Security					
Floor quality					
Ventilation					
Wall quality					

School compounds

Please tick the appropriate position.

Table A 2: School compound resources

Resource	Most adequate	Adequate	Less adequate	None	comment
School fence					
School gate					
Notice board					
Security					
School grounds					
Flower beds					
Safety of building					
Worship place					
Urinal for boys					

Toilet space					
Toilet privacy					
Toilet ventilation					
Cleaners					
Washing places					

7. What is the number of latrines in the school? Girls ☐ Boys ☐

   Staff ☐ Visitors ☐

8. What is the overall latrine to student ratio? For boys ☐ For girls ☐

9. Does the school have a permanent clean water supply ☐ ☐
   No

10. (a)Does the school have physically challenged students Yes ☐ No ☐

    (b) if so, does the school provide special facilities for them? Yes ☐ ☐
    No

Workshop facilities and equipment for practical subjects

11. Which practical subjects are offered by the school?
    a) _____
    b) _____
    c) _____

    d)_____
    e)_____

12. Practical subjects not offered by the school
    a) _____ b) _____ c) _____

    d)_____ e) _____

    Why are the subjects not offered? _____

Table A 3: Practical subject facilities

Facility	Most adequate	Adequate	Fairly adequate	Not adequate	comment

Chemistry laboratory					
Physics Laboratory					
Biology Laboratory					
Home science Laboratory					
Biology facilities					
Home science facilities					
Chemistry facilities					
Physics facilities					
Laboratory ventilation					
Laboratory storage					
Laboratory maintenance					
General service					

Office buildings

13. How much does the school spend on energy per year? Less Ksh 10,000 ☐

Ksh 10,000-50,000 ☐ Ksh50,000- 100,000 ☐

14. What is the source of power for the school?

Generator ☐

Solar power ☐

Electricity ☐

Natural light ☐

15. Does the school have the following facilities? (Please tick)

Landline telephone	
Fax	
Internet services	
Mobile phone	

16. Does the school have the following facilities?(Tick as appropriate)

Site plan	
Staff room	
Principal's office	
Deputy Principal's office	
H.O.D's office	
Guidance and counseling office	

Table A 4: Quality of physical facilities

Facility	Extremely good	Good	Average	Poor
Classrooms				
Laboratories				
School compound				
Science equipments				
Playing fields				
Office equipments				
Administrative offices				
Latrines				
Staff houses				

17. In your opinion, do you think the amount spent is adequate for financing quality education? If no, why?

Human resources

Number of teachers in the school_____

Number of teachers with master and above degree_____

Number of teachers with first degree_____

Number of diploma teachers_____

Number of untrained teachers_____

Number employed by the government_____

Number employed by B.O.G_____

Average amount paid to B.O.G staff per month_____

Table A 5: Adequacy of the non-teaching staff in the school

Staff	Most adequate	Adequate	Less adequate	None
Watchmen				
Bursar				
Account Clerk				
Secretary				
Messenger				
Grounds men				
Cooks				
Drivers				

Expenditure on school resources

18. Please indicate the average annual expenditure on the following

Table A 6: Adequacy of the school teaching staff

Department	No deficit	Excess	Shortfall
Mathematics			

Sciences			
Humanities			
Languages			
Technical and creative			

Appendix B. School Bursar's Questionnaire.

Introduction.

Please answer the questions in this questionnaire. The information provided will be kept confidential and used for only this study.

I**ncome sources and financial contribution**

1). List down the sources of income in the school.

……

……

……..

2). Who finances the construction of the physical facilities in the school?

Government ☐ PTA/Parents ☐ Donors ☐

School income activities ☐ Sponsor ☐ CDF ☐

LATF ☐ Any other specify_____

3). How much did you receive from the government in the following years?

Table b 1: Income sources (Ksh 000)

Year	Government	Parents	PTA	Donation	IGAS	Sponsor	Other CDF
2005							
2006							
2007							
2008							
2009							
2010							

4). Does the school have arrears owed by parents? Yes ☐ o ☐

5). Please indicate the projected and actual expenditure for the following years.

Table B 2: School expenditure

6). Do you think the current government contribution is adequate? Yes ☐ No ☐

Year	Projected	Actual	Deficit
2005			
2006			
2007			
2008			
2009			
2010			

If no explain why_____

7). In your opinion, how reliable is the financial inflow from:

Table B 3: Reliability of income sources

Source	Extremely reliable	Very reliable	Reliable	Unreliable	Comment
Government					
Parents					
Donors					
School income					
Sponsor					
CDF					
PTA					

8). In your opinion, are the sources adequate to purchase the required physical facilities? Yes ☐ ☐

Table B 4: Adequacy of sources

Source	Very adequate	Adequate	Fairly adequate	Not adequate
Government				
Parents				
Donors				
Harambee				
PTA				
IGAS				
CDF				
Others				

Table B 5: School Expenditure per vote heads per year

Item	2005	2006	2007	2008	2009	2010
Maintenance						
Library						
Laboratory						
Lab equipments						
Salary for staff						
Electricity						
Water						
Co-curriculum Activities						
Buildings						
Office equipment						
Staff houses						
Textbooks						
Stationeries						
Vehicle maintenance						

9)**.** How much money was being raised in the schools in the following years?

Table B6: school revenue

Year	Revenue
2005	
2006	
2007	
2008	
2009	
2010	

10). How much money was raised by each source in the year 2006-2010?

Table B7: Sources of revenue

Source	2005	2006	2007	2008	2009	2010
Government Community Sponsors CDF Income activities Donations Harambee fundraisings Any other						

11)Please indicate the fees arrears for the following years

Table B8: fees arrears

Year	Amount	
2005		

2006		
2007		
2008		
2009		
2010		

i) Please indicate the annual school expenditure on following items

Table A8: school expenditure

Item	2005	2006	2007	2008	2009	2010
Uniforms Exercise books Textbook Teachers books Class trips Awards Motivation						

Appendix C Principal's interview schedule

Implications on quality

1. How does the provision of resources impact on the quality of teaching and learning?

	Recourse	Impact
A	Lighting	
B	Seating space	
C	Classrooms	
D	Desks	
E	School Compound resources	
F	Water supply and sanitation	
G	Workshop facilities and equipments	
H	Practical subject facilities	
I	Office buildings	
J	Physical facilities	
K	Human resources	
L	Text books	
M	Co-curricular facilities	
N	Time management	

2. How does the provision of learning resources by the following sources affect the quality of learning?

i) Government

ii) Parents

iii) CDF/LATIF

iv) Sponsors and donors

v) Community support

3. (i) Please indicate the performance of your school in the following years in KCSE

Table: KCSE performance indicator

	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	E	Entry	Mean score
2005														
2006														
2007														
2008														
2009														
2010														

(ii) In your opinion do you think the provision of resources by income sources contributed to the quality of performance? Yes ☐ No ☐

If yes above, give reasons

a)

b)

c)

d)

4. Do you think the various sources of income to the school are adequate?

Yes ☐ No ☐

If no, please recommend on how the existing sources can be improved to enhance the adequacy and quality of teaching and learning

i)

ii)

iii)

iv)

v)

Appendix D: The DQAS'S Interview Guide

Interview Schedule for District Quality Assurance and Standards Officer

1. What is the general staff establishment in day secondary schools in the district?
2. Are the Schools in the District

   Under enrolled? _____ Over enrolled? _____
3. Are the tuition facilities in the district adequate?
4. Do the day schools charge extra levies from the parents besides government stipulated amount.
5. What is your judgment on overall quality of education offered in day secondary schools in the district?
6. What are the financial parameters of assessing quality in schools? How are the parameters met in the district?
7. What are the challenges facing the provision of quality in the district.
8. How can the financial challenges impend the quality be soured?
9. Are the parents meeting their role in fulfilling the cost sharing strategy of financing education?
10. The government provision in financing education is it adequate?
11. How can the income sources be improved to enhance quality and adequacy of resources?

Appendix E: Interview Guide for BOG chairpersons

This instrument was meant to get data from the school BOG chairpersons on their role in financing day schools.

1). What is your occupation?

2). What is your level of education?

3). What are the sources in financing the day secondary schools?

4). Does the school have the required physical facilities?

Yes ☐ No ☐

5). What are the constraints(if any) does the school have in regard to financing?

……

……

……

……

……...

6). What projects has the school

i. Completed

……

……

……

……

ii. Ongoing

……

……

……

……

iii. Stalled

……

……

……

……..

7). What are the possible strategies can be used to enhance the financing of day secondary schools to promote quality learning?

……

……

……

……

……..

Appendix F: Interview Guide for PTA chairperson

This instrument is meant to get data from the school PTA chairperson on their role in financing day schools.

1. Name of the school?

   _____

2. What is your occupation?

   _____

3. What is your level of education?

   _____

4. How much was contributed by parents to the school in
   2005_____
   2005_____2006_____2007_____2009_____
   _____2010_____

5. Do you know the school has the required facilities? Yes ☐ No ☐ If no which ones are missing?

   _____

6. How was the money collected for PTA used in the years 2005-2009?

7. How do you intend to meet all facilities required in the school?

8. Which constraints are parents facing in financing education?

9. How can the current income source be improved to enhance quality of learning in the school?

Appendix G: Observation Checklist

The researcher while administering and collecting questionnaires from Head teacher, he will observe the following with the help of the Head teacher.

1. **Physical facilities**

Table A9: Checklist of physical facilities.(What are the conditions of the physical facilities in the school)

Physical facilities	**Permanent / temporary**	**Number**	**Equipped**	**In use**
Classrooms Workshops Teachers' house Latrines Office Stores Playing fields Furniture Teaching Aids Canteen Bus Library Staffroom				

2. Compound

Average _____ ☐ enough ☐ not enough

Fencing _____ ☐ done ☐ not done

School farm _____ ☐ yes ☐ no

Watchman ☐ yes ☐ no

Annual production _____

Possibility of income generation _____ ☐ yes ☐ no

Room for expansion _____ ☐ yes ☐ no

Learning facilities Yes ☐ no ☐

Enough textbooks yes ☐ no ☐

Enough chairs yes ☐ no ☐

Blackboard yes ☐ no ☐

3. Learning environment

Number of pupils enough ☐ not enough ☐

Number of teachers enough ☐ not enough ☐

Relation between teachers and students good ☐ bad ☐

Absenteeism in class yes ☐ no ☐

Appendix H: Participatory Schools

The following day secondary schools in Kisii Central District will form the population of the study

(i) List of Public day secondary schools in Kisii Central District

S/NO	SCHOOL
Getembe Division	
1.	Kiongongi Mixed Day
2.	B.C.M Nyamokenye Mixed Day
3.	Nyaura Mixed Day
4.	Bobaracho Mixed Day
5.	Kiamabundu Mixed Day
Kegogi Division	
6.	St John's Metembe Mixed Day
7.	Gamba Mixed Day
8.	Entanda Mixed Day
9.	St. Paul's Nyankanda Mixed Day
10.	Nyakoora Mixed Day
11.	Tambacha Mixed Day
12.	St. Joram Asanyo Montonto Mixed Day
13.	Nyakeyo COG Mixed Day
Marani Division	
14.	Nyasore Mixed Day
15.	Nyagesenda Mixed Day
16.	Sensi Mixed Day
17.	Rioma Mixed Day
18.	Eramba Mixed Day
19.	Geturi Mixed Day
20.	Kiareni Mixed Day
21.	Engoto Mixed Day
22.	Nyabworoba Mixed Day
23.	Nyangonyi ELCK Mixed Day
24.	Nyakome Fm Boys' Day
Mosocho Division	
25.	Nyatieko Mixed Day
26.	Raganga Mixed Day
27.	St. Patrick's Mosocho Mixed Day
28.	St. Lukes Kanunda
29.	Matieko Mixed
30.	St. Ambrose Nyaore Mixed Day
31.	Nyakeogiro Mixed Day
32.	Nyagisai Mixed Day
33.	Ong'icha Mixed Day
34.	Kiogo Sda Mixed Day
35.	St. Catherine Iranda Mixed Day

Suneka Division	
36.	Suneka Mixed Day
37.	St. Vincent Omwari Mixed Day
38.	Ekerubo Mixed Day
39.	Matongo Mixed Day
40.	Iruma Sda Mixed Day
41.	Gesero Mixed Day
42.	Isamwera Mixed Day
43.	Botoro Mixed Day
44.	St. Theresa's Bogiakumu Mixed Day
45.	Nyabimwa Mixed Day
46.	Itibo Elck Boys Day
47.	Kiabusura Mixed Day
48.	Nyangoge Girls Day
49.	Kerina Mixed Day
Kiogoro Division	
50.	Otamba Mixed Day
51.	Nyanko Mixed Day
52.	Nyaguta Mixed Day
53.	Snr Chief Kegati Mixed Day
54.	Matunwa Mixed Day
55.	Amariba Mixed Day
56.	Nyonsia Mixed Day
Keumbu Division	
57.	Gianchere Friends Mixed Day
58.	Irondi Mixed Day
59.	Ibeno Mixed Day
60.	Riondong'a Mixed Day
61.	Kirwa Mixed Day
62.	St. Stephen's Nyamware Mixed Day
63.	Keoke Friends Mixed Day
64.	Irungu P.A.G Mixed Day
65.	St. Peter's Kerera Mixed Day
66.	Nyansira SDA Mixed Day
67.	Boruma Dok Mixed Day
68.	O.L.V Nyabiosi Mixed Day
Kiamokama Division	
69.	St. Peter's Chironge Mixed Day
70.	Ibacho Mixed Day
71.	Gesabakwa Mixed Day
72.	Amabuko Mixed Day
73.	Mobamba Mixed Day
74.	Musa Nyandusi Gesicho Mixed Day
75.	Mogweko Mixed Day
76.	Kiamokama Friends Mixed Day

77.	Moremani Mixed Day
78.	Amasege Mixed Day
79.	Hema Chitago Mixed Day
80.	Nyamagesa C.O.G Mixed Day
81.	Masabo Mixed Day
82.	St James Ichuni Mixed Day
83.	Bogeche Dok Mixed Day
84.	Kegogi Deb Mixed Day
85.	Nyamagesa Deb Mixed Day
Masaba Division	
86.	Ramasha Mixed Day
87.	Bongonta Mixed Day
88.	Masimba Mixed Day
89.	Nyamesocho Mixed Day
90.	Sosera Mixed Day
91.	St. Joseph's Mukasa Matibo Mixed Day
92.	Nyanturago Mixed Day
93.	Chibwobi Mixed Day
94.	St. Lukes Ekware Mixed Day
95.	Geteri PAG Mixed Day
96.	St. Mark's Mokorogoinwa Mixed Day
97.	Metembe SDA Mixed Day
98.	Mesabisabi Mixed Day
99.	Mosisa Mixed Day
100.	Riuri Mixed Day
101.	Gekonge Mixed Day
102.	Riabigutu Mixed Day

Appendix I: Models

Model (a)Regression model analysis of income and expenditure in PDSS

Correlations

		income	Expenditure
Income	Pearson Correlation	1	.993**
	Sig. (2-tailed)		.000
	N	6	6
Expenditure	Pearson Correlation	.993**	1
	Sig. (2-tailed)	.000	
	N	6	6

**. Correlation is significant at the 0.01 level (2-tailed).

Regression

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.993[a]	.985	.981	5386.98896

a. Predictors: (Constant), income

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	7.652E9	1	7.652E9	263.682	.000[a]
	Residual	1.161E8	4	2.902E7		
	Total	7.768E9	5			

a. Predictors: (Constant), income

b. Dependent Variable: expenditure

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	12323.920	4617.500		2.669	.056
	Income	.764	.047	.993	16.238	.000

a. Dependent Variable: expenditure

Model(b). T-test of income and expenditure in PDSS

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Income	86241.0000	6	51172.23862	20890.97894
	Expenditure	78253.5000	6	39415.79519	16091.43100

Paired Samples Test

		Paired Differences		
		Mean	Std. Deviation	Std. Error Mean
Pair 1	income - expenditure	7987.50000	12979.50766	5298.86181

Paired Samples Test

		Paired Differences				
		95% Confidence Interval of the Difference				
		Lower	Upper	t	Df	Sig. (2-tailed)
Pair 1	income - expenditure	-5633.65793	21608.65793	1.507	5	.192

Model(c) T-test on PDSS performance in KCSE before and after FSE

Group Statistics

Mss	Yr	N	Mean	Std. Deviation	Std. Error Mean
Less 2	Before FSE	3	.3333	.57735	.33333
	After FSE	3	.0000	.00000	.00000
2-3	Before FSE	3	6.6667	.57735	.33333
	After FSE	3	5.0000	2.64575	1.52753
3-4	Before FSE	3	10.6667	4.04145	2.33333
	After FSE	3	11.6667	1.15470	.66667
4-5	Before FSE	3	10.6667	2.08167	1.20185
	After FSE	3	13.0000	1.00000	.57735
Above 5	Before FSE	3	7.3333	3.05505	1.76383
	After FSE	3	6.3333	3.51188	2.02759

Independent Samples Test

MSS		Levene's Test for Equality of Variances		t-test for Equality of Means	
		F	Sig.	t	df
Less 2	Equal variances assumed	16.000	.016	1.000	4
	Equal variances not assumed			1.000	2.000
2-3	Equal variances assumed	7.000	.057	1.066	4
	Equal variances not assumed			1.066	2.190
3-4	Equal variances assumed	3.028	.157	-.412	4
	Equal variances not assumed			-.412	2.324
4-5	Equal variances assumed	2.286	.205	-1.750	4
	Equal variances not assumed			-1.750	2.876
Above 5	Equal variances assumed	.028	.875	.372	4
	Equal variances not assumed			.372	3.925

Independent Samples Test

MSS		t-test for Equality of Means		
		Sig. (2-tailed)	Mean Difference	Std. Error Difference
Less 2	Equal variances assumed	.374	.33333	.33333
	Equal variances not assumed	.423	.33333	.33333
2-3	Equal variances assumed	.346	1.66667	1.56347
	Equal variances not assumed	.390	1.66667	1.56347
3-4	Equal variances assumed	.701	-1.00000	2.42670
	Equal variances not assumed	.715	-1.00000	2.42670
4-5	Equal variances assumed	.155	-2.33333	1.33333
	Equal variances not assumed	.182	-2.33333	1.33333
Above 5	Equal variances assumed	.729	1.00000	2.68742
	Equal variances not assumed	.729	1.00000	2.68742

Independent Samples Test

MSS		t-test for Equality of Means	
		95% Confidence Interval of the Difference	
		Lower	Upper
Less 2	Equal variances assumed	-.59215	1.25882
	Equal variances not assumed	-1.10088	1.76755
2-3	Equal variances assumed	-2.67423	6.00756
	Equal variances not assumed	-4.53083	7.86417
3-4	Equal variances assumed	-7.73761	5.73761
	Equal variances not assumed	-10.16204	8.16204
4-5	Equal variances assumed	-6.03526	1.36859
	Equal variances not assumed	-6.68163	2.01496
Above 5	Equal variances assumed	-6.46147	8.46147
	Equal variances not assumed	-6.51823	8.51823

AppendixJ: Secondary Schools Enrollment in Kenya, 1963-2007

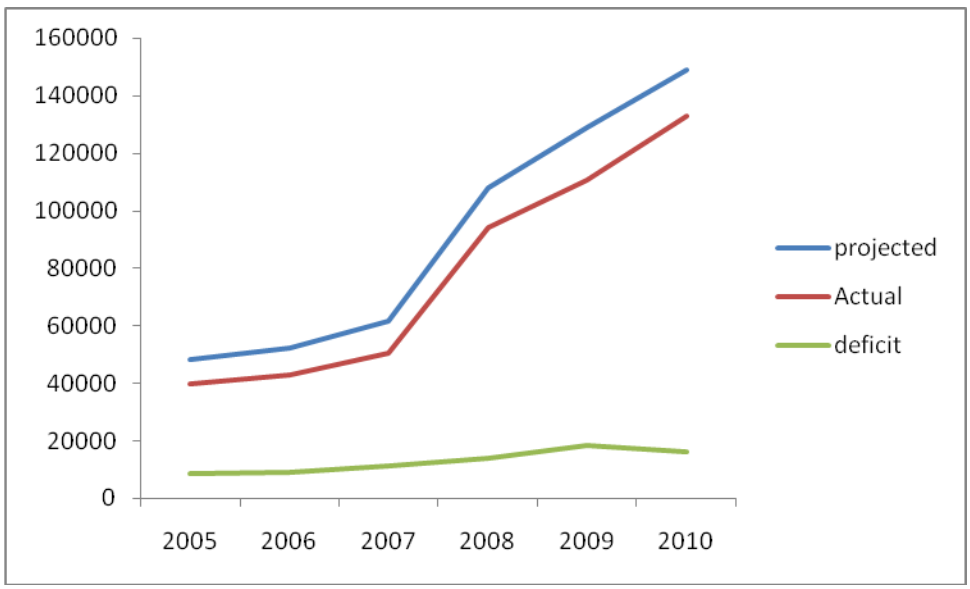
Year	Number of Students
1963	30,121
1973	137,325
1983	431,700
1993	531,342
2006	1,030,300
2007	1,180,300
2008	1,382,211

***Source: Statistical Abstract (2008)**

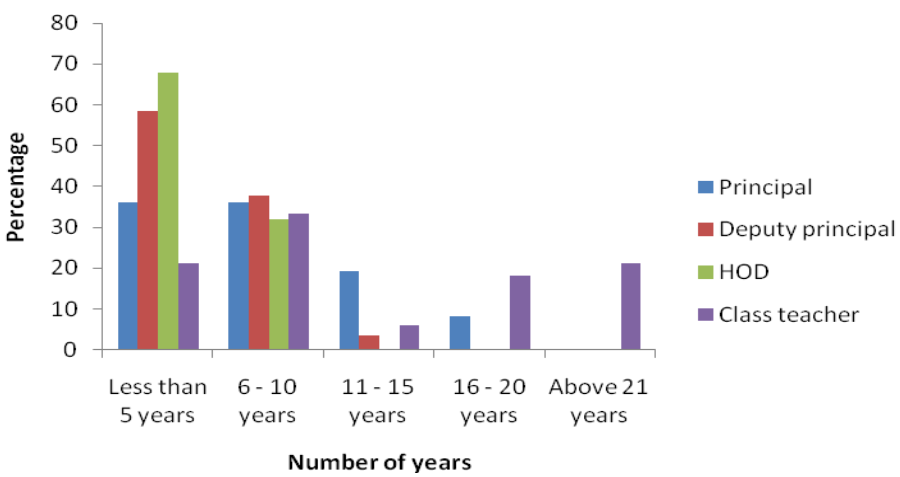
Appendix K: Trend of income in PDSS 2005-2010 in Kshs '000

Years	Government	Parents	Cdf/LATF	Sponsor	IGAS	Donations
2005	0	30400	2180	0	2000	0
2006	1324	31845	6325	0	2500	700
2007	7360	32660	2229	0	1500	800
2008	95898	14909	3100	150	1200	600
2009	104020	18408	5680	0	1400	1500
2010	114190	22818	8150	2000	1600	0

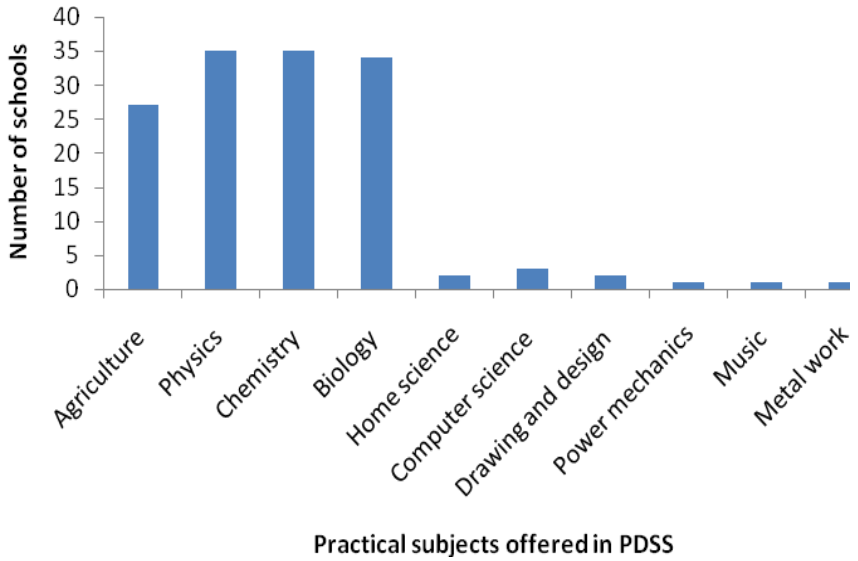
Appendix L: Expenditure trends in PDSS, 2005-2010 '000



Appendix M: Principals' progression of experience



Appendix N: Practical Subjects offered in PDSS



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Appendix O: Research Authorization

REPUBLIC OF KENYA

NATIONAL COUNCIL FOR SCIENCE AND TECHNOLOGY

Telegrams:"SCIENCETECH", Nairobi
Telephone: 254-020-241349, 2213102
254-020-310571, 2213123.
Fax: 254-020-2213215, 318245, 318249
When replying please quote

P.O. Box 30623-00100
NAIROBI-KENYA
Website: www.ncst.go.ke

Our Ref: **NCST/RRI/12/1/SS-011/1436 /4**

Date: **21st October, 2011**

Kennedy Nyambeche Getange
Kenyatta University
P. O. Box 43844
NAIROBI

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on "***A Financing of public day secondary schools education; Implications on the quality of learning : A case of Kisii Central District, Kisii County, Kenya***" I am pleased to inform you that you have been authorized to undertake research **in Kisii Central District** for a period ending ***31st December 2011.***

You are advised to report to **the District Commissioner & the District Education Officer, Kisii Central District** before embarking on the research project.

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

P. N. NYAKUNDI
FOR: SECRETARY/CEO

Copy to:
The District Commissioners
Kisii Central District

The District Education Officer
Kisii Central District