

**Cost saving measures and internal efficiency in public secondary schools
in Kisumu West district, Kisumu county, Kenya**

BY

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DECLARATION

This project is my original work and has not been submitted for an award of a Degree or any other award in any University.

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DEDICATION

This research project is dedicated to my aunt, the late Mrs. Margaret Alice Ochido and my parents Mzee Samuel Nyangia Ndinya and Mama Helida Anyango for the firm academic foundation they laid in my life.

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ABBREVIATIONS AND ACRONYMS

AEO	Area Education Officer
CBE	Curriculum Based Establishment
DEO	District Education Officer
EFA	Education for All
FCUBE	Free Compulsory Universal Basic Education
FSE	Free Secondary Education
GDP	Gross Domestic Product
GER	Gross Enrolment Rate
GNP	Gross Net Product
GPI	Gender Parity Index
KESSP	Kenya Education Support Programme
LATF	Local Authority Transfer Fund
MDG	Millennium Development Goal
MoE	Ministry of Education
MoEST	Ministry of Education, Science and Technology
NGO	Non-Governmental Organization
OECD	Organization for Economic Cooperation and Development
PTA	Parent teacher association
PTR	Pupil –Teacher Ratio
SSA	Sub-Saharan Africa
SAP	Structural Adjustment Programme
TSC	Teachers Service Commission
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations Children’s Fund
UPE	Universal Free Primary Education
US\$	United States Dollar
USE	United Secondary Education

ABSTRACT

The problem of the study was that internal efficiency in terms of improved rates of students' flow which is the main objective of Subsidized Secondary Education is costly yet the available educational resources are dwindling. The purpose of this study, therefore, was to determine the cost-saving measures and their influence on internal efficiency with specific reference to various rates of students' flow such as repetition, dropout, completion, graduation rates and average graduation year per student which ultimately helped to determine coefficient of internal efficiency of Public Secondary Schools in Kisumu West District. The objectives of the study were to investigate the cost-saving measures on educational resources heads of public secondary schools in Kisumu West District employ; to establish the level of internal efficiency in public secondary schools in Kisumu West District; and to determine the influence of cost-saving measures on internal efficiency in public secondary schools in Kisumu West District. Cost-effectiveness analysis guided the study. The study used descriptive survey research design. The target population was 367 respondents consisting of 36 Principals, 220 teachers, 108 PTA members of the BOG, two AEOs and one DEO. The sample size was 103 respondents (28.1% of target population) made up of 10 principals, 60 teachers, 30 PTA representatives, two AEOs and one DEO. Proportionate sampling was used to select the principals, teachers and PTA representatives while AEOs and DEO were selected using purposive sampling. They were requested to give information for the study. Four types of instruments: questionnaires, interview schedule, observation checklist and document analysis form were used. The questionnaires were for the principals, teachers and PTA representatives. An interview schedule was used for soliciting information from AEOs and the DEO. An observation checklist was used to check the physical and material resources in the school. Finally, document analysis form was used to confirm enrolment records and available records on finances in terms of income and expenditure. The instruments were piloted to determine their validity and reliability. Before data collection, permit was sought from the National Council for Science and Technology. The quantitative data collected were entered into a computer spreadsheet in a standard format to allow for computation of descriptive statistics using the Statistical Package for Social Sciences (SPSS) version 14.0. The descriptive statistics such as percentage and frequency distribution were used to analyze the quantitative data. Data on enrolment, repetition, dropout and completion rates was analyzed using ratios and percentages. Graduation rates and average years per student were calculated applying already established formulae to determine the level of internal efficiency. Qualitative data was placed under themes consistent with research objectives; and conclusions made based on trends and patterns of responses. The study established use of, bulk purchases through direct sourcing, assigning multiple tasks to school workers for maximum human resource utilization and institution of income generating projects among others as cost-saving measures. However, timely completion of school projects; increase in class size; use of electricity for e-learning; multiple shifts; and effective utilization of available TSC teachers are yet to be explored. Only 40% of the schools made savings. The rest did not due to failure of full exploitation of cost-saving measures. It was also revealed that the public secondary schools in Kisumu West District have an internal efficiency of average years per graduate of 4.409 translating to an additional 0.409 years needed to produce graduates that require an optimal 4 years of the secondary education cycle. Coefficient of efficiency of 0.909(90.9%) was determined in line with the UNESCO recommended coefficient of efficiency of over 0.90(90%) for an internally efficient education system. It was further established that the cost-saving measures employed by public secondary schools helped improve internal efficiency level. Based on the study findings and conclusions, it was recommended that principals and educational policy formulators encourage full exploitation of cost-saving measures. This will help lower average year per graduate as a strategy towards an internally efficient secondary education system.

CHAPTER ONE

INTRODUCTION

This chapter dealt with the background of the study, statement of the problem, purpose of the study, objectives, research questions, significance, limitations and the delimitations of the study; assumptions; theoretical and conceptual frameworks; and operational definition of key terms.

1.1 Background to the Study

Secondary Education (SE) lies between primary and tertiary levels of education and has got an enormous impact on critical period of adolescence. At this level, important life choices for future and career orientation are made. According to Masimbwa (2010), its expansion can contribute to poverty alleviation. He further notes that globally, growth in demand for secondary education is driven by several factors such as the huge bulge of students completing primary education, an increased demand for new types of skills and knowledge; growth in the service sector and its requirement for knowledgeable workers to the benefit of government or agrarian sectors, a democracy's need for better educated citizens and the private returns of secondary education as labour market demands graduates with a set of knowledge and competence. The Ministry of Education (2007) asserts that such calls for a broader view taking into account issues to do with efficiency such as transition rates; persistence, retention, completion, access to education; and access to future opportunities and affordability.

According to Lebel (2000) in many countries in Africa, commitments made to expanding educational opportunity during the early 1960s were all too often without careful consideration of the education cost, of how efficiently educated graduates were being produced and whether the system was operating in ways that were in tandem with social justice.

The Addis Ababa conference of African states in May 1961, on the development of education pointed out that the cost of producing any given quality of education was three times higher in Africa as a percentage of national income than in Europe or North America. The conference, therefore suggested reduction in educational costs by setting elaborate standards and using cheaper materials of local origin in addition to greater reliance on self-help (Masimbwa, 2010).

According to Psachoropolous (1985) there is the need to examine the utilization of resources to identify possible cost reduction, and link research on costs with research on effectiveness. This would make education be affordable to all. According to UNESCO (1948) the United Nations declared education as a human right, which should not be denied to any child.

Otie (1994) notes that to implement the policy of education as a basic human right, vigorous effort have been made by international bodies to mobilize educational resources and particularly in the 3rd world. UNESCO proclaimed (2003-2012) as a literacy decade which aims to extend literacy to those who do not currently have access.

Akaranga (2011) acknowledges that resolution (2002/2003) of the universal Declaration of Human Rights (1948) urged members to give the right to education and exercise it without discriminations to ensure effective education. This agrees with the comment given by Bishop (1989), that the main task confronting developing countries is to give everybody his/her basic rights, essential right to education, to give not only education but relevant education to more and more people: children or adults, effectively and efficiently. He however, notes that many countries can no longer afford the massive capital and recurrent budgets for education.

That notwithstanding, Masimbwa (2010) agrees that with moves to include SE within basic education, poverty still remains a deterrent factor because in addition to tuition, there are high additional costs for transportation, uniforms, books, boarding and other materials. It is due to

the increasing financial constraints on educational investment that developing countries are not only searching for alternative ways of financing education, but also paying close attention to the costs of educational investment and attempting to reduce unit costs so as to influence internal efficiency.

According to Akaranga (2011), it has been a long standing objective of the Kenyan government since independence to develop education. Several instruments have been formulated to address issues of access, quality, equity and inclusion among others in education. The Ominde commission (1964) recommended an education to promote social equality, abolish segregation of schools along racial, religious and establishment of a standardized national curriculum. Parliamentary Sessional Paper No. 10 (1965) adopted Ominde's report by setting out strategies of socio-economic development which underlined the role of education as the principal means of producing domestic skilled man-power and equalizing economic opportunities among all citizens. She further highlights that the Kenya Government Commission of Inquiry into Education System in Kenya (Koech Report, 2002) recommended a totally integrated quality education and training (TIQET) that would ensure quality, life- long and expanded basic education from early childhood to secondary level. This is in tandem with The Children's Act (2001) part 11 6(5) and 7(1 and 2).

According to Ministry of Education Science and Technology (2005), a policy framework for educational training and research Sessional Paper No. 1 of 2005, identifies strategies to improve access, quality and completion rates and commitment to attain the goals of education for all by 2015. The Republic of Kenya (2006) gives the MOE strategic plan (2006-2011) aiming at expanding access to educational opportunities. It said that the total resource requirement for the public education sector over that period was projected at Ksh 543.4 billion. Subsidized secondary education was implemented in February, 2008 by the coalition government. This was aimed at reducing the cost of learning as well as increase transition

rates from primary to secondary. The government of Kenya announced the release of 2.9 million for subsidized secondary education and allocated Kshs 10,265 to every child to cater for tuition and operational costs annually. This amount, however, does not cater for hidden examination fees, development of physical facilities and hidden costs of education such as transport, uniform, lunch and boarding fees. Parents are expected to meet these costs which are still high for poor households who may find it difficult to maintain their children in secondary schools. According to Republic of Kenya (2005), data from the Ministry of Education shows that primary to secondary school transition rate has been surpassed, at 71%. However, 30% of the students who enroll in secondary education drop out before they complete the secondary cycle. The main concern of the current study was about cost-saving measures the public secondary schools could institute to help maintain children in schools so as to enhance internal efficiency.

According to Akaranga (2011), the government assumed that there was adequate infrastructure to accommodate more students. But, it is worth noting that since the introduction of cost sharing policy by the government of Kenya (1988) most Kenyans (56%) cannot afford education of their children since they live below international poverty line. Kiveu (2004) alludes to this by saying that manifestations of poverty are seen in lack of basic requirements for example access to education, vocational training and employment.

This concurs with the premise held by Fields (1998) and World Bank (1989) that access to education and poverty are inversely related, that is, the higher the level of education of the population, the lower will be the proportion of the poor in the total population and the reverse holds. Akaranga (2011) further acknowledges that cost sharing has put schools in awkward situation to provide for learning resources as students remained with huge fee balances burdening schools with huge debts. ROK (2009) notes an increase in government expenditure on education between 2004/05 and 2008/09. This expenditure trend shows the Kenya

government's commitments to implementing Free Primary Education and Subsidized Secondary Education.

Even with the introduction of SSE, both parents and the school administrators have been left wondering how free it is! Abagi (2008) proposes that the government should explain to parents how free secondary education is. Parents expect a lot from this programme in terms of equity and quality of education which means adequate supply of learning resources like more teachers, physical facilities and instructional materials. The study therefore sought to find out the availability, adequacy and cost- saving measures for such resources in public secondary schools in ensuring that reduced number of students repeat classes or drop out of school.

According to Republic of Kenya (2008), President Kibaki in his speech says that SSE is meant to ensure that children from poor households acquire a quality education that enables them to access opportunities for self advancement and become productive members of society. He further emphasizes that it will ensure access to as well as high quality secondary education in Kenya.

The philosophy behind the programme was to translate into reality the idea that no child who qualifies for secondary education is denied access due to inability to pay fees. Ibid (2008) emphasizes that the government gave a commitment to ensure that free education went beyond primary school and that there are remarkable progress towards attaining that. He alludes to the fact that the implementation of Free Primary Education resulted in substantial growth in enrolment, from 5.9 million children in 2002 to 8.2 million children in 2007. He however, points out that primary education alone is not sufficient to provide the quality skilled human resource necessary for the country's sustainable development. Apart from that, primary school pupils complete 8 years of school when they are still too young to engage in

productive activities and contribute meaningfully to nation building (Republic of Kenya, 2008). The other reason according to ROK (2008), for SSE, is that children from poor families who fail to join secondary schools because of lack of fees often revert back to illiteracy, thus reversing 8 years of investment in primary education.

It is enlightening to note that as SSE programme was being launched, the challenges that would jeopardize its implementation to make it a success story had been identified and ready measures proposed. ROK (2008) argues that there was expected increased enrolment of up to 1.4 million as a result of the implementation of SSE policy. Further to that, he notes that the programme was bound to create additional challenges such as the increase in students' numbers, creating a rapid demand for more teachers as well as facilities.

To respond to such challenges, ROK (2008) gives the following measures to expand the capacity of secondary schools to cope with the projected expansion in secondary schools enrolment: introduction of day wing in boarding schools, opening of day secondary schools in high population density and arid and semi-arid areas, implementing double shifts in some urban schools and introducing distant learning through e-learning. These are quite ambitious measures.

Republic of Kenya (2008) also emphasizes that the ministry of education is charged to ensure that guidelines on free secondary education are implemented by all schools and that the government would not allow or tolerate schools which impose unauthorized levies since they would undermine the successful implementation of the policy whose main objective is to ensure that deserving children from poor families do not miss out of secondary education. This could be in the light of MOE (2007) worldview that the main sources of secondary school funding in Kenya include households and the government. Other sources include private sector, religious organizations, communities, NGOs and development partners. To

MOE (2007), while the public meets costs for teachers' personal emoluments and bursaries to students, households are to ensure provision of supplies and equipment, operations, maintenance, repair and physical infrastructure. The literature estimates that the proportion of costs borne by households is about 46% for day schools, 63% for boarding schools and an overall average of about 57% for day and boarding schools. Given that 56% of Kenyans live below the poverty line, this made SE unaffordable to a majority of the household.

MOEST (2005) further gives the following estimates in educational financing in Kshs million: In 2005/06 ; 2006/07; 2007/08;2008/09 and 2009/010 total donor and net government funding, total education spending and financing gap as 94,613.1, 96,544.9 and 1,931.9; 98,520.0, 105,388.0 and 6,817.9; 101,087.9, 112,628.5 and 11,540.5; 102,707.7, 113,343.0 and 10,635.3; and 97,708.4, 106,046.7 and 9,510.5 respectively. The third figure in every set shows the financing gap totaling to Kshs 40.4 billion for KESSP alone.

According to MOEST (2005), to bridge the gaps a lot of support will be required from all the stakeholders. In which case, the schools must implement cost-saving measures. To this end, *ibid* (2005) proposes that the government will promote a more efficient development of secondary education to improve access, equity and quality of education at this level. It will ensure full utilization of the idle capacity in secondary schools by raising class enrolments to between 40-45 students, adding more streams, as appropriate, to existing schools with less than three streams and promoting the establishment of more day schools to reduce costs to parents. The government will also monitor and address emerging issues of teaching to ascertain that there is cost-effectiveness and achievement of desired results. It is against such background that SSE was introduced. The question therefore was, which of these cost- saving measures had been instituted by public secondary schools to fill the financing gap with the effort of ensuring internal efficiency.

Asayo (2009) concurs with the position of challenges and calls them emerging issues likely to affect the sustainable provision of the quality of subsidized secondary education which includes limited facilities, inadequate number of trained teachers and the growing government financial deficits. All these, therefore, leave schools with no option but to implement workable cost- saving measures which will enhance internal efficiency. It is on the premise of this background that the study aimed at assessing cost-saving measures that had been put in place to ensure reduced absenteeism, repetition, dropout rates and improved completion and graduation rates as aspects of internal efficiency in public secondary schools in Kisumu West District.

1.2 Statement of the problem

As a result of the successful implementation of Free Primary Education (FPE) in Kenya in 2003, focus has shifted to means of making Secondary Education (SE) more affordable and accessible to accommodate the exponential rise in enrolments. There is evidence that transition rate from primary to secondary has, since inception of FPE, surpassed 71% but 30% of them drop out before completing the cycle (MOEST, 2005). The GOK plan to subsidize tuition fee in secondary schools as from January 2008 called for great support from all stakeholders to ease the immense financial implication. This was because data available on estimates of total donor and net government educational funding and total educational expenditure already showed financing gap (MOEST, 2005). ROK (2008) during the launch of Subsidized Secondary Education recommended measures such as introduction of Day wing in Boarding schools, introducing distant learning through e-learning and implementing double shifts among others as cost-saving measures that secondary schools can use in their endeavour to respond to the gap and challenges. The literature also emphasizes that MOE should ensure that guidelines on SSE are implemented and that the government would not tolerate schools which impose unauthorized levies. Such levies would undermine the main

objective of the policy which is to ensure that deserving children from poor families do not miss or drop out of secondary education. The problem of the study was that internal efficiency in terms of improved rates of students' flow which is the main objective of Subsidized Secondary Education is costly yet the available educational resources are dwindling. The study therefore, sought to investigate cost-saving measures on educational resources and their influence on internal efficiency with specific reference to various rates of students' flow such as repetition, dropout, completion, graduation rates and average graduation year per student which ultimately helped to determine coefficient of internal efficiency in public Secondary Schools in Kisumu West District.

1.3 Purpose of the study

The study was intended to assess how public secondary schools in Kisumu West District had instituted cost-saving measures on educational resources to influence internal efficiency. The study also sought to establish the level of internal efficiency influenced by the cost- saving measures instituted by public secondary schools in Kisumu West District.

1.4 Objectives

The specific objectives for this study were to:

- i. Investigate cost-saving measures employed, to help make educational resources adequate, by principals of Public Secondary Schools in Kisumu West District.
- ii. Determine rates, for instance, repeater and dropout of various grades, completion and graduation rates together with average year per graduate and coefficient of efficiency, related to the level of internal efficiency in Public Secondary Schools in Kisumu West District.
- iii. Establish the influence of cost-saving measures on internal efficiency in Public Secondary Schools.

1.5 Research questions

- i. What cost-saving measures among Day-wing in Boarding Schools, Income Generating projects, Good Time Management, Payment in Kind, Sound Financial Management and others have been employed, to make educational resources adequate, by the principals of Public Secondary Schools in Kisumu West District?
- ii. What is the level of internal efficiency in terms of reduced repetition and dropout rates, increased completion rates coefficient of efficiency in Public Secondary Schools in Kisumu West District?
- iii. Is there positive or negative influence of cost-saving measures on internal efficiency in Public Secondary schools?

1.6 Significance

The study had both theoretical and practical application for the future of the secondary education in Kenya. It was hoped to offer practical knowledge on cost-saving measures in public secondary schools and the possible influence such measures are likely to have on internal efficiency in public secondary schools. Information so gathered will assist secondary schools administration in making sound decisions on investments and proper resource utilization. The results that were discussed under chapter four will contribute to the existing literature on costs and financing of secondary education. The study will also assist MOE in its policy formulation. Lastly, it will be an impetus for future studies.

1.7 Limitations of the study

The study was carried out in Kisumu West District. Due to financial constraint, the researcher limited the study to just this one district of Kenya.

1.8 Delimitations of the study

The scope of the study was limited to Kisumu West District in Kisumu County. One DEO and two AEOs were interviewed. Only ten public secondary schools were involved in the study. However, the findings of the study cannot be generalized for the entire country.

1.9 Assumptions of the study

- i. Public secondary schools in Kisumu West District had the capacity to employ cost-saving measures.
- ii. The study assumed a continuous flow of students and if there were repeaters and dropouts, then they were replaced by the new entrants into the cycle.
- iii. Public Secondary Schools employed cost-saving measures to promote internal efficiency.
- iv. There was influence of cost-saving measures on internal efficiency.

1.10 The theoretical framework

The study identified the theoretical framework related for the wholesome adoption of education and development policies known as Cost-Effectiveness Analysis. Based upon the work of Hanushek (1986), the analyses documented the inconsistent relationship between school resources and student outcomes. According to Levin (1995), cost-effectiveness analysis refers to the consideration of decision alternatives in which both their costs and consequences are taken into account in a systematic way. It is a decision –oriented tool, in that it is designed to ascertain which means of attaining a particular educational goal are most efficient. To Levin (1995), most educational alternatives are dedicated to improving achievement or some other educational outcome that cannot be easily converted into monetary terms. Therefore, the comparison of alternatives must be limited to those that have similar goals by comparing them through cost-effectiveness analysis.

Levin (1995) further emphasizes that the purpose of cost –effectiveness analysis in education is to ascertain which programme or combination of programmes can achieve particular objectives at the lowest cost. The underlying assumption is that different alternatives are associated with different costs and different educational results. By choosing those with the least cost for a given outcome, society can use its resources more effectively. Those resources that are saved through using more cost-effective approaches can be devoted to expanding programme or to other important educational and social endeavors. This actually made the theory relevant to the current study which was concerned about cost- saving measures on educational resources enhancing internal efficiency in public secondary schools. The government of Kenya in 2008 initiated Subsidized Secondary Education giving a capitation of Kshs 10,260 per student, at the same time giving strict fee guidelines to be followed by each school to fill the financing gap (ROK, 2008). This placed both parents and school administrators in a dilemma which they must be helped out of as confirmed by Abagi (2008). They both expected adequate supply of learning resources like more teachers, physical facilities and instructional materials. However, Hanushek (1986) asserts that just providing more resources to schools is not sufficient to ensure gains in students’ outcomes. How money is spent is more important than how much money is spent. This is in tandem with the warning of Forojlla (1993) that any measure taken to improve educational quality or opportunity without proper examination of its cost consequences is self –defeating and that costs have little meaning or value unless they are set against educational results and in turn weighed against objectives.

This gives the justification for investing in education however scarce the resources may be. According to Babalola (2003), the reality behind investment in human capital through education is based on three arguments. One, the new generation must be given the appropriate parts of knowledge which has already been accumulated by previous generation.

Two, new generation should be taught how existing knowledge should be used to develop new products to introduce new process and production method and social services. Three, people must be encouraged to develop entirely newly ideas, products, processes and methods through creative approach.

The cost of secondary school education is at many times higher (Republic of Kenya, 2005b). Free Secondary Education was introduced in 2008. Before then, the Kenya Government met only the cost of paying teachers in secondary schools while households had to meet other expenses such as operational, maintenance and development costs. According to Republic of Kenya (2005), this, therefore led to about 30% of students who enrolled in secondary school dropping out of school nationally without completing the secondary cycle. Even with current arrangement, there was still financing gap for the parents to fill (MOEST, 2005). According to (Njeru & Orodho, 2003), cost sharing discriminates poor families who cannot afford to keep their children in school hence withdraw them prematurely. The study confirmed, however, that Free Secondary Education with cost-saving measures enhance reduced dropouts, absenteeism and repetition, caused by the financial inability of the poor families to sustain their children in schools, hence internal inefficiency.

1.11 Conceptual Framework

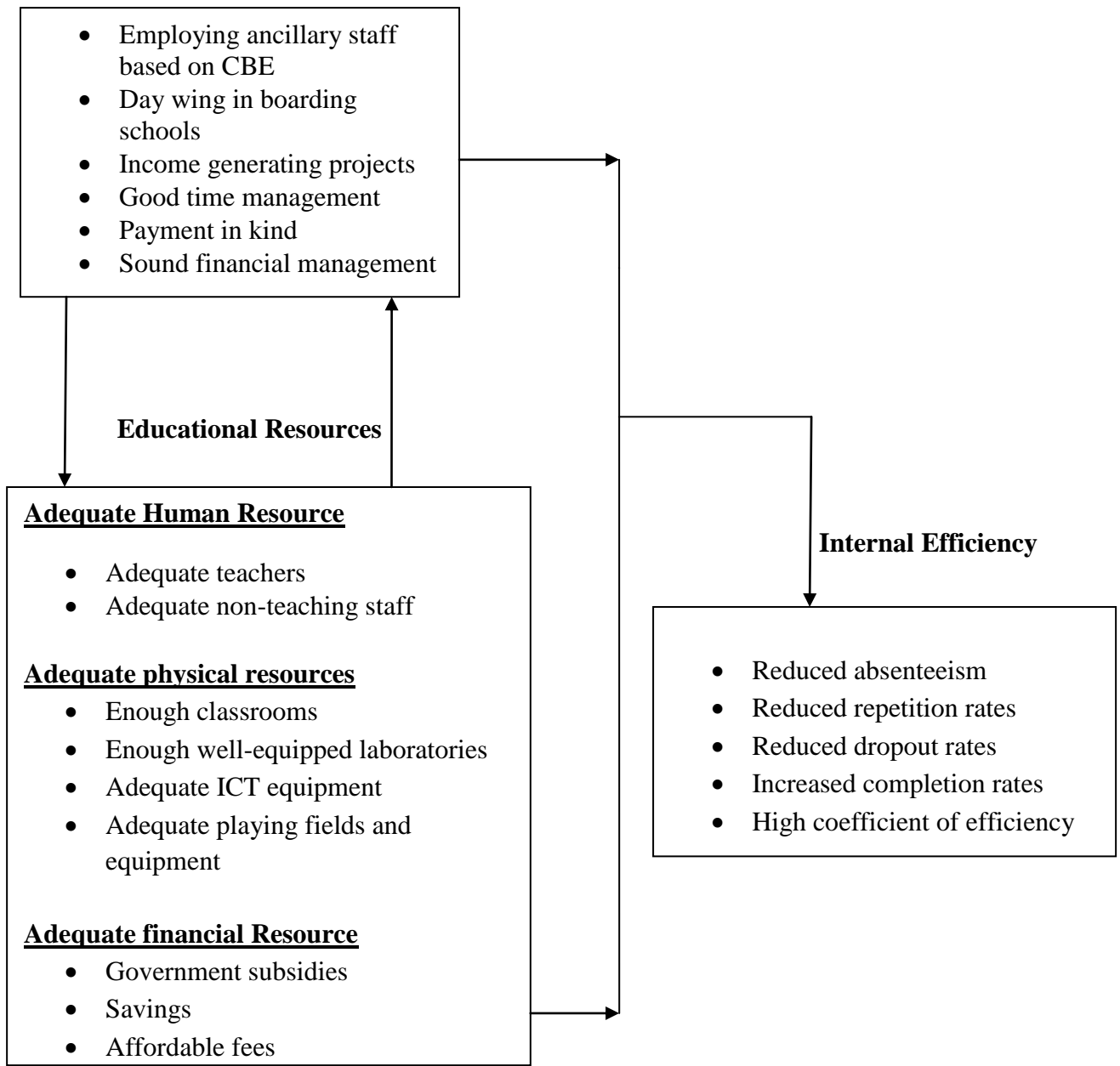
Based on the cost-effectiveness analysis theory, the scarce educational resources can be expanded through cost-saving measures to provide education which is highly instrumental and even necessary to improve the production of a population, in other words, an educated population is a productive population. To ensure that a country has such a population, every citizen should be given, through education, the social status through which he/she is entitled to inherited aptitude (organization of economic cooperation and development). The conceptual framework in the figure 1.1 overleaf shows how cost- saving measures can help in

ensuring affordable cost of education leading to everyone getting chance of efficient utilization of educational resources hence internal efficiency.

A conceptual framework according to Orodho (2009: 120) is diagrammatic representation of the relation between Independent Variables and Dependent Variables. In this study, the cost-saving measures (i.e. Appropriate procurement procedures, employing ancillary staff based on CBE, bulk purchases, e-learning, day-wing in boarding schools, income generating projects, sharing of resources between institutions, sound financial management, payment in kind, increased student/teacher ratio and good time management) led to adequate educational resources (i.e. adequate human resource, adequate physical resources and adequate financial resources) leading to internal efficiency (i.e. reduced absenteeism, reduced repetition, reduced dropout rates, increased completion rates and high coefficient efficiency).

Figure1.1 Showing Conceptual representation of cost-saving measures in enhancing internal efficiency in public secondary schools

Cost-saving measures



Independent Variables

Dependent Variables

Source: Adopted from Orodho (2009)

For there to be internal efficiency, there must be cost- saving measures carried out by the schools. It is a fact that subsidized secondary education was meant to cushion the disadvantaged group of students; however, the funds are inadequate to supply all the

educational resources. To resolve this impasse, the conceptual representation suggested maximum interaction between educational resources and cost-saving measures.

This would help in increasing resources at low cost, for instance the use of e-learning. World Bank (2009) attests to this by saying that there is potential in network technologies to increase the availability of quality educational material. Their interactive and global reach allows for customized sharing of knowledge, material and data quickly and cheaply over long geographical distance.

Therefore, the maximum interaction between the educational resources and cost-saving measures results to efficient utilization of resources because of affordability. This led to reduced absenteeism, repetition and dropout; increased completion rates and high coefficient of efficiency hence internal efficiency, improved knowledge, skill and attitude acquisition thereby enhanced human capital and economic growth for all, which is the main goal of SSE. UNESCO (2002) in attesting to this emphasizes that the criteria for determining internal efficiency in educational level are education system management practices i.e. participation (enrolment), progression, promotion policies and completion together with transition, which the findings of the study replicate.

1.12 Operational Definitions of Key Terms

Absenteeism: Refers to the fact of being frequently away from school.

Affordability: Refers to being able to obtain secondary education at a given cost and time without strain and the available resources.

Attendance: Refers to act of being present in school.

Cohort : Refers to learners with similar characteristics when they are in a particular grade.

Completion: Refers to going through the four year cycle of secondary education and sitting for final examination.

Cost saving measures: Refer to strategies and alternatives that can reduce the cost of education.

Dropouts: Refer to students who leave secondary school education before completion of four year course.

Internal Efficiency: Refers reduced dropout, absenteeism, repetition and increased completion rates.

Repetition: Refers to act of students being enrolled in the same grade in the current school year as in the previous school year.

Retention: Refers to the ability of students to remain and progress in school until the complete their secondary school life cycle.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

In this chapter, the researcher displays a review related to the study. The chapter begins by covering the literature on the status of secondary education in developed countries, Africa and finally in Kenya. The literature is then reviewed on specific issues related to the study such as cost-saving measures, internal efficiency and influence of cost-saving measures on internal efficiency in public secondary schools. The chapter is then concluded by giving a summary of the literature review.

2.2 Status of Secondary Education in the Developed World

Globally, countries face the challenge of equipping their young people to become productive citizens, to find employment in constantly changing workplace environment, and to adopt and respond to change throughout their lives. Countries should respond to the challenge with approaches that are appropriate to their capacities and long –term economic development objectives. This makes secondary education have special significance. World Bank (2005) gives a historical perspective on education in the developed countries. The literature emphasizes that secondary education was subsidiary to higher education, and this relationship has influenced policy, choice of providers, curriculum decisions, teacher recruitment and training, evaluation, accreditation and certification.

In the 20th century, both U.S and Soviet education polices resulted to secondary education models aimed at the creation of massive systems that emphasized open access and universal coverage. After 1945, what were later called comprehensive secondary began to spread from Northern to Southern Europe. In comprehensive schools all students receive secondary education in a single institution, and may be streamed through elective subjects. This is in

contrast to students being tracked and grouped either by academic ability or by choice on entering secondary education. Meanwhile the vocational approach to secondary schooling developed faster in Eastern Europe. By the 1960s and 1970s secondary education was as a matter of fact linked more to primary than to tertiary education. The extension of compulsory education had entirely changed the concept, together with duration of basic education to the extent that basic education usually included lower secondary schooling. A rising average level of schooling was viewed as an important objective and as a measure of the success of education reforms. Many other countries have embarked on extending and expanding the notion of basic education to include much of what used to be restricted – access, elitist secondary schooling. In Kenya, the introduction of both the Free Primary Education and Free Secondary Education are government initiatives towards creating open access to education for all citizens.

According to Goldin (2001), the spectacular expansion of secondary in the United States, which took place 40-50 years (two full generations) before the corresponding expansion in European countries, had to do with a template that entailed a sharp departure from the European tradition of secondary schooling. The US template was faced by a number of virtues: Public funding and provision; an open and forgiving system (non-selective, with no specialization or academic segregation); an academic yet practical curriculum; numerous small fiscally independent school districts; and secular control of schools and school funds.

Contrary to the United States, in European countries nearly half a century elapsed between when primary education was generalized and made free and compulsory and when access to secondary education was made free i.e. open to all. During the Second World War, countries such as France, Ireland and Spain enrolled a fairly low proportion of relevant age group in secondary education.

Developed countries usually had education beyond the compulsory level financed in part and sometimes wholly by the state. In Britain, education up to secondary school level was fully financed by the government (Moon & Moyes, 1994). Parents' responsibility is only to ensure that children attend school.

In Britain, education authority and central government are required by section 7 of the 1944 Act to make education facilities available. This enables parents to carry out their legal duty. Parents are seen as the schools' main legal clients until the child is 16 years of age. Section 36 of the Act states that it shall be the duty of the parent of every child of compulsory school going age to cause him receive full-time education suitable to his age, ability and aptitude, either by regular attendance at school or otherwise (Moon & Mayes 1994). The big question of the study was about the Kenyan situation especially, Kisumu West District parents. Did they play similar roles in the provision of education for their children when there were user fees to supplement the government's inadequate subsidy as justified by Appleton (1997)?

According to the literature, in practice, developing country governments often provide wholly inadequate funding. In such circumstances, it may be better to allow social sector providers to levy user fees in order to raise additional resources. Based on this position, Appleton (1997) reveals that much of the new international consensus then focuses on the need to ensure such fees do indeed increase the funds available for education. The consensus remains distinctly lukewarm since experience suggests that introducing user fees may raise only limited revenue and will often adversely affect usage, particularly by the poor. The study, in this case sought to find out option the public secondary schools in Kisumu West District were left with to get adequate funds to provide quality education without pricing out the poor.

In Canada, school fees are most important in the education system. Parents are asked to contribute to their children's education through payment of fees (Nyaga, 2005). The

government, however, appreciates that some parents are sincerely not able to pay. Therefore, the government makes provisions to ensure that no child is denied access to education due to honest inability to pay fees. According to Nyaga (2005), the department of education in Canada works with school Boards, parents, teachers and other partners to ensure that policies governing school fees are implemented consistently in all the provinces. To Chabari (2010), in Kenya, poverty has been a major barrier to education access for many children and this led to the government introducing free education. However, it was not clear whether the funds allocated by the government for FSE is equitably being utilized by all students with reference to those from economically poor background, which the study sought to establish.

In Japan, the government fiscal policies provide for free education up to secondary school level. Those of school going age have no option other than attend school to acquire education that is fully funded by the government (Nyaga, 2005). In the United States of America (USA), the Federal Government supports public education. The government is empowered by the constitution welfare clause, article 1 section 8, to levy taxes and collect revenues for the support of education. However, the congress decided the extent of such support (Nyaga, 2005). The situation in Kenya is not different from that of Japan and America as the government and community participate in the provision of education. What was not clear was how this arrangement would be implemented without disadvantaging the students from poor family background to influence internal efficiency. Therefore, the study sought to establish the measures to ensure that.

2.3 Status of Secondary Education in Sub-Saharan Africa

Pressure on government in Sub-Saharan Africa (SSA) to expand secondary education is growing. Mulkeen (2005); SEIA (2007); World Bank (2006) and World Bank (2007) all agree that increasing number of students flowing from the expanded primary school and the need to increase the education level of the labour force to benefit from a globalizing economy

make it inevitable that governments in the SSA will turn their attention to expanding and improving secondary education. This poses dilemma to these countries. The dilemma is multifaceted. Many countries will need to continue to donate resources to expanding and improving primary education to achieve the goals for Education for All. A realistic conversation about greater access to secondary education in Sub-Saharan Africa will need to confront the present status of education, as well as their existing limitations in terms of capacity and financing to simultaneously expand and improve secondary education.

There is consensus in the literature that secondary education – long neglected – is now the fastest growing segment of the education sector (SEIA 2001; UNESCO 2001; Mulkeen 2005; World Bank 2005; Di Gropello 2006; World Bank 2007). In many countries movement away from seeing Primary education as the terminal level of education towards policies that envision widespread completion of junior secondary and upper secondary as the goals of education system development is well underway but has only recently begun in sub-Saharan Africa (De Ferranti 2003; World Bank 2005). Many challenges to expanding secondary are particular to and particularly pronounced in SSA.

According to SEIA (2001), participation rates for secondary education in SSA are lower than any region of the world, with access biased in favour of wealthier populations. In the same vane the lack of access to secondary education is increasingly seen to constrain countries' ability to pursue effective economic growth and development strategies, which is leading governments and the funding community to place increased emphasis on the expansion of secondary education (SEIA 2001; UNESCO 2001; World Bank 2005).

Governments in SSA and their financial partners are increasingly looking to make secondary education more widely accessible, more relevant and of higher quality. Secondary participation rates in SSA have increased from 19% in 1999 to 30% in 2004 (SEIA 2007).

However, the region faces many challenges in meeting the goal of further expansion of secondary education. Only a handful of countries in the region –Botswana, Cape Verde, Mauritius and South Africa for instance- have achieved secondary education access rates as high as 80 percent for junior secondary. Some countries such as Burkina Faso and Rwanda have not achieved rates of 20 percent (UNESCO, 2006 as cited in SEIA, 2007).

In addition to differences across countries, within most countries, secondary education largely benefits wealthier groups in urban areas. Girls and rural populations are particularly disadvantaged as they are impacted more than other groups by both supplies (lack of available spaces, fees; biased selection process) and demand (opportunity costs, social roles) factors (SEIA 2007; World Bank 2005). The government that wants to expand access to secondary education will need to confront the same issues faced in primary education where it comes to meeting the chronically underserved segments of the population. These issues include reshaping, how schools are organized, by whom they are governed, where they are located, and how they operate in order to make it easier for rural poor children and especially girls, to have viable opportunities to learn.

According to SEIA (2007), while rethinking the basic components of education, governments will also need to confront the resource requirements in maintaining growth in primary education while launching expansion of secondary education. To Ibid (2007), it is not clear whether adequate resources have been mobilized to fully realize government's existing plans for primary education. This is because those resources are already competing with other demands on the public sector, making it difficult for the government to mobilize additional resources to accelerate the expansion of secondary education.

In addition, the cost of expanding the capacity of Teachers Training Colleges (TTCs) by increasing the number of faculty, spaces and candidates to meet the needs of growing

secondary education sector places even more financial pressure on already stretched education budgets.

It was for these reasons that the study sought to establish cost-saving measures influencing internal efficiency in public secondary schools.

2.4 Status of Secondary Education in Kenya

In Kenya, just like in other developing countries, the provision of quality education and relevant training to all is the key determinant for achieving the national development agenda. The government of Kenya has therefore resolved to formulate appropriate education policies to ensure maximum development of the human resources who are essential for all aspects of development and wealth creation through industrialization. Literature concur that education stakeholders recognize that quality education at all levels will enable Kenyans utilize their natural resources, efficiently and effectively in order to attain and maintain desired lifestyles for all Kenyans (Munavi, Ogutu & Wasonga, 2008). For the attainment of the desired Millennium Development Goals (MDGs) and Education For All, the introduction of Free Secondary Education was to reduce the cost burden on parents and enable more children access and attain the minimum basic secondary education.

There are, however, many challenges which threaten the sustainability of a strong and powerful educational regime in Kenya. The major issues include low enrolment and retention rates, constricted access and equity at higher levels, establishment and maintenance of quality and relevance, and much inefficiency in managing the limited resources allocated to the education sector (Republic of Kenya, 2005).

Implementation of Free Primary Education (FPE) has resulted to the recent upsurge in the secondary school enrolments since 2003. Ministry of Education Science and Technology (2003a, 2003b) reveals that in Kenya the decline in education quality, participation and

retention rates have been attributed to high cost of education and rising levels of poverty as many households are not able to effectively pay school levies.

Kiveu and Mayo (2009) assert that the escalation of school fees at secondary level has been the immediate consequence of cost sharing policy in Kenya. They believe that the fees and other school related directed costs have become too high for parents to afford given their low average incomes. This confirms the belief held by Maritim (2008) that access to public secondary schools and universities by the poor has remained elusive despite government efforts to ensure equity in provision of education. He argues that despite tuition fee waiver in secondary schools, children from poor backgrounds have continued to be marginalized as some national schools charges are as in excess of Kshs. 60,000 annually.

Kiveu and Maiyo (2009) agree that many children from poor families perform well in KCPE and are admitted to national schools but are locked out due to their inability to pay high fees. They decry that although cost sharing policy was introduced on the basis of economically genuine reasons, high poverty levels in the households are pervasive. It therefore means that against the background of tuition fee waiver by the government, the schools should come up with cost – saving measures to enhance internal efficiency. Or else the government's good intention would be jeopardized. The study therefore sought to establish the cost-saving measures put in place in enhancing internal efficiency in public secondary schools.

A lot of research on causes of dropouts, repetition and absenteeism and therefore internal inefficiency suggest that it is associated with distribution of wealth (Kiveu and Mayo, 2009). They confirm that two studies in Kenya associate it with low incomes of the affected sections of the society. Families with low income are unable to provide education to their children. In the words of UNICEF (1994), these costs are prohibitive not only to the poor but also to medium income one. Maritim (2008) echoes this by stating that these costs are far beyond the reach of the poor and medium income families.

Therefore children from these families are priced out of the schools. This increases inefficiency in public secondary school. To Abagi and Odipo (1994), as the official budgetary allocation to education shrinks, inefficiency is a problem that needs to be understood and solved. The study sought to investigate the cost-saving measures public secondary schools carry out to address budgetary constraint.

2.5 Specific issues related to the study

This section reviews specific issues related to cost- saving measures and internal efficiency in the provision of secondary education.

2.5.1 Cost –saving measures in education

Farell and Schiefelbein (1974) note that in the absence of evidence that the additional costs generate benefits, it may be more cost- effective to allow a modest increase in class size and invest the annual savings in more teaching materials or textbooks. They point out that a 15 percent increase in average class size could reduce the annual education budget by 5 percent; this saving could then be used to achieve significant quality improvements as no additional cost could be imposed on the students leading to the income poor students dropping out. Psacharopolous (1985) concurs by suggesting that one reason for the very high unit costs in education in Africa is the low level of enrolment. Thus, expansion of higher education may enable some developing countries to reduce cost per student.

Ibid (1985) on assessment of World Bank education projects at the time of project completion shows that several countries have utilized facilities that is to say, spare capacity. He notes that when there is spare capacity, expansion of technical training in existing institutions should lead to a reduction in unit costs. He further states the evidence from cost studies of distance teaching which suggests that the use of educational media, particularly radio, may be less costly in terms of average cost per student than conventional teaching. However to achieve these cost – savings, it is necessary to invest heavily in capital. The major concern

about this was whether there were cost – saving measures related to use of technology such as radio, television, computer learning etc in public secondary schools in Kisumu West District which the study seeks to find out.

According to study done in Botswana by Chernichovsky (1982) it was discovered that school enrolment tends to increase when there are elderly people in the household and it suggests that the earnings forgone of children are less important for the family budget when substitutes for child labour are available. This, it said reduces the cost of schooling and increases demand.

Human development reported by UNDP (1991) indicates that the opportunities for cost-saving are considerable in education. A study on “Education For All” (EFA) for the world conference points out that a feasible package of reforms would reduce the recurrent costs of educational system by 25%. It includes measures to reduce repetition, more efficient use of community resources, multiple shifts, selective increase in class size, and some introduction of costs recovery at the tertiary level. However, it cautions that the quality of education should not be sacrificed. The position is conceded to by Aoki et al (2002) who recommend lower cost designs and construction material, community based construction, locally recruited teachers, local teaching materials, distance education (for example radio education), eliminate school fees, and provide textbooks and school supplies free to target groups.

The MOE (2007) suggests that an option towards reducing the burden of SE cost on the government is to improve on resource utilization by increasing the number of lessons taught per week, expand and construct day schools since they attract lower unit costs on the part of household, increase in class size that ensures efficient use of both human and physical educational resources and to improve school management systems to ensure that school revenues are not only just utilized and that quality education is ensured, but also ensure that procuring school supplies is done at competitive prices. In addition it recommends that head

teachers and BOG members should be trained on prudent financial management with special attention on cost reduction and income generating activities as a strategy of lowering cost, and that schools should be authorized to receive fees in terms of goods in order to assist parents in maintaining their children in school. What was not clear was whether the public secondary schools were practicing some of these measures, and if so which ones? The review on the following issues was to help in shading more light.

2.5.1.1 Cost of education

According to Masimbwa (2010), education investment involves both social and private costs. Therefore, government choices must take into account public of fiscal cost as well as the wider social costs. To concur with this, Eicher (1984) says that we know much less about cost of education than we often think we do. Still advancing his case, Masimbwa (2010) laments that the problem is that budgetary data are often inadequate for a detailed study of cost since they cover expenditures rather than real resource, or opportunity costs. Moreover, they present planned or provisional budget estimate rather than actual expenditure. This is in tandem with the conclusion made by Eicher (1984) that governments do have good reasons to be concerned about the rising trends of total costs and about their ability to finance these costs in the future. The need for costs reducing measures and more generally for policies towards cost effectiveness is everywhere present and is getting more urgent in many countries.

A study in Malaysia by Meerman (2007) affirms that effective demand at each educational level is a positive function of income. One reason is that out-of-pocket expenses even for primary education where fees are low represent a substantial financial burden for poor families. In the same way, many poor parents in India claim that they do not send their children to school because they cannot afford to buy school uniform and notebooks and so many keep their children at home. It was observed that the reason for keeping children at

home was that poor families need the additional income that even very young children generate.

According to Psacharopoulos (1985), one of most powerful influences on demand for secondary and higher education is level of family income. Poor families will certainly find it difficult to pay fees but even free education imposes a substantial financial burden through earnings forgone and out-of-pocket expenses from clothes, travel, books and other direct costs.

UNICEF (1989) concurs that a large part of the burden of educating children is borne by parents. Parents pay for tuition, books, uniforms, Parents Teachers Association (PTA) contributions, activities, furniture and building funds among other contributions. According to World Bank (1980) wastage and repetition increases the social costs of education without correspondingly increasing the benefits. In the light of data on wastage rates, a number of developing countries have to provide 10 years of primary schooling instead of a normal or prescribed period to produce one successful school completer because of drop outs and repetitions. This was in relation to primary schooling but what was not clear was the case with secondary schooling which the study sought to determine.

Zymelman (1973) points out that at secondary level, the ratio of teachers' salaries to GNP is much higher. For instance in Tanzania and Ethiopia secondary school teachers receive more money than twenty times GNP per capita income which is very much higher than in developed countries. He suggests that substantial savings may be made in the medium term by marginally changing teachers' pay scales.

In the Kenyan context, the higher cost of secondary education has been emphasized. Masimbwa (2010) cites Mwingi South M.P, David Musila to have moved a motion to compel the Ministry of Education to release examination certificates held by secondary schools over

arrears, asking the government to offset the arrears for the cost of secondary school was beyond the reach of many Kenyans. The Tinderet M.P, Henry Kosgey is also cited by Masimbwa (2010) to have concurred by asking the government to consider providing free basic and secondary education.

According to the Ministry of Education, Permanent Secretary Prof Karega Mutahi (2006) secondary school fees in Kenya is the highest compared to other African and Western countries. This he said, overtime, had been an impediment to many people acquiring higher education in the country. He further pointed out that the government target of 70 percent enrolment to secondary schools was still a difficult task due to high poverty levels (Kenya times, 29th May, 2006; 2 col.) However, what remained unclear was whether the cost of secondary had reduced to become affordable to all, especially the poor, with the current policy of FSE.

2.5.1.2 Utilization of Educational Resources

Republic of Kenya (1999) points out that Kenya compared with other nations in the region spends considerably more on education in relation to total spending. The report reveals that it is possible to improve cost on education without increasing the share of government expenditure on education and by improving efficiency in the use of resources. It was therefore recommended that the budget of the Ministry be properly nationalized to ensure that the vast amount of resources allocated to the education sector is more efficiently utilized. Ayot and Brigs (1992) allude to this by pointing out that given the fact that most countries are struggling to find enough resources to meet ever- growing demand for, and cost of education, it may be possible to increase class size, use less qualified teachers (for instance non-graduates rather than graduates) or make increased use of radio and television and get at least the same results for more students at no extra cost. Ayot and Brigs (1992) further suggest that the achievement of that is only possible if teacher opposition to some of

these measures can be overcome. Other measures suggested include: increase class size proportionately; use of double shifts for better utilization of expensive buildings and equipment; increase the teacher/student ratios and increasing the size of schools, rather than creating more and more small units thus reduction in administrative costs.

Bishop (1989) concurs to this position by stating that small rural schools, often with one class are very expensive to run because of the under –employment of teachers. Bishop (1989) insists that considerable savings can be affected by transporting children to a larger central school. He says that the French commission on school equipment examined the cost of transporting each day 120,000 children from primary schools with less than 20 pupils and compared it to the economies resulting from better use of teachers and school equipment. The study showed annual savings using transportation or “bussing” was twice as much as the annual running costs of several small isolated schools.

Heyaman (1994) proposes that more efficient use of current resources can be enhanced by rationalizing and downsizing the number and variety of programme duplications; sharing common facilities across different institutions, such as libraries and laboratories, using incentive to encourage and reward good institutional management and by reducing wasted time. Psachoropoulos (1985) emphasizes the importance of time as one of the most important resources devoted to education by teachers and students. The value of teachers’ time is measured in wages and salaries and the fact that students devote their time to education means it is no longer available for alternative uses such as help in agricultural production.

There is agreement in literature that apart from cost sharing being used as an alternative source of funds for Kenya secondary schools, there is need for efficient use of educational resources (Masimbwa 2010 and Muya 1990). In sectional paper no 6 of 1988, the need to cost effectively use resources at the disposal of schools including land, finances, teachers,

time, facilities and equipment to bring about efficient provision of quality and relevance in education is outlined.

Republic of Kenya (2001) equally points out efficient utilization of resources as one of the essential education policies. Aoki et al (2002) and Ayot and Brigs (1992) concur on among key education policy options (in basic education) as more cost effective, use of existing school infrastructure, including double shift, multigrade schools, teacher re-deployment and efficient class size, however, they warn against compromising the quality of education.

Olembo (1985) in a study on financing secondary schools in Kenya shows parent's contribution to development fund through provision of labour in school farms. The observation made was that some schools in both central and western provinces were endowed with sizeable acreage of tea, sugarcane and coffee whose proceeds were used for development purposes. The study concludes that schools need not entirely rely on government and parent contribution but rather initiate and run projects which generate and supplement income.

The MOE (2007) recommends that as a measure to improve resource utilization the ministry should: Increase the number of lessons taught per week (efficient and effective utilization of teachers, offer optional subjects in specific schools with provision for part-time teachers handling small classes and withdraw teachers from schools enrolment of less than 120 students and redeploy them to understaffed schools of three streams and above for more effective and economical utilization.

The second recommendation is quite ideal especially during this time that we have a number of teachers in Primary schools with Bachelor of Education Degree. Most of them have done optional subjects like Business Studies, Computer studies, agriculture, Home Science, Christian Religious Education, History, Geography etc. Such teachers can be provided the

opportunity to handle subjects of their interest and specialization on part –time basis in neighboring secondary schools if they cannot be re-deployed.

All these will result to cost reduction hence equitable utilization of educational resources with reference to students from income poor families. The study therefore attempted to find out which of these cost-saving measures were being undertaken to enhance equitable utilization of educational resources in public secondary schools in Kisumu West District.

2.5.1.3 Sources of Educational Finance

Investment in education has both private and social implication which is shared by individual students, their families; government and other groups, including international agencies. Psacharopoulos (1985) highlights that during the 1960 and 1970, most of the expansions on education, rose in relation to national income and public expenditure as a whole. World Bank (1980) agrees that the proportion of GNP in developing countries rose on the average from 2.3 percent in 1960 to 4.5 percent in 1984, and the proportion of the national government budget rose from 11.7 percent in 1960 to 16.1 percent in 1984.

The World Bank (1980), however, notes that there was evidence of financial constraints; in many developing countries the proportion of government budget and GNP devoted to education had began to decline. The literature further emphasizes that the increasing demands of education on public finance at a time when government funds were stagnant or even falling in many developing countries could only be resolved by either finding additional sources of financial support or reducing unit costs through greater efficiency. In the same spirit, Zymelman (1973) notes that educational financing is still an area of experimentation although few entirely new methods of financing have been developed according to the following recommendations: Use of lotteries, though not much explanation is given, encouragement of public subsidy of education, Students' loan that can contribute to both efficiency and equity goals, are flexible as a means of finance, and can help to increase the

share of private finance for educational investment and community involvement in financing education through use of direct labour to build schools, communities providing goods and services in kind and self – help initiatives.

Citing evidence from Caribbean countries, Brodersohn (1978) concludes that between 25 and 50 percent of operation and maintenance costs of a school can be financed by the sale of goods produced in the school. This lays emphasis on the importance of community.

To Angela, Khoo, Selvaratnam, Patel and Verspoor (1993), financing policies not only determine how efficiently higher education institutions mobilize and use the available resources but also the quality and effectiveness of their teaching and research programmes as well as their ability to enhance training and research in productive sector. They further point out that the situation in most developing countries of providing free or below cost higher education irrespective of private or social returns produce inefficiencies and inequalities (ibid, 1993). According to the literature, with increased competition for resources and demand for places, the government would be in a situation whereby they are unable to subsidize all the programmes at a level that could ensure quality and effectiveness. For that reason, Angela et al (1993) conclude that higher education institution would have to come up with strategies for reducing their exclusive reliance on public financing. This would enhance efficiency; however, the main concern of the current study was to establish workable strategies for enhancing internal efficiency in public secondary. This is because raising fees for secondary and tertiary education may nonetheless serve as distributional purposes, if as is often the case, the beneficiaries of the state subsidies are the more affluent (Appleton, 1997). The same concern put in a different way, Oyaro (2008) laments that despite the efforts of the government to improve access and retention of students in secondary schools, evidence shows that access to secondary education is still highly skewed in favour of the rich.

World Bank (1984) observes that in the last thirty years, African governments financed the cost of education to the maximum. Towards the 1980, however, these governments did not have the capacity to fully finance education. It therefore recommends the burden to be passed over to the parents and community through cost – sharing. And according to a number of studies, this recommendation has been adversely criticized to have mainly affected the poor because they are unable to afford the cost of secondary education which is beyond the reach of not only the poor but also the middle income families (Maritin, 2008). For that reason, this study sought to establish sources of finance put in place to cushion the poor so as to reduce dropout rates and enhance internal efficiency.

In Kenyan context, in 1963, the Ministry of Education spent 46 million shillings on education. By 1975 the government spent 277 million shillings representing 18 percent of the budget. The Kenyan minister for finance then called for new ways of financing education as government resources were strained. He said that there was ‘need to rationalize educational system and contain the educational budget’. He recommended a new policy to transfer more burden of finance to parents, particularly in the area of development expenditure (building classrooms, laboratories and teachers houses). To this, Ayot and Brigs (1992) attest the new 8-4-4 plan for education (1985) left the building of new primary classrooms to parents through the work of “harambee” meetings and the newly created PTAs. The government was to institute cost- sharing with local communities whereby the cost of school buildings would be met by the communities. Ibid (1992) recommend that a voucher system as a new method of financing education should be introduced to replace the usual state subsidy, though assessment of the merits or otherwise should be made or else cost – sharing would lead to dropout.

Ponttract and Hardman (2005) and Republic of Kenya (1999) concur that dropouts and repetition as phenomenon in Kenyan secondary schools as a whole has significantly

contributed not only to unequal access to education but also manifested an alarming aspect of wastage, within the education system. In the same vein, the Koech Commission Report (1999:85) while commenting on cost-sharing as a way of financing education notes that the policy with the context of existing poverty levels was viewed as the single most-hindering or constraining factor which has led to the serious decline in enrolments, since its implementation. Together with “harambee” spirit, the report notes that while mobilizing community resources for education, it had created inequalities between the economically strong regions and those that were less endowed or developed; and that the policy of cost-sharing disadvantages the poor who cannot “share what they do not have”.

According to Njeru and Orodho (2003) the introduction of cost – sharing created a heavy burden on households to an estimated current expenditure of between 30 and 44 percent of their annual incomes on education. The study concludes that the secondary school bursary is both insufficient to meet the objectives of enhancing access to SE and reducing dropout rate among the poor, and also improperly managed. Njeru and Orodho (2003) recommend an increase in bursary funding level and establishment of clear guidelines regarding the socio — economic categorization of those to benefit. The two also recommend that government spending should be restricted to reflect increased sub-sector, particularly regarding development expenditure; the government should move towards incorporating secondary education into the mainstream basic education, and that the government, academic and other stakeholders should review cost-sharing policy at the secondary level.

In tandem with the recommendation, in January 2008, the Kenyan government incorporated S.E as part of basic education and declared tuition Free secondary Education or subsidized Secondary Education (ROK, 2008). According to ROK (2008), SSE is meant to ensure that children from poor households acquire a quality education that enables them to access opportunities for self advancement and become productive members of society. The literature

further emphasizes that it will ensure access to and high quality secondary education in Kenya. It is sad to note, however, that even with the introduction of SSE, both parents and the administrators have been left wondering how free it is! Abagi (2008) proposes, therefore, that the government should explain to parents how free secondary education is.

Parents expect a lot from this programme in terms of equity and quality of education which means adequate supply of learning resources like more teachers, physical facilities and instructional materials. ROK (2008) emphasizes that the ministry of education is charged with the responsibility to ensure that guidelines on Free secondary education are implemented by all schools and that the government would not allow or tolerate schools which impose unauthorized levies since they would undermine the successful implementation of the policy whose main objective is to ensure that deserving children from poor families do not miss out in secondary education. This study therefore seeks to establish the sources of educational finance in tandem with the ministry's guidelines.

Verspoor (2008) argues that increases in public spending will be inadequate to generate increases in education attainment and learning achievement unless accompanied by reforms that aim at a more efficient use of available resources and find sources of additional funding. He advises that well structured public – private partnerships (PPPs) can help diversify the sources of financing and provision Mbugua (1987) says that one of the duties of the head teachers in Kenya is to develop the school's physical facilities, a head teacher has to bear in mind where to house the educational programme, the population to be served by the facility and ensure that financial resources are readily available for the school expansions. Based on this, the study sought to find out the sources of fund used in public secondary in Kisumu West District as cost- saving measures to ensure equitable utilization of educational resources with reference to the students from economically poor families.

According to Orlosky (1984), financial management determines the way the school is managed and whether or not the school will meet its objectives. The Principal is responsible for budgeting, accounting and auditing functions of financial management with the introduction of free secondary schools to get some funding from the government while parents are required to meet various other costs such as development projects and boarding fees (Republic of Kenya, 2005). It was not clear whether the principals had been exposed to financial management and that schools had competent accounts officers. Therefore the study sought to find out prudence in financial management in the school.

Republic of Kenya (2012) asserts that the main sources of funds for secondary education in Kenya include households and the government. Other sources of funds are private sector, religious organizations, communities, NGOs and development partners (donor community). The cost of secondary education borne by the government and households consists of salaries for teaching and non-teaching staff, bursary allocations, capital investments, school fees, tuition and transport, among others. Ibid (2012) adds that over the recent years, the proportion of secondary education expenditure to total education budget has been in the range of 22-25%. Financing of secondary education faces many challenges, which include inadequacy of public resources to effectively meet infrastructural needs of secondary schools; inequality of funding between primary and secondary schools; weaknesses in the bursary funds scheme; inefficiency in resources utilization and lack of enforcement of fees guidelines. Ibid (2012) recommends an increase of 20% above the 2008 grants, which together with an ICT component of Kshs. 5,000 and a lunch/component of Kshs. 5,799 increases the per capita grant from Kshs. 10,265 to Kshs. 19,238 per annum.

2.5.2 Internal Efficiency in Secondary Education

Education economists define internal efficiency as comprising 'the amount of learning achieved during school age attendance, compared to the resources provided, the percentage of

entering students who complete the course is often used as its measure” (Wolff, 1984). Internal efficiency of an education system is revealed by the promotion; repetition and dropout rates (Abagi & Odipo, 1997). Ibid (1997) further emphasizes that children who enter the school primary level, do not complete the complete cycle. Learners drop out at various stages of the education system especially in Standards 6, 7 and 8. The concern of current study was how the situation is like in secondary education against the backdrop of SSE with user fees, which according to Appleton (1997), are typically even more important at the secondary level. He however reaffirms in his discussion for and against user fees that user fees for “basic education” are not advocated for and likely problems with them are noted .In particular it is noted that their revenue raising potential may be less than sometimes thought, their impact on take-up may often be greater and that it is difficult to exempt the poor. The study therefore sought to find out the level of internal efficiency with the presence of user charges.

According to UNESCO (2002), the criteria for determining internal efficiency in an educational level are education system management practices i.e participation (enrolment), progression, promotion policies and completion rates. Republic of Kenya (1998) on its part emphasizes that also important are the presence and adequacy of physical facilities, institutional materials and teaching force that is healthy and motivated. To sum up, Abagi and Odipo (2000) reiterates that acceptable cost of education at all levels, established key educational management structures add to the list of indicators of internal efficiency. The current study therefore sought to analyze the flow of students by calculating the grade repetition, dropout rates, completion rate, graduation rate and average years per graduate as a way of determining internal efficiency given by UNESCO (2005).

2.5.3 Influence of Cost- Saving Measures on Internal Efficiency

Internationally, there is a considerable body of literature on the usage of the terms quality, efficiency and effectiveness of education (Fuller, 1987; Lockheed & Hamushek, 1988;

Makau, 1986; Motala, 1993; World Bank, 1988). These terms have become increasingly popular in discourse about developing education in less industrialized countries. The fact is that , the terms “quality of education”, ”school quality”, “school efficiency” and “school effectiveness” are often used interchangeably and associated with students’ levels of academic (cognitive) performance in examinations. If achievement by students is low- as manifested in a school’s low test score in national examinations, for instance – the school is purported to be of low quality and, therefore, inefficient.

According to Abagi and Odipo (1997), across – analysis studies on efficiency in education indicate that emphasis has been on the manipulation and the operations of inputs and output whose prices are easy to determine. The structural processes – learning time management, school management practices, classroom management and teacher - pupil relationships – for which prices are difficult to determine, have not been given much attention. In this regard, Abagi and Odipo (1997) emphasizes that there is no doubt that the use of time in school, classroom management and school heads’ managerial behavior have a direct impact on school efficiency because they affect how pupils learn and perform in examination. Literature concur that in Kenya, the perception of efficiency in education through an examination index has had structural and financial impacts on schools, teachers, pupils and parents (Abagi, 1997 and Sifuna, 1997). Due to this, school management has to devise ways of ensuring that the right candidates are registered for examination. This has led to the introduction of extra-tuition (‘coaching’) for which further fees are charged. Learners have been forced to repeat classes or leave a particular school they think is not good enough. At the same time students are generally overworked academically, and have little time for play. Parents are forced to bear heavy burden – paying for coaching, buying books and meeting other direct and indirect costs. Abagi and Odipo (1997) lament that the most elusive issue has been the justification for this burden. To this end, several policy-loaded questions have been raised: Is it worth

incurring more costs in education? Is the recommended school time (8 a.m to 4 p.m) utilized efficiently? Are teachers utilizing their time efficiently? Among other questions.

Abagi and Odipo (1997) emphasize that the conceptualization of the term school or education efficiency in developing country like Kenya should take a process perspective as opposed to an outcome perspective. There is, therefore, need to go beyond the issue of ‘at what cost’ does a school meet its objectives – mean score in a national examination. They insist that school efficiency has to be pegged on how education as a system operates to meet its objectives: that is “holistic operation”.

From a process perspective, some pertinent questions arise: what educational policies are in existence? How are schools operating to meet their objectives? How many learners are catered for? What are the costs of learning and how are they met? How are learners coping with the system –who repeats classes, who drops out of the system and who completes school? Are there constraints which affect learners’ active participation? What are the student- teacher ratios? Does teachers’ work-load correspond to their qualifications; and do teachers cope with their work? How are students performing in school? Answers to these questions are critical as they would indicate levels of efficiency in education system. The current study therefore sought to establish whether the determined level of internal efficiency is influenced by the cost-saving measures.

2.6 Summary and Gap Identification

The chapter has covered review of literature related to cost - saving measures to enhance internal efficiency. The literature review has shown that cost- saving measures can enhance internal efficiency in secondary schools. The literature gaps have also been identified which this study sought to fill. A study by Abagi and Odipo (1997) focused on efficiency in primary education and was done several years before Subsidized Secondary Education. The study did not as well investigate the cost saving-measures in enhancing internal efficiency. Another

study by Nyaga (2005) reveals that in Japan, the Government fiscal policies provide for free education upto secondary school level. In this arrangement, those of school going age have no option other than attend school to acquire education that is fully funded by the government. Such arrangement leaves gap in Kenyan's situation where the parents have to meet other costs like transport, examination fees, development funds, uniforms and other opportunity costs. Appleton (1997) appreciates that developing country governments often provide wholly inadequate funding and therefore it may be better to allow social sector providers to levy user fees in order to raise additional resources. The literature however does not go farther to propose measures that schools can use to make the cost affordable especially for the poor whom the literature confirms will often be adversely affected by the user fees thereby affecting the internal efficiency.

Another gap was that according to Kibaki (2008), schools should implement cost- saving measures such as double-shift; day -wing in Boarding schools, e-learning among others to enhance internal efficiency. However there was no empirical evidence to confirm the implementation of such measures in secondary schools and especially in Kisumu West District.

Related to the above gap was the fact that no empirical evidence was available to show internal efficiency level of the public secondary schools in relation to cost-saving measures and whether there was any influence of cost –saving measures on internal efficiency against the background of FSE where MOE has given strict guidelines for schools concerning school levies. Finally, none of the studies had been done in Kisumu West District on internal efficiency and that it was a new district which was just started in 2008. To fill these gaps, the study sought to investigate the cost-saving measures, level of internal efficiency and the influence of cost-saving measures on internal efficiency in public secondary schools in Kisumu West District.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The purpose of the study was to determine the cost – saving measures in enhancing equitable utilization of educational resources and the obstacles faced in implementing such measures in public secondary schools in Kisumu West District. This chapter therefore, provides data on the methodology that was used for the study. It focuses on the research design, the study variables, location of the study, the target population, sampling techniques and sample size, research instruments, piloting to determine validity and reliability; and techniques for data collection and analysis.

3.2 Research Design

The study adopted a descriptive survey design. Descriptive survey research designs are used in preliminary and exploratory studies to allow researchers to gather information, summarize, present and interpret for the purpose of clarification (Orodho 2002). According to Orodho (2003) descriptive surveys is a method of collecting information by interviewing or administering a questionnaire to a sample of individuals. Mugenda and Mugenda (1999) emphasize the purpose of descriptive research as determining and reporting the way things are. That is, to describe the state of affairs as it exists.

Kerlinger (1996) on his part, affirms that descriptive studies are not only restricting to fact findings, but may also often result in information of important principles of knowledge and solutions to significant problems. They involve measurement, classification analysis, comparison and interpretation of data. In tandem with this, Borg and Gall (1989) note that descriptive survey research is intended to produce statistical information about aspects of education that interest policy makers and educators. The study fitted within the provisions of descriptive survey research design as the researcher collected data using questionnaire,

interview schedule, observation schedule and document analysis guide; and reported the way things were without manipulating any variables.

3.2.1 Variables

Kombo and Tromp (2006) define variables as attributes of the cases that we measure or record. There are two major forms of variables: the independent and dependent variables. Kerlinger (1973) defines an independent variable as the presented cause of the dependent variable, the presumed effect. In this study, the independent variables were cost – saving measures and educational resources (inputs).

The cost saving – measures are in form of use of competitive procurement methods in acquisition of school resources, Day schools/ Day – wing in Boarding schools, income generating projects, assigning multiple tasks to school workers for maximum human resource utilization, school bursary funds, payment in kind through service and material, sharing of resources between schools. The educational resources are human resources – teachers and ancillary staff; physical resources – classrooms, laboratories, textbooks, ICT equipment, playing fields, boarding facilities, and financial resources exhibited in the form of budgets, purchases and receipts. On the other hand, dependent variables in this study included high attendance and completion, reduced repetition and drop – out rates; and average year per graduate resulting to coefficient of efficiency which are measures of internal efficiency.

3.3 Location of the Study

The study was conducted in public secondary schools in Kisumu West District, Kisumu County, Kenya. The District is one of the four districts that make up Kisumu county. It is neighboured by Kisumu East, Vihiga, Gem and Rarieda districts. Transport and communication network is fair because of the Kisumu – Busia and Kisumu – Bondo roads which are tarmacked. Other feeder roads and rural access roads are in fair state. These roads have resulted to development of trading centres influencing the economic activities such

shopkeeping, hawking and transport services provision by the middle aged people. This is done through the use of motor bikes and bicycles. However, a greater majority are subsistence farmers while those who live near the Lake (Victoria) shore, eke living from fishing. The district has two educational divisions which are also administrative divisions namely Kombewa and Maseno. According to Singleton (1993), the ideal setting for any study should be of easier access to the researcher and should be that which allows instant rapport with the informants. Kisumu West District was chosen because it was within reach by the researcher. Furthermore, being a new district, there was a dearth of literature on studies based on cost- saving measures in enhancing any aspect of education e.g. equitable utilization of resources, or even internal efficiency. It was therefore important to gain empirical data on the cost – saving measures and internal efficiency in public secondary schools in the district.

3.4 Target Population

Target population refer to all the members of a real or hypothetical set of people, events or objects which researcher wishes to generalize the results of the research study (Borg & Gall, 1989). The target population consisted of all the head teachers (Principals) and teachers from Kisumu West District. The parents’ representatives also helped in getting insight of what they experience in the process of meeting the cost of education to help their children utilize educational resources efficiently. To get in-depth understanding of how cost- saving measures can enhance internal efficiency, the DEO and the two AEO’s formed an important group of key informants. They represented two categories of respondents who are important in descriptive survey studies, namely specialists and consumers or users of information (Luck and Reuben, 1992).

This study, therefore, targeted the MOE staff at the district and divisional levels, particularly, the DEO and AEO’s, to represent informed specialists. The principals, teachers, and opinion

leaders (PTA representatives) were also targeted to represent the users of information and educational services.

There are two divisions and thirty six secondary schools. The population, therefore, consisted of:

Table 3.1 Targeted Population

Description	Population
DEO	1
AEOs	2
Principals	36
Teachers	220
Parents Representatives	108
Total	367

3.5 Sampling Procedure and Sample Size

Webster (1985) defines a sample as a finite part of a statistical population whose properties are studied to gain information about the whole. According to Orodho (2010) sampling is a process of selecting a number of individuals or objects from population such that the selected group contain elements representative of entire group. Gay (1992) agrees, however that the larger the sample the smaller the sampling error. Gay (1992) further recommends that when the target population is small (less than 1000 members), a minimum sample of 20% is adequate for educational research. Kerlinger (1978), however reckons that as a rough and ready rule for beginners, use as large samples as possible for the larger the sample the smaller the error. From 367 members of the target population, the proportionate and purposive sampling techniques were used to select 103 participants. This formed 28.1% of the target population, which is in tandem with the recommendation given by Gay (1992). Using proportionate sampling, there were 10 head teachers, 60 teachers and 30 PTA representatives. The 2 AEOs and one DEO were purposively selected. See the sampling matrix in Table 3.2.

Table 3.2 Sampling matrix

Description	Population	Sample Size	Percentage
Head teachers	36	10	27.8
Teachers	220	60	27.3
Parents' representatives	108	30	27.8
AEO	2	2	100
DEO	1	1	100
TOTAL	367	103	28.1

3.6 Research Instruments

The main tools of data collection in this study were questionnaires, interview schedules, observation sheet and document analysis.

3.6.1 Questionnaires

The questionnaires were used to collect data because it offers considerable advantages in the administration. It also presents an even stimulus potentially to large numbers of people simultaneously and provides the investigation with an easy accumulation of data. Gay (1992) insists that questionnaires give respondents freedom to express their views or opinion and also to give suggestions. It is also anonymous. Anonymity helps to produce more candid answers than is possible in an interview. The questionnaires were used to collect data from head teachers, teachers and the PTA representative.

Items in the questionnaire are structured (close ended) which measure the objective responses and others are unstructured (open ended) which measure subjective responses and clarified objective to enhance formulation of useful recommendations to the study. The four categories of the questionnaire are as follows:-

3.6.2 Questionnaire for Head teachers

Questionnaire for head teachers that sought information on the availability and adequacy of school resources, enrolment, repeater and dropout rates; the cost- saving measures available in the school; and if not available, then the views of the head teachers on cost –saving measures and how they affect internal efficiency

3.6.3 Questionnaire for Teachers

Questionnaires for class teachers that sought information on absenteeism, the repeater and drop –out rates attributed to unaffordable cost of education, their views on cost – saving measures to minimize absenteeism, repetition and drop –out rates hence internal efficiency resource.

3.6.4 Questionnaire for Parents' Representatives

Questionnaires for PTA representatives sought information on the public views on the cost of education and cost –saving measures in enhancing internal efficiency in public secondary schools.

Each of questionnaires was designed to collect information which led to ascertaining the cost –saving measures in enhancing internal efficiency in public secondary school in Kisumu West District.

3.6.5 Interview schedule

The researcher carried out interviews with the DEO and AEOs to ascertain reasons for absenteeism, repetition and dropout as well as their views on cost –saving measures in enhancing internal efficiency. Peil (1995) maintains that interviews can provide reliable, valid theoretical and satisfactory results from unknown source especially in societies where interaction is highly personalized and that interviewer gets co-operation and fuller answers.

3.6.6 Observation sheet

The researcher visited schools in the district and observe physical facilities and equipment to find out what extent the schools had been equipped to enhance internal efficiency. This helped to supplement the information from formal responses. Peil (1995) insists that much is learned by observing what people actually do and how they do it and that observation is almost combined with casual or informal interviewing.

3.6.7 Document analysis

The researcher analyzed the records from the schools in the division. The records that were to be analyzed included fee statements, attendance registers, equipment records, enrolment records and graduation records. The information that was analyzed from the school records included: total enrolment, dropout, repeaters and absentees which were attributed to costs of education. Mwiria and Wamahia (1995:62) describe document analysis as the best method of assessing valid information since it cannot create, waiver or withhold information. This was used to supplement, validate and ascertain the responses in the questionnaires.

3.7 Piloting of the instruments

Before the actual data collection, the researcher conducted a pilot study in six schools which were not to take part in the study and therefore their head teachers were not included in the final study population. From each of the schools where six head teachers were stationed, four teachers' and two opinion leader (PTA representative) were purposively selected for the pilot study. Therefore the pilot study participants were 6 head teachers and 24 teachers and 6 opinion leaders giving a total of 36 cases, which was slightly above the minimum number of cases (30) required for conducting statistical analysis as recommended by Mugenda and Mugenda (2003). The purpose of the pilot study was to enable the researcher to ascertain the reliability and validity of the instruments; and to familiarize himself with the administration of questionnaires therefore improve the instruments and procedures.

3.7.1 Reliability

Mugenda and Mugenda (2003) define reliability as a measure of the degree to which a research instrument yields consistent results or data after repeated trial. The pilot study enabled the researcher to assess the clarity of the questionnaire items so that those items found to be inadequate or vague were identified to improve the quality of the research instrument thus increasing its reliability. Split - half technique of reliability testing was employed, whereby the pilot questionnaires were divided into two equivalent halves and then a correlation co-efficient for the two halves computed using the spearman Brown prophecy formula which is given by

$$r_{2=1} = \frac{2(\sum d^2)}{N(N^2-1)} \quad (\text{Orodho, 2009}).$$

The coefficient indicates the degree to which the two halves of the test provide the same results and hence describe the internal consistency of the test. A reliability coefficient of 0.78 was obtained. A minimum reliability coefficient of 0.75 is recommended by Orodho (2009) as indicating that an instrument is reliable. Therefore our coefficient lies within this range.

3.7.2 Validity

Validity is defined as the accuracy and meaningfulness of inferences; which are based on the research results (Mugenda & Mugenda, 1999). That is, to say, validity is the degree to which results obtained from the analysis of the data actually represents the phenomena under the study. Validity according to Borg and Gall (1989) is the degree to which a test measures what it purports to measure. All assessments of validity are subjective opinions based on the judgment of the researcher (Wiersma, 1995). The pilot study helped to improve face validity of the instruments. According to Borg and Gall (1989) content validity of an instrument is improved through expert judgment. As such, the researcher sought assistance of the supervisors, who, as experts in research helped improve content validity of the instrument.

3.8 Data Collection Procedures

A research permit was obtained from the National Council for Science and Technology after approval by the University. After which the District Education officer for Kisumu West District was contacted before the start of the study. The researcher personally administered the questionnaires to the principals, teachers and the parents' representatives; and interviewed the DEO and AEOs. The selected principals were visited in their schools and the questionnaires administered to the respondents. The respondents were assured of strict confidentiality in dealing with the responses. The head teachers and teachers and parents' representatives were given about one week to fill in the questionnaires after which the filled questionnaires were collected. Face to face interviews were then conducted with the DEO and AEOs.

3.9 Data Analysis and Presentation

According to Patton (1990) massive qualitative data collected from the field need to be organized into significant patterns to reveal the essence of the data. Data analysis was both qualitative and quantitative. Before the actual data analysis, questionnaires were checked to determine if accurate sample was obtained in terms of proportion of issued questionnaires. They were also checked for completeness. The interview was controlled to ensure relevance. All the responses were organized into pertinent areas of the study. Development of these areas was based on the research objectives of the study. Qualitative data was analyzed in narrative form while quantitative data was analyzed using, frequencies and percentages. Graphical illustrations in form of tables were used to present the data and research findings. Analysis was carried out under different headings grouped according to the study objectives. Research findings and the conclusion of the study were drawn with the help of the information obtained from the questionnaires, interview schedules, observation sheets and form document analysis. Finally, recommendations were drawn from the research findings of study.

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

This chapter covers analysis and discussion of data and findings of the study. The general objective of the study was to establish the cost- saving measures and internal efficiency in the public secondary schools in Kisumu West District - Kisumu County. The chapter commences by presenting the demographic data of the respondents and the background of the schools. This is followed by a presentation of the study according to the objectives namely:

- i. To investigate cost-saving measures employed by principals of public secondary schools in Kisumu West District.
- ii. To determine the level of internal efficiency using different rates of students' flow in public secondary schools in Kisumu West District.
- iii. To establish the influence of cost-saving measures on internal efficiency in public secondary schools in Kisumu West District.

4.2 Demographic Data and Background Information

The study sought demographic data of the respondents such as gender level of education and work experience for both principals and teachers. The study was conducted in public secondary schools in Kisumu West District - Kisumu County. The study was carried out among 10 principals, 60 teachers and 20 Parent Teachers Association (PTA) representatives. The analyzed data is presented in Table 4.1 below:

Table 4.1 Gender of the respondents

Gender	Principal N	N=10 %	Teacher N	N=60 %	PTA Representatives N	N=20 %
Male	6	60	35	58.3	13	65
Female	4	40	25	41.7	7	35
Total	10	100	60	100	20	100

From the data contained in Table 4.1, it is noted that the percentage of male principals was higher than female principals in a ratio of 3:2. Similarly, males were a majority among teachers and PTA representatives constituting 58.3 percent and 65 percent respectively.

The study also sought to establish the education levels of principals, teachers and PTA representatives who were involved in the study. The Table 4.2 shows the respondents' level of education.

Table 4.2 Education Level of the Principals, Teachers and PTA representatives

Education level	Principals		Teachers		PTA Representatives	
	N	%	N	%	N	%
Masters Degree	7	70	1	1.7	0	0
Bachelor's Degree	3	30	53	88.3	7	35
Diploma	0	0	4	6.7	0	0
PDG	0	0	2	3.3	0	0
Secondary					13	65
Total	10	100	60	100	20	100

Source: Questionnaires for Principals, Teachers and PTA Representatives

Table 4.2 shows that 70 percent of the principals had Masters Degree while 30 percent had Bachelor's Degree. Majority of the teachers, 90 percent, had at least a Bachelor's Degree while the remaining 10 percent were Diploma holders. As for PTA representatives, more than half the number 65 percent had secondary level of education while the remaining lot 35 percent had Bachelor's Degree.

The principals and teachers were at the same time requested to indicate their work experience in the schools to which they responded as shown in Table 4.3.

Table 4.3 Work Experience for both principals and teachers in the school

Years of Experience	Principals	N=10	Teachers	N=60
	N	%	N	%
1-5	3	30	20	33.3
6-10	7	70	24	40
11-15	0	0	9	15.0
16-20	0	0	4	6.7
21-30	0	0	3	5.0
Total	10	100	60	100

From Table 4.3, the results reveal that there were 30 percent principals who had 1-5 years experience while the majority had worked for six years and above. Concerning teachers, 33.3 percent had worked for five years and below, while over 60 percent had worked for 6 years and above.

From the data presented in Tables 4.2 and 4.3, it is evident that a majority of teachers and principals not only had higher educational level but also a wider working experience of six years and above. Teachers are also not left behind in this strength.

According to these results, it is apparent that given the level of education and working experience of the majority of the respondents, they were better placed to give useful insights into the appropriate cost-saving measures to be employed that can enhance internal efficiency. Employing cost-saving measures to ensure efficiency amidst constrained school resources requires adequate skills especially for management. School administrators, management and teachers need skills in order to cope with the demand of the school management and teaching tasks. Such skills can be attained through formal training, and most principals and teachers had Masters and at least Bachelor's degrees respectively. To Robin (2003), the skills needed for effective management can be grouped into three categories, viz.

technical, human and conceptual skills. Technical skills for instance refer to the category of skills which enable the manager to use resources and scientific knowledge and to apply techniques in order to accomplish the objectives of the organization.

As a foundation for achieving the research objectives, the researcher sought information on the following: Type and status of the sampled schools; The schools sponsor and Year of enrolment in the year 2008-2012

The principals were asked to indicate whether their schools were girls, boys or mixed in terms of type; day, boarding or both day and boarding in status and whether they were national, county or district in terms of category. The responses are shown in Table 4.4.

Table 4.4 Type, Status and Category of the sampled schools

Type	School	N=10	Status	School	N=10	Category	School	N=10
	N	%		N	%		N	%
Boys	2	20	Boarding	4	40	National	0	0
Girls	3	30	Day	4	40	County	5	50
Mixed	5	50	Boarding & Day	2	20	District	5	50
Total	10	100		10	100		10	100

From Table 4.4, County and District schools were in the ratio of 1:1 while there was no National school. Concerning whether the schools were Boarding& Day or pure Day or pure Boarding, the data revealed that ratio of the schools in that order was 1:2:2. Finally, half of the schools were mixed while the remaining schools are in the ratio of 2:3 as boys to girls.

This information was found relevant in determining the fees ceiling recommended by MOE, levels of performance as in the quality of education and enrolment. Since pure day schools consist of only 40 percent of the sampled schools and 20 percent of the schools are having Day-wing, there is a higher possibility of cost of education borne by parents being low as

Crenshaw (2003) notes that students living at home eliminate the cost of room and board. There is therefore need to put up more Day Schools in order to reduce the cost further. This is also consistent with MOE (2007) suggestion on expanding and constructing Day Schools as they attract lower unit cost on the part of the household and also in tandem with ROK (2008) proposal that schools should introduce Day Wing in Boarding schools.

The principals were also requested by use of questionnaire to indicate the sponsor of their schools. Table 4.5 shows the findings.

Table 4.5 School Sponsorship

Sponsor	Schools	N=10
	N	%
Anglican Church of Kenya	7	70
Roman Catholic	3	30
Total	10	100

Table 4.5 shows that religious organizations are the main sponsors of public secondary schools i.e. Anglican Church of Kenya sponsoring 70 percent while Roman Catholic 30 percent of the sampled schools. As MOE (2007) indicates various sources of secondary school funding, it was necessary to ascertain whether there was any support given by sponsors of the schools. Of the two denominations, Roman Catholic was found to be providing more support to the schools it sponsors starting from the provision of land to construction of the classrooms before the school is registered or taken over by the government in terms of management.

The principals, using questionnaire were to state the year of establishment of their schools. This kind of information was useful in determining the levels of enrolment, availability of facilities and quality of teaching. Table 4.6 gives a summary of the findings.

Table 4.6 Year of School Establishment

<u>Year</u>	<u>School</u>	<u>N=10</u>
	<u>N</u>	<u>%</u>
1960-1969	2	20
1970-1979	1	10
1980-1989	3	30
1990-1999	2	20
2000-2009	2	20
Total	10	100

The results reveal that a number of schools 80 percent have been in existence for over 20 years. These are the schools which were found to be having big sizes of land, high enrolments and slightly more physical facilities though inadequate as indicated in Tables 4.7. It is therefore expected that user charges especially for development are low leading to reduction in costs of education with high quality of education due to availability of resources. However, it is in such schools that user charges are higher compared to what the DEB approves in the district to be at a rate of not more than Kshs. 2,000. This was a revelation given by the DEO. It was felt that such kind of actions should be discouraged as they tend to frustrate the government's effort to improve access and retention of students in secondary schools just as Oyaro (2008) laments.

The principals were also to provide the number of streams and enrolment per form in the years 2008-2012. Reasons for the difference in enrolment were to be given. The figures were also ascertained through documentation analysis and details are shown in Table 4.7.

Table 4.7 Enrolment in public secondary schools in Kisumu West District

Year	Total No. of Streams per form				Total Enrolment per Form				Total
	1	2	3	4	1	2	3	4	
2008	22	22	23	23	1025	990	875	713	3603
2009	22	23	23	23	1057	945	861	717	3580
2010	23	23	23	23	1079	1048	943	859	3929
2011	24	23	23	23	1088	1061	994	864	4007
2012	25	23	23	23	1109	1084	987	912	4092
Total	116	114	115	115	5358	5128	4660	4065	19,211

Source: Principals' Questionnaires and Document Analysis

The results show that student enrolment was at lowest in 2009 yet this was the second year of the SSE programme. The schools which were established over 20 years ago as indicated in Figure 4.5 were expanding their facilities due to increase in enrolment. While the effects of the FPE and SSE were cited as the main reasons for the increase, effective management and good performance were also indicated to have attracted students to particular schools.

Though the average enrolment per stream was between 40 and 45 students there was still room to increase the number to 45 students as per the MOE recommendation for proper resource utilization. This is in agreement with Farel and Schiefelbein (1974) statement that a 15 percent increase in average class size could reduce the annual education budget by 5 percent. This will lead to saving which could be used and ensure no additional cost is imposed on the students leading to the income poor students dropping out.

4.3 Cost saving measures instituted by principals of public secondary schools

The first objective of the study was to investigate cost- saving measures employed by heads of public secondary schools in Kisumu West District. The issues addressed were as follows: The availability and adequacy of physical facilities and space followed by measures taken by public secondary school principals in case of lacking facilities. Another issue was the

availability of shared facilities between neighbouring schools and the opinion of principals on the same. The study also established frequency of repair and maintenance of school facilities, teachers establishment in the public school, non-teaching staff establishment in the public secondary schools and their utilization. The other issues are related to financial management in public secondary schools, availability and utilization of savings in the year 2011, other options available for financing Education in Public Secondary Schools and other appropriate cost-saving measures that would help secondary education be affordable.

Finally, principals' ratings of time management by principals of students, teaching and non-teaching staff, extra-time allocated for teaching apart from normal teaching hours, timely completion of school projects and the opinion of the teachers and parents on cost-saving measures to help reduce the rates will be addressed.

4.3.1 The availability and adequacy of various physical facilities and space

This information was sought as a basis of establishing the level of need as a result of education costs. The principals were asked to indicate whether various physical facilities were available and whether they were adequate for the smooth running of the school. The same information was confirmed using observation schedule. Table 4.8 provides the information:

Table 4.8 Availability and adequacy of Physical Facilities Equipment and Resources

Facilities	Availability				Number				Adequacy	
	N=10								N=10	
	Yes		No		Yes		No			
	N	%	N	%	N	%	N	%	N	%
Classrooms	10	100	0	0	95	4	40	6	60	
Dormitories	6	60	3	30	30	4	40	6	60	
Laboratories	10	100	0	0	12	1	10	9	90	
Library	6	60	4	40	6	0	0	10	100	
Workshop	1	10	9	90	1	1	10	9	90	
H/science	2	20	7	70	5	2	20	10	100	
Toilets/Latrine	10	100	0	0	146	3	30	7	70	
Staff houses	7	70	3	30	58	0	0	10	100	
Computer room	8	80	2	20	8	1	10	9	90	
Computers	10	100	0	0	110	1	10	9	90	
Photocopies	8	80	2	20	9	5	50	5	50	
Printers	8	80	2	20	16	5	50	5	50	
Playgrounds	10	100	0	0	24	1	10	9	90	
Electricity	10	100	0	0	0	10	100	0	0	
Generators	4	40	6	60	4	4	40	3	30	
Piped water	3	30	7	70	3	0	0	10	100	
Tank/Well/Borehole	10	100	0	0	19	4	40	6	60	
School van	2	20	8	80	2	0	0	10	100	
School bus	5	50	5	50	5	2	20	8	80	
Dining hall	5	50	5	50	4	1	10	9	90	

The results revealed that all the public secondary schools sampled for the study had classrooms, laboratories, computers, electricity, latrines/toilets, playgrounds and tank/well/borehole. Of all the schools, 30 percent had piped water, 40 percent had dining halls, 70 percent had staff houses, 20 percent had school van while 60 percent had dormitories for boarding. A half i.e. 50 percent of the sampled schools had a school bus.

On the adequacy, schools connected with electricity accepted that it was adequate while for the staff housing, all the schools concurred that they were insufficient but very necessary. Most importantly, all the sampled schools did not have enough physical facilities. This is a fact that was equally emphasized by the DEO and supported by the findings from the AEOs during separate interviews.

According to Ransom, Khoo, Selvaratnam, Patel and Verspoor (1993), financing policies not only determine how efficiently higher education institution mobilize and use available resources but also the quality and effectiveness of their teaching. With the apparent shortage of facilities there was a likelihood of competition by schools to acquire more in order to improve on quality, a factor that can contribute to higher costs of education. Therefore it was important to establish measures taken to reduce cost in case of shortage (Heyneman, 1994).

4.3.2 Measures taken by public secondary schools in the case of lacking facilities

The principals were required to give alternatives used in case of lack of facilities within their schools, and their opinions in terms of costs. The responses were as shown in Table 4.9

Table 4.9 Alternatives used in case of lacking facilities

<u>Facility</u>	<u>Alternative used</u>
Dorm/Kitchen/Class	Make shift
Dining Hall	Open air
Library	Classrooms
Generator	Solar
Bus	Hired means from both other schools/public
<u>Playgrounds</u>	<u>Share with primary</u>

The principals acknowledged that hiring facilities such as a bus was expensive, time wasting and unavailable. On the other hand increase in enrolment was cited by a number of teachers as a way of cost-saving measures for underutilized facilities although it was yet to be explored as discussed under 4.2 with reference to Table 4.7. This is in tandem with Psachoropolous (1982) assertion that low enrolment is a reason for very high unit costs in education in Africa. Diversification and improvisation were indicated as effective alternative in case of lacking facilities. As Heyneman (1994) has suggested, sharing of common facilities across different institutions is one way of efficient use of institutional resources. Similarly, principals had embraced this. Nevertheless, some of the alternatives given for instance hiring

“matatu” in case of need were found to be costly. It was felt that downsizing and rationalizing the number and variety of programme duplications as proposed by Heyneman (1994) could be cost effective as it will reduce the demand for more facilities.

4.3.3 Availability of shared Facilities between Neighbouring schools

According to Heyneman (1994), better utilization of resources can be achieved through sharing common facilities across different institutions. Principals were therefore asked to show whether there were facilities shared by their institutions and their opinion on the same. The study showed that some of the facilities shared include school buses and playgrounds. However, only 40 percent of the sampled schools shared their facilities. While giving their opinions on the sharing of facilities, the results are as shown in Figure 4.1.

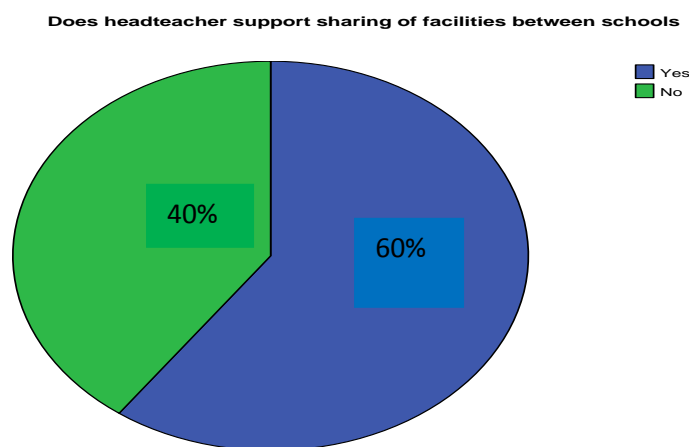


Figure 4.1 Principals opinion on sharing of facilities between schools.

The study revealed that 40 percent of the principals did not support the idea of sharing facilities. They indicated that schools are run differently; and also that they have enough facilities.

However, the majority of them, 60 percent indicated that new schools would benefit from the established ones, that it was cost-effective for schools to share cost of repair and maintenance; it promotes interaction between teachers and students and that there is need to

share because some of the facilities in established schools are rarely in use. This is in line with Heyaman (1994) proposal that more efficient use of current resources can be enhanced by rationalizing and downsizing the number and variety of programme duplications, sharing common facilities across different institutions e.g. library and laboratories, using incentive to encourage and reward good institutional management and by reducing wasted time.

4.3.4 Repair and Maintenance of school facilities

The principals were requested to indicate how often they maintain and repair school's facilities. They were also to state the measures taken to reduce costs for maintenance and repairs. The results were as shown in Table 4.10.

Table 4.10 Frequency of Repair and maintenance of school Facilities

Response	Principal N	No=10 %
Frequently	2	20
Per term	5	50
Annually	1	10
Availability of funds	2	20
Total	10	100

The results revealed that 50 percent of the principals repaired and maintained their school facilities on termly basis while 20 percent of the principals carried out maintenance and repair when funds were available. To reduce costs for maintenance and repair, principals indicated measures such as sensitizing of all stakeholders on how to take care of existing facilities, surcharging the students who carelessly destroy/vandalize school property, use school workers in repair and maintenance instead of hiring the services, procurement of durable facilities/materials; and installation of proper record keeping of all facilities for accountability purpose.

UNICEF (1989) observes that a large burden was borne by parents in the provision and of maintenance and repair of school facilities such as furniture and building. Contrary to this, frequent maintenance as indicated by the results, would not only be cheaper in the long run but also could contribute to quality education in school.

4.3.5 Teachers' Establishment in Public secondary schools

As a way of determining the Curriculum Based Establishment (CBE) and the cost incurred on teachers, the principals were asked to indicate the total number of teachers in their schools specifying those under TSC and BOG. They were also to give reasons for employing or not employing BOG Teachers. The results are shown in Figure 4.2.

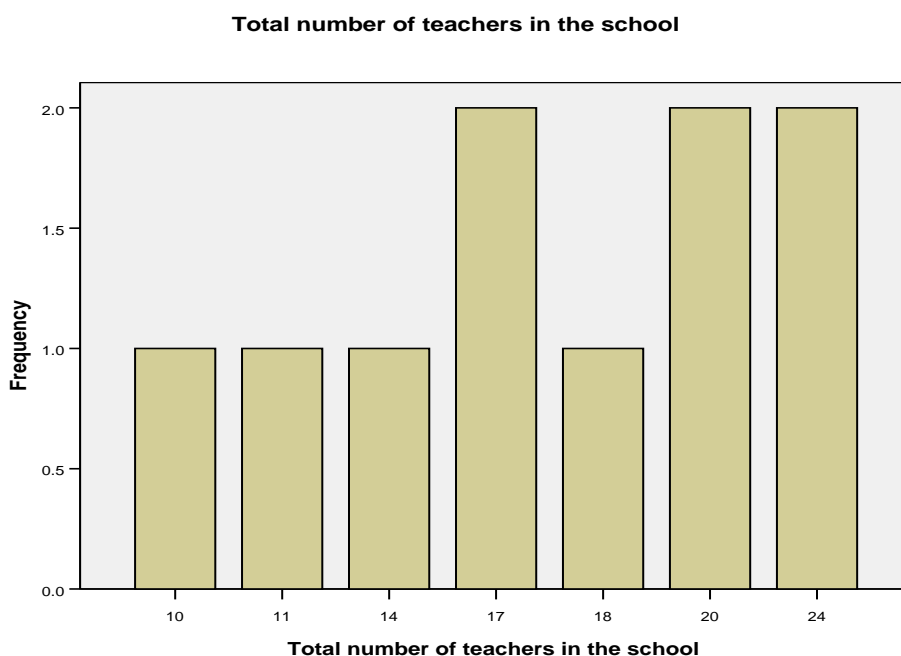


Figure 4.2 Total number of teacher in the school- both TSC and BOG

From the data in Figure 4.2 above, the total number of teachers in the public schools sampled was 154 teachers. This number includes TSC and BOG employed teachers. The data presented in Figure 4.3 below gives additional information for constructive discussion on this issue.

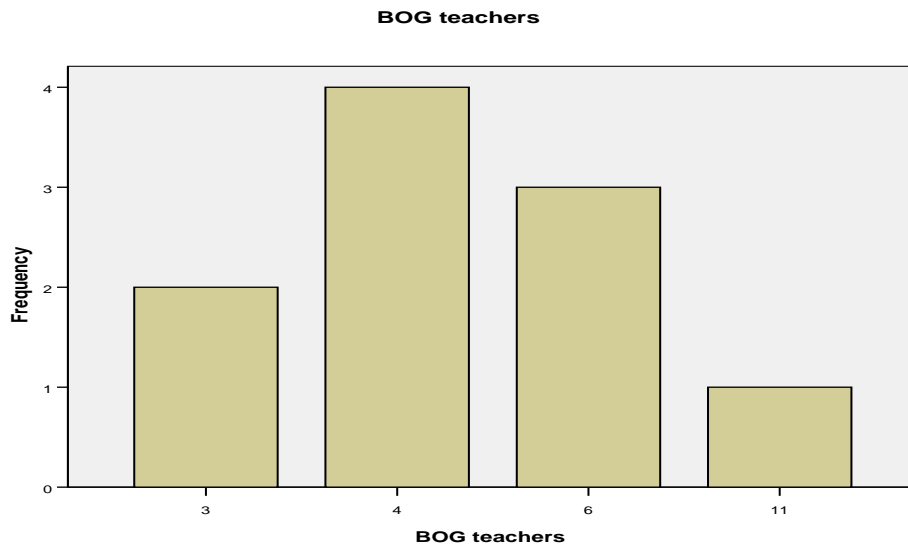


Figure 4.3 Teachers employed by BOG

The results presented in Figures 4.2 and 4.3 showed that most of the teachers (67 %) in the sampled schools were employed by the TSC while 32.9 percent were under BOG. Reasons given for teachers hiring were: a temporary measure for shortage of TSC teachers, share excess workload and enhance effectiveness in service delivery, increase in student enrolment and replacement of TSC teachers redeployed in administration. These are in agreement the findings of a similar study in Kericho District by Masimbwa (2010). The DEO on her part also concurred with the reasons as she lamented that there was serious understaffing in the district, a position which was also confirmed by the two AEOs.

On the contrary, it was observed that hiring BOG teachers increased expenses on salaries and allowances by individual schools. The reasons given were not cost effective as they were not consistent with KESSP (2005) on measures to make the most efficient use of teachers and to control spending on salary costs. Measures such as increase in class size, use of radio and TVs and use of qualified teachers as suggested by Mutua and Namaswa (1992) were not practiced. As indicated in 4.3.6 on the average teaching load per week, it was observed that

most teachers were under-utilized since their work load fell below the recommended 27 lessons per week.

4.3.6 Average Teaching Load per Week for Different Subject Categories

Concerning staff utilization, the principals were requested to state average teaching load per week for different subject categories. Table 4.11 indicates the details.

Table 4.11 The average Teaching Load per Week

Workload	Language		Mathematics		Sciences		Humanities		Technical/Applied	
	N	%	N	%	N	%	N	%	N	%
28	9	90	0	0	0	0	0	0	1	10
27	0	0	6	60	5	50	2	20	2	20
24	0	0	0	0	2	20	0	0	0	0
23	0	0	0	0	0	0	3	30	2	20
22	0	0	0	0	1	10	4	40	0	0
20	1	10	4	40	2	20	0	0	2	20
Below 20	0	0	0	0	0	0	1	10	3	30
Total	10	100	10	100	10	100	10	100	10	100

Source: Principals' Questionnaires

The study established that majority of the schools, 90 percent, had the teachers of languages with teaching load of 28 lessons per week. Only 10 percent of the schools had teachers of Humanity also with 28 lessons a week. 60 percent, 50 percent, 20 percent and another 20 percent of schools had teachers of Mathematics, Sciences, Humanities and Technical/ Applied respectively all with 27 lessons per week respectively. However, Humanities and Technical/Applied teachers in majority of the schools 80 percent and 70 percent respectively had a teaching load of below 24 lessons per week. This shows that the work load in different subject categories is reasonable considering the MOE (2007) suggestion on increasing the number of lessons taught per week (i.e. 27 lessons). This means that schools could still do

with less of BOG teachers (as discussed in 4.4.6), and utilized the available TSC teachers to cut down on costs.

4.3.7 Financial management in public secondary schools

The principals were requested to indicate whether their schools had qualified accounts officers, whether they had attended any financial management course and to state how often their schools books of accounts were audited. The results were as shown in Table 4.12

Table 4.12 Presence of Qualified Accounts Officer and Principals attendance of Financial management Course

Response	Qualified.Acc.Officer		Principals' Financial Management Course.	
	N	%	N	%
Yes	10	100	7	70
No	0	0	3	30
Total	10	100	10	100

Source: Principals Questionnaires

The results revealed that all the sampled schools had qualified Accounts Officers. Majority of Principals numbering 70 percent noted that they had attended financial management course. They also indicated that they were more efficient on their roles. It was felt that in tandem with MOE (2002) recommendation, the other principals should be compelled to attend financial management courses as it will impart relevant financial skills to them.

All of the principals sampled also indicated that they had school's accounts audited regularly. This showed that prudent financial managements are monitored closely. This is a way of cost-saving measures.

4.3.8 Availability and utilization of savings in the year 2011

The principals were asked to indicate whether their schools made any savings in 2011 and therefore state how such savings were utilized. Figure 4.4 show the details.

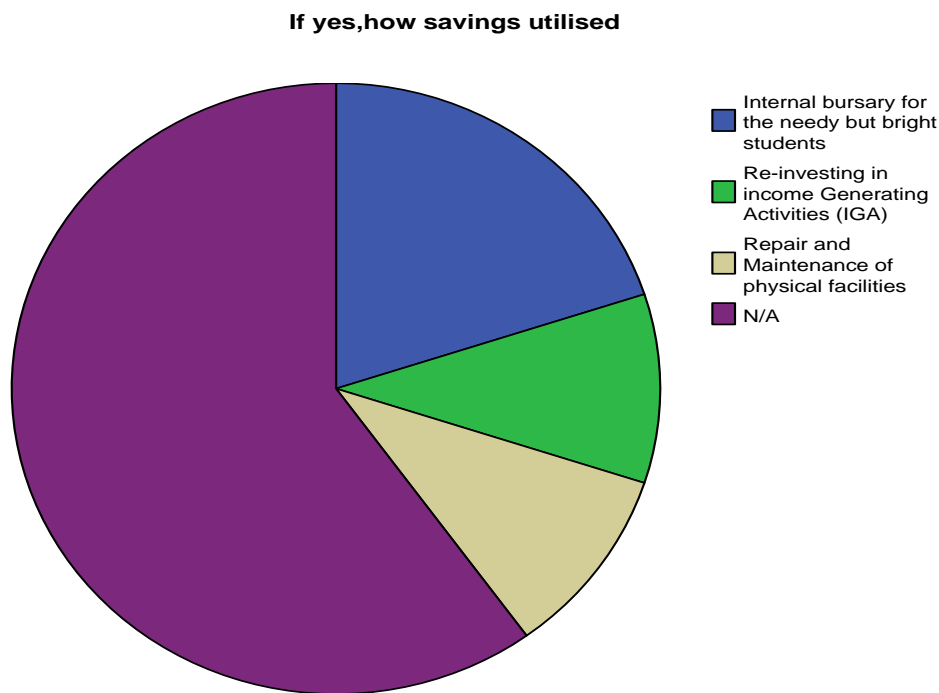


Figure 4.4 Utilization of savings

Majority of the principals numbering 60 percent reported that their schools did not make any savings in the year 2011. Results showed that many schools operated huge expenditure which did not allow them to make any savings. However, some of those which made savings utilized the funds by re-investing in Income Generating Activities (IGAs) to generate more income while others used the funds on repair and maintenance of physical facilities such as dormitories, classrooms, furniture etc and in creating school Internal Bursary for the needy students. According to the DEO and the two AEOs interviewed, the funds allocated to the Public Secondary Schools especially capitation from the government is far much inadequate although they did not suggest the amount which they thought could be enough. This made it hard for schools to make savings without employing cost- saving measures as discussed under 4.3.9. It was felt that lack of savings limited the budgetary operation of the schools, an issue that could jeopardize the efficiency level of education offered. In line with Heyneman (1994), savings could be realized if incentives are used to encourage and reward good

institutional management. This is possible because already 70 percent of the principals have been trained on financial management as indicated in Table 4.12.

4.3.9 Other options available for financing Education in Public Secondary Schools

As outlined in Sessional paper No. 6 of 1998 cost-saving effective use of resources at the disposal of schools land can bring about efficient provision of quality and relevance in education by reducing cost. It is in view of this that the following are addressed: The school land size in acreage, school's land utilization apart from buildings and playgrounds, size of the school farm in acreage, sources of finances in school and Income Generating Activities.

4.3.9.1 The School Land Size in Acreage

The principals were requested to state their school's land size in acreage. The results were as indicated in Table 4.13

Table 4.13 School's Land size in Acreage

Acres	Schools	N=10
	N	%
21-30	5	50
11-20	3	30
1-10	2	20
Total	10	100

The results indicated that 80 percent of schools had between 11-30 acres of land while only 20 percent had land between 1-10 acres. This was a good indication that land as one of education inputs was available.

4.3.9.2 Schools' Land utilization apart from buildings and playgrounds.

The principals were to indicate how they utilized land in their schools apart from buildings and playgrounds. The results were as indicated in Table 4.14.

Table 4.14 Schools' Land Utilization apart from building and playground

Response	Schools	
	N	N=10 %
Grazing Field	7	70
Horticultural Farm	8	80
Dairy Farming	8	80
Beekeeping	4	40
Vegetable Farm	9	90
Tree Planting	9	90
Flour Mill	4	40

Source: Principals' Questionnaires

The results indicated that Majority, 90 percent of the schools had their land used for vegetable farm and for tree planting. Eighty percent of the schools had their land used for Horticultural and Dairy farming while 70 percent of the schools had land used for Grazing field by the schools. Beekeeping and Flour mill were carried out each in 40 percent of the schools. These were clear indications of schools' effort to supplement income according to Olembo (1988) view that schools may initiate projects which generate supplementary income instead of entirely depending on government and parents' contribution.

4.3.9.3 Sources of Financing Secondary School Education

The principals were requested to indicate the sources of finance for their schools. They were also requested to state whether they accepted payment of fees in kind. The results were as stipulated in Table 4.15.

Table 4.15 Source of Finance in Public Secondary Schools

Response	Schools	
	N	N=10 %
Fees	10	100
Grants	10	100
CDF, LATF and Bursaries	10	100
Donors (NGOs)	10	100
IGA (House rent/Farm Income)	9	90

Source: Principals' Questionnaires and document analysis

The results revealed that all schools had fees as the main source of finance and CDF, LTF and bursaries also as other sources. Better still, all the schools enjoyed the benefit of both Grants from the Government and Donors (NGO) as sources of finance. Only 10 percent of the schools did not have IGA as a source of finance. As indicated in Table 4.15, 90 percent of the schools engaged in vegetable and tree planting. Brodersohn (1978) states that between 25 and 50 percent of operating and maintenance cost of school can be financed by the sale of goods produced in the school. The study further found out that all principals accepted payment of fees in kind. They indicated that parents offer services such as splitting firewood, painting, repair of facilities etc; and supply foodstuffs and firewood as a way of paying fees for their children. This is in tandem with MOE (2007) suggestion on receiving fees in kind for the purpose of maintaining children in schools.

4.3.9.4 Income Generating Activities in public secondary schools

The principals were required to show whether their schools were engaged in income generating activities and to specify the type presence in their schools. The results revealed that majority of the sampled schools 90 percent engaged in Income Generating Activities. The activities engaged in are as indicated in Table 4.16.

Figure 4.16 Income Generating Activities in Public Secondary Schools

Activity	Schools	
	N	%
Dairy Farming	8	80
Horticulture	8	80
Poultry Farming	4	40
Beekeeping	4	40
Hiring School Bus	5	50
Hiring School Hall	5	50
Rental House	7	70
Vegetable farming	9	90

Source: Principals Questionnaires

The study found out that 90 percent of the schools engaged in income generating activities. All these schools practiced vegetable farming while 8 of them were also engaged in Horticultural farming as well as dairy. It was also observed that facilities such as school bus, school hall were each mentioned by 50 percent of the sampled schools as being utilized for generating income. This was in tune with MOE (2007) suggestion on income generating activities as a strategy for lowering costs though there was still need to diversify the activities.

4.3. 10 How principals acquire school materials

The principals were requested to indicate how they acquired school materials such as text books, stationery and kitchen supplies and to indicate whether it was done in bulk or in units. The results were as indicated in Tables 4.17 and 4.18.

Table 4.17 Acquisition of school materials such as text books, stationery and kitchen supplies

Response	Text books		Stationery		Kitchen Supplies	
	N	%	N	%	N	%
Donors	1	10	0	00	0	00
Tender	9	90	10	100	8	80
Direct Purchase	0	00	0	00	2	20
Total	10	100	10	100	10	100

Source: Principals' Questionnaires

Data presented in Table 4.17 show that tendering was a popular method of acquiring materials. The mostly acquired by the method was stationery. Text books were also acquired through donation as indicated by 10 percent.

In response to the request to indicate the amount of materials acquired through each method presented in Table 4.17, the principals gave information as shown in Table 4.18.

Table 4.18 The Amount of Materials Acquired

Amount	Text books		Stationery		Kitchen Supplies	
	N	%	N	%	N	%
Bulk	9	90	9	90	9	90
In Units	1	10	1	10	1	10
Total	10	100	10	100	10	100

Source: Principals Questionnaires

From the data contained in Tables 4.19 and 4.18, the study discovered that 90 percent of the schools acquired all the materials in bulk. All the sampled principals acquired stationery by tendering method while text books and kitchen supplies were mostly obtained by the same method of tendering in 90 percent and 80 percent of the schools respectively. The principals gave reasons for using the indicated methods of acquisition. They said that tendering and bulk methods enabled them to have the best quality at the lowest cost; direct purchase was due to low payment of fees that could not afford bulk purchase while donation was for text books offered during the ‘Book Donation Day’. This reason was also supported by the DEO in the interview. It was noted that 50 percent of kitchen supplies through tender could easily be supplemented by IGAs if land utilization as indicated in table 4.19 was to be realized. This is in tandem with Broderon (1978).

4.3.11 The Number of Non-teaching staff in Public Secondary Schools

The principals were requested to indicate the number of non-teaching staff in their schools. The results were as indicated in Table 4.19.

Table 4.19 The number of Non-teaching staff in public secondary schools

Number of workers	Schools	N=10
	N	%
4	1	10
8	1	10
9	1	10
11	2	20
16	1	10
20	2	20
25	2	20
Total	10	100

Source: Principals' Questionnaires and Document Analysis

The study discovered that 40 percent of the schools had above 20 non-teaching staff while 50 percent had below 15 non-teaching staff. Only 10 percent of the schools had above 15 but below 20 non-teaching staff. However, the schools should hire the minimum number of support staff in order to limit the monthly wage payment according to the MOE (2007) guidelines on CBE. It could be prudent to reduce the number with some of the duties such as cleaning performed by ancillary staff allocated to students to reduce the costs.

4.3.12 Duty Combination by the Ancillary Staff (non-teaching staff) and Hiring them on Contract

The principals were asked to indicate whether there were cases of duty combination by ancillary staff as well as employing them on contract in their schools and then provide reasons for their answer. Table 4. 20 gives the results.

Table 4.20 The principal’s response on whether there were cases of duty combination by non-teaching staff and employment on contract

Response	Duty Combination		Employment on Contract	
	N	%	N	%
Yes	10	100	9	90
No	0	0	1	10
Total	10	100	10	100

Source: Principals’ Questionnaires

The results in Table 4.20 indicated that all the ten sampled schools had non-teaching staff combining duty. There was also indication that 90 percent of the principals had employed some of their non-teaching staff on contract basis as a way of reducing cost of employing more personnel. Employing staff on contract terms as cost-saving measure should be embraced in Public Secondary Schools. This is in tandem with Heyneman (1994) suggestion that efficient use of current resources can be achieved by rationalizing and downsizing the number of variety of programme duplications. The activities for which non-teaching staff were hired on contract basis include gardening, repair of school furniture, painting relieve security/kitchen workers, grounds men, firewood splitting and fencing. They indicated that some duties were given on contract basis because of shortage of ancillary staff and inability to sustain monthly payments. It was also observed that some duties were temporary due to leaves and suspensions of regular workers. It was noted that parents/ guardians could be involved in such a plan as a way of payment of fees in kind.

4.3.13 Principals' rating of Time Management by students, teachers and non-teaching staff in Public Secondary Schools

The principals were requested to state the utilization of time as a resource by the human personnel under them. The results are as shown in Table 4.21.

Table 4.21 Principals' rating of Time management by students, teachers and non-teaching staff

Human Resource	V.Good N=10		Good N=10		Fair N=10		Poor N=10	
	N	%	N	%	N	%	N	%
Teachers	1	10	9	90	0	0	0	0
Students	0	0	9	90	1	10	0	0
Non-teaching staff	0	0	9	90	1	10	0	0

Source: Principals' Questionnaires

The outcome indicated that 90 percent of the sampled principals rated the students, teachers and non-teaching staff as good in time management. With good time management, it was felt that cost of education could be reduced thereby leading to internal efficiency. This is because manipulation of good time management has an effect on other educational inputs. It was therefore deemed proper not to have extra time for teaching since almost all the schools, 90 percent of the sampled schools, were good time managers. This is contrary to extra time allocated for teaching time as indicated in Table 4.25 and disagrees with Psachoropolous (1985) emphasis on the importance of the time as one of the most important resources devoted to education by teachers and students and should be properly utilized to help save on cost. To Abagi and Odipo (1997) several policy- loaded questions have been raised: Is it worth incurring more costs in education? Is the recommended school time (8 a.m to 4 p.m) utilized efficiently? Then there would be no reason at all to have " couching lessons".

4.3.14 Presence of Extra-time Allocation for Teaching apart from Normal Teaching Hours

The principals were requested to indicate whether there was any time allocated for teaching other than the normal teaching time. They were also asked to state whether such extra teaching was done at an extra cost.

The results revealed that all the principals indicated that there was extra time allocated for teaching other than the normal teaching hours. The principals stated that such extra-teaching was done early in the morning, late in the evening and on Saturdays. For the case of 20 percent of schools, the early morning, evening and Saturday remedial teaching was done at an extra cost of Ksh 150 per hour. Very few schools 30 percent of the sampled were doing remedial teaching for free. From the study it was observed that remedial teaching at extra cost could be a contributory factor to the extra fees charged and against Subsidized Secondary Education Programme. It negates the purpose of cost-saving as supported by Angela et al (1993). In addition, if time is well managed as shown in Table 4.21 then there was no need for extra time for it attracted extra cost.

4.3.15 Timely Completion of the school projects

The principals were required to show whether school projects were completed within the given time frame and give reasons for their response. They were also to state cost- saving measures being practiced in their schools. The results revealed that the majority, 70 percent, of the schools never completed their projects in time. Most of the principals cited funds delay especially from CDF; following laid down plans; insufficient funds; and lack of local materials as the major reasons as to why school projects were not completed in time. However, some principals numbering 20 percent noted that there were cases of insincere contractors who deliberately delay projects completion for an extra cost especially when they were given full contract. It was observed that delay in completion of set projects was a

contributory factor of high costs of education in public secondary schools due to high rate of inflation. There was need for proper planning before implementation and to blacklist insincere contractors. This is a response to the call for joint effort to support SSE (ROK, 2008).

4.3.16 Cost-Saving Measures Practised in Public Secondary Schools to make secondary education affordable

As a way of summary, the principals, the teachers and the PTA representatives were asked separately to state cost-saving measures being practised by their schools to reduce repeater and dropout rates. In response, they cited the following: Bulk purchases were made through direct sourcing to avoid middle persons who demand for high pay and proper utilization of available resources such as electric lights through strict regulation. There is also assigning students to perform general cleaning duties within the schools instead of employing workers for pay. Assigning multiple tasks to schools' workers for maximum human resource utilization, tree planting for firewood and timber that would instead be acquired by the school at a cost and use of Competitive procurement methods in acquisition of school resources where lowest bidders are given preference will also help reduce cost.

It was also realized that parents were allowed to pay fees in kind and that workers were being trained to perform specific jobs efficiently and that schools initiated income generating activities to reduce daily expenses. Such activities included doing dairy farming as indicated by 70 percent, Horticultural farming by 80 percent, Poultry farming by 60 percent and Hiring out of school facilities by 70 percent of the principals in Table 4.16 on page 71; and Increasing enrolment as indicated by 80 percent of teachers and 60 percent of PTA representatives. The two AEOs added to the list of cost-saving measures the following: book donation and subsidized lunch programme in Day Schools. The DEO expressed the same sentiments, as well, highlighting that the principals were encouraged to allow parents to get cheap uniforms as a way of reducing cost.

Increase in class size, however, as pointed out by Favell and Schiefelbein (1974); use of education media, decentralization of management; multiple shifts as suggested by UNDP (1991) and ROK (2008) and increase in number of lessons as suggested by MOE (2007) were yet to be explored. Even electricity which was available in all the sampled schools was not being used in promoting E-learning, by all the sampled schools, as cost-saving measure proposed by World Bank (2009). Majority, given by 60 percent of the sampled schools also did not make savings. There was also a general feeling by the respondents that FSE capitation was inadequate and this concurred with Republic of Kenya (2012) finding and recommendation that the current capitation of Kshs 10,265 per student is inadequate and that it should be increased by 20 percent, which together with an ICT component of Kshs 5000 and a lunch component of Kshs 5,799 increases the per capital grant to Kshs 19,238. All these put together apparently, partly explains why the repeaters and dropouts still exist in the sampled schools as indicated in Tables 4. 25 And 4.26

4.4 Internal Efficiency level in public secondary schools

The second objective of the study was to establish the level of internal efficiency in public secondary schools in Kisumu West District. The objective was achieved by calculating flow of students' indices of determining internal efficiency. Distribution of students in the sampled schools (2008-2012) data provided by the principals and confirmed by document analysis in Table 4.22 was used to analyze the indices. There are two figures in the boxes. The figures above are the total enrolment (N), figures below are the number of repeaters (R) and the figures in the boxes in the last column indicated (GRAD) are graduates who have sat for KSCE. The tabulation is adopted from Chiuri and Kiumi (2005).

. Table 4.22 Students' Distribution Data

	F1	F2	F3	F4	GRAD.
2008	1025 17	990 23	875 28	713 35	711
2009	1058 17	945 20	861 31	717 30	715
2010	1079 21	1048 30	943 32	859 40	855
2011	1088 18	1061 25	994 30	864 39	860
2012	1109 18	1084 28	987 33	912 34	910

Source: Principals' Questionnaires and Document analysis

From the data in the Table 4.22 above, it is possible to analyze the flow of students by calculating the grade repetition, dropout rate, completion rate, graduation rate and average years per graduate as a way of determining internal efficiency as discussed overleaf:

4.4.1 Average Grade repeater Rate

The grade repeater rate compares the number of repeaters of the same grade in a subsequent year with the total number of students in the previous year. Grade repetition is an indicator of internal efficiency of education. In calculating the grade repeater rate, the combined data on enrolment and repetition in the 10 sampled schools (Table 4.22) was used. The following formula according to Chiuri and Kiumi (2005) was used to arrive at the repeater rates across the classes within the schools.

$$\frac{R_{t+1}^k}{N_t^k}$$

Where **R** refers to repeaters
N refers to total number enrolled
k refers to Grade/Class
t refers to the year
t+1 refers to subsequent year

This is the division of the number of students who repeat the same grade in a subsequent year by the total enrolment in the same grade in the previous year. Table 4.23 below shows the repetition per class in the schools studied.

Table 4. 23 Average Grade Repeater Rate

Form	1		2		3		4		Average	
Year	Rate	%	Rate	%	Rate	%	Rate	%	Rate	%
2008	0.0167	1.67	0.020	2.00	0.0343	3.43	0.0418	4.18	0.0282	2.82
2009	0.0194	1.94	0.0317	3.17	0.0372	3.72	0.0558	5.58	0.0360	3.6
2010	0.0167	1.67	0.0239	2.39	0.0312	3.12	0.0454	4.54	0.0287	2.87
2011	0.0165	1.67	0.0258	2.58	0.0332	3.32	0.0392	3.92	0.0287	2.87
Av.	0.0173	1.73	0.02535	2.535	0.033975	3.34	0.04555	4.555	0.0305	3.05

The results reveal a repetition rate whose average came to as low as 3.05 percent for the four years considered. Even higher repetition rates observed in Form 4 followed by Form 3 were still less than 5 percent. Low repetition rates reveal internal efficiency of the education system because grade repeaters otherwise occupy places that could have been taken up by

other students and it therefore inhibits efforts to educate large number of students. They also occupy resources which would have been used to educate new students (Eshiwani, 1993). The idea that repetition enhances students' good performance is not true since repeating one or more of these years of their secondary education can be the first step towards dropping out (UNESCO Statistics, 2006). The low repeater rate pointed out to high internal efficiency. From the results in Table 4.23, the trend of student repetition between 2008 and 2011 was established by computing the average grade repeater rate across the forms. Even though there was a slight reduction in the rate of student repetition from 3.6 percent in 2009 to 2.87 percent in 2011, the overall trend reveal fluctuating repeater rate across the years but at a reducing rate, therefore, improved internal efficiency.

The reduction of repetition phenomenon rate indicate efforts of the schools to ensure that there is minimal manifestation of wastage within education sector in line with Pontetrat and Hardman (2005) concern.

4.4.2 Student Dropout Rate (GDR)

An estimate of the number of dropouts was arrived at from the information given by the principals. Additional information was gathered from the class registers and a final table of dropouts per form per year arrived at. Dropouts are students who are no longer in school. Grade dropout rate is the % of students dropping out from a given grade at a given time. In determining the grade dropout rate, the formula below was applied (Chiuri & Kiumi, 2005).

$$\frac{N_t^k - [(N_{t+1}^{k+1} - R_{t+2}^{k+1}) + R_{t+1}^k]}{N_t^k}$$

Where $N_{t+1}^{k+1} - R_{t+2}^{k+1}$ = Survivors from initial grade into the subsequent grade the subsequent year.

R_{t+1}^k = Repeaters of the initial grade in the subsequent year.

N_t^k = Total enrolment in the initial grade initial year

Below is the summary of the grade dropout rate in the schools studied as computed from the data on students' distribution Table 4.22.

Table 4.24 Average student grade dropout rate

Form	1-2		2-3		3-4		Average
Year	Rate	%	Rate	%	Rate	%	%
2008	0.08098	8.098	0.1414	14.14	0.01794	1.794	8.011
2009	0.01796	1.796	0.00423	00.423	0.0116	1.16	1.126
2010	0.0232	2.32	0.0563	5.63	0.09333	9.33	5.761
2011	0.1591	15.91	0.07446	7.446	0.08350	8.35	10.57
Average	0.07072	7.072	0.0691	6.91	0.05159	5.159	6.380

The findings about the student dropout rates reveal that the highest average dropout rate at 7.072 percent occurred between 1 and 2 Forms followed by 6.91 percent between 2 and 3 Forms. The lowest average dropout rate was recorded between Forms 3 and 4 at 5.159 percent. The average dropout rates between the forms for the four years reduced steadily showing improved efficiency between the forms. On yearly basis, however, 2011 recorded the highest AGDR of 10.57 percent. This was due to the higher grade dropout rates of 15.91 percent between Form 1 & 2 and 8.35 percent between Forms 3&4 in the same year.

It was evident that this high dropout rate was a major contribution to the reduced proportions of students who complete the secondary course. One underlying consequences of this dropout cases is the negative impact on education efficiency. The trend of the average student GDR between 2008 and 2009 recorded a sharp drop from 8.011 percent to 1.126 percent. This period represents the first and second years of FSE implementation and perhaps schools were still very keen on the warning of ROK (2008) that the MOE is charged to ensure that the guidelines on FSE are implemented by all schools and that the government would not allow or tolerate schools which impose unauthorized levies since they would undermine the

successful implementation of the policy whose main objective is to ensure that no deserving children from poor families do not miss out or dropout of secondary education. The trend of the AGDR thereafter has been drastically increasing from 1.126 percent to 10.57 in three years and this leaves a lot of questions unanswered. However, these rates were lower than the dropout rates for Africa and Latin America ranging from 26.2 percent to 64.7 percent and from 23.1 percent to 54.7 percent respectively (World Bank, 2005).

The DEO attributed such kinds of scenario in the district to some extent to the fact that the schools have not fully exploited and diversified cost-saving measures and socio-cultural factors but not fully to cost problems because, to her, the cost of education was so much subsidized and that the user charges were affordable. The affordability of user charges and fees was a fact that was supported by all the respondents from the sampled schools. They all attributed this to cost-saving measures put in place in the schools. This is contrary to Psacharopoulos (1985) position that one of most powerful influences on demand for secondary and higher education is level of family income and that poor families will certainly find it difficult to pay fees even as free education imposes a substantial financial burden through earnings forgone and out-of- pocket expenses in form of clothes, travel, books and other direct ones.

4.4.3 Student Completion Rate

The secondary completion rate is an indicator of human capital formation and internal efficiency of a school system. It is also a direct measure of national progress towards the MDG and Education for All. The secondary completion rate reflecting the secondary cycle as nationally defined i.e. 4 years for the 2008 and 2009 cohorts as indicated in table 4.22 were calculated using the following formula as developed by Chiuri and Kiumi (2005):

$$N_{t+3}^{k+3} - R_{t+4}^{k+3}$$

$$N_t^k$$

Where N_{t+3}^{k+3} Refers to the student enrolment into

the final grade

R_{t+4}^{k+3} refers to the repeaters in the final grade the final

year.

N_t^k refers to total enrolment in the initial grade in

the initial year.

i.e. (i) 2008 cohort = $\frac{864 - 39}{1025} = 0.804878 = 0.80$

(ii) 2009 cohort = $\frac{912 - 34}{1058} = 0.82986767485 = 0.83$

The index falls below the 90 percent and below the completion rates required for an education system to be considered internally efficient. A completion rate of 0.80 as registered by the 2008 cohort reflects a situation where about 80 percent of the students who enrolled in form 1 completed form 4. The second scenario is about the 2009 cohort. It reflects a situation of where 83 percent of the students who enrolled in form 1 completed form 4. The trend is increasing and it indicates a positive trend. This is an indicator of an efficient secondary education.

4.4.4 Student Graduation Rate (GR)

Graduation rate refers to the number of students who graduate from an education system from the proportion of those who survive upto the terminal grade. In the case of this study, using the same data in table 4.23, the graduation rate was established by dividing the number of students who sat for the final examination (KCSE) by the total enrolment in the terminal grade in the same year. The formula below was used as provided by Chiuri and Kiumi (2005).

$$\frac{G_{t+3}^{k+3}}{N_{t+3}^{k+3}}$$

Where G_{t+3}^{k+3} refers to the number of students who sat for
KCSE

N_{t+3}^{k+3} refers to the total enrolment in the terminal grade (Form 4)

The graduation rate of students in the public secondary schools studied between the years 2008 and 2012 is presented below:

Table 4.25 The Graduation Rate in public secondary Schools

Year	Graduation Rate	%
2008	0.9971	99.71
2009	0.9972	99.72
2010	0.9953	99.53
2011	0.9953	99.53
2012	0.9978	99.78

The findings as in Table 4.26 reveal a trend of high student GR of over 99 percent. A very high percentage of the students who survive up to the final / terminal level sit for their KCSE examination. This means there is high internal efficiency in Form 4 in the public secondary schools in the area studied. It concurs with UNESCO (2005) that high graduation rate indicate high internal efficiency.

4.4.5 Average Year Per Graduate

The amount of resources spent on a graduate should be compared to the ideal number which is simply the duration of the education cycle i.e. 4 years. More than 4 years input per student (graduate) indicate wastage in the system that may be due to either dropout or repetition. In computing the average years per graduate certain assumptions which if not realized would have made the indicator meaningless were taken into consideration. The method did not take

into account the quality of output that the system was producing. The method took into account only the number of students who successfully completed the education cycle, which meant learners' attainment was ignored. The method also assumed that all the members of the cohort had identical facilities in schools, which may not have been the case. The method also did not consider socio-economic background of the students. The method took cognizance of only the number of dropout and repeaters as possible manifestations of inefficient system. The average years per graduate was arrive data by adding the enrolment in a cohort from the initial or entry point (Form 1) to the terminal grade (Form 4) divided by the graduates emanating from the cohort. The formula below was used.

$$\frac{N_t^k + N_{t+1}^{k+1} + N_{t+2}^{k+2} + N_{t+3}^{k+3}}{G_{t+3}^{k+3}}$$

The average year per graduate for 2008/2012 cohort therefore was calculated thus:

$$\frac{1025+945+963+864}{860} = \frac{3797}{860}$$

$$= 4.415$$

This was 4.415 average years per student compared to an ideal average of 4 years. This is not a very high average. It is less than half a year although more resources were being devoted to educate a student than the minimum required. It translates to using an additional 4.98 months worth of resources to educate a student for 4 years. This is slightly wasteful. For the 2009 cohort, the average year per graduate Rate was calculated as follows:

$$\text{AYPGR} = \frac{1058+1048+994+912}{910}$$

$$= \frac{4012}{910}$$

$$= 4.409$$

This translates to 4.409 years per graduate for 2009/2012 compared to an ideal average of 4 years. From this result it was realized that the trend was reducing. The AYPGR for

2008/2011 cohort was lower than the AYPGR for 2008/2011 cohort. This was a sign of improved internal efficiency. It also negates the premise that 30% of students who join secondary drop out before reaching Form 4 (MOE, 2005). The trend has changed and this will help reduce rampant wastage and inequality of access in education sector as observed by Pontetrat and Hardman (2005).

4.4.6 Coefficient of Efficiency

The most common indicator used to assess the educational efficiency is the coefficient of efficiency (also called the input-output ratio). In a perfectly efficient system, this co-efficient would equal to 100 percent. A coefficient of less than 100 percent therefore reveals inefficiency (UNESCO, 2005). The coefficient of efficiency was calculated by dividing the optimal (ideal) number of students' years (i.e. in the absence of repetition and dropout) by the number of actual student years spent by a cohort of students. Therefore, coefficient for:

$$\text{i) } 2008/2011 \text{ cohort} = \frac{4}{4.415} = 0.906$$

$$\text{ii) } 2009/2012 \text{ Cohort} = \frac{4}{4.409} = 0.907$$

The two coefficient of efficiency of 0.906 or 90.6% and 0.907 or 90.7% for 2008/2011 and 2009/2012 cohort respectively are lower than the efficiency coefficient of developed countries like the US, UK, Canada and Switzerland at over 97% but higher than both an average of 77.4% for Latin America and the Caribbean and; between 48.4% to 57.6% for Sub Saharan Africa (World Bank, 2005).

The results presented and discussed under this objective reveal that repeater and dropout rates are lower, completion rates of 80 percent is lower than recommended rate of at least 90 percent (UNESCO, 2008). Graduation rates are very high, all calculated at over 99 percent.

The average year per graduate was 4.409 years leading to a determination of 90.9 percent coefficient of efficiency. Based on all these analyses, the study determined a high internal efficiency level of 0.909 (90.9%) which is in line with the UNESCO (2008) recommended coefficient of efficiency of over 0.90(90%) for an internally efficient education system in developing countries.

4.5 The influence of cost-saving measures on internal efficiency

The third research objective was to determine the influence of cost-saving measures on internal efficiency in public secondary schools. To achieve this objective, the principals, the teachers and the PTA representatives were requested to indicate their opinion concerning the influence the cost- saving measures have on the level of the internal efficiency. The DEO and AEOs were equally requested to give their opinion on the same. The results were as indicated in the table below for the principals, teacher and PTA representatives:

Table 4.26 Respondents’ opinion about the influence of cost-saving measures on internal efficiency level

Response	Principal N= 10		Teacher N=60		PTA Reps N = 20	
	N	%	N	%	N	%
Help improve internal efficiency	10	100	51	85	20	100
Do not help improve	0	0	9	15	0	0
Not all measures help improve	0	0	0	0	0	0
Have negative influence	0	0	0	0	0	0
Total	10	100	60	100	20	100

Source: Questionnaires for Principals, Teachers and PTA representatives

The results indicate a popular idea about the influence of the cost-saving measures on internal efficiency in the sampled schools. It was eminent that cost-saving measures help improve internal efficiency. All the principals, PTA reps and 85% of the teachers attested to this. The DEO and the AEOs on their part appreciated the efforts the schools had exerted to employ

cost-saving measures which according to them had ensured that a greater percentage of students were maintained in schools to continue with their studies. The DEO, however, accepted that there were cases of repetition and dropouts in the district but emphasized the main reasons for such cases were socio-cultural and not cost-related.

It was observed that the schools which had not fully exploited the available cost-saving measures should be encouraged to do so and the socio-cultural problems be identified and addressed in order to improve the internal efficiency level further. This is in agreement with UNICEF (1989) concern that a large part of the burden of educating children is borne by parents who pay for tuition, books, uniforms, PTA contributions, activities, furniture and building funds among other contributions. Failure of which, students drop out. World Bank (1980) confirms this by asserting that wastage and repetition increase the social costs of education without correspondingly increasing the benefits. In the light of wastage rates, a number of developing countries have to provide 10 years of primary schooling instead of a normal or prescribed period to produce one successful school completer because of dropouts and repetitions. This was in relation to primary schooling but it can be generalized to secondary schooling.

The other issue of interest about the data is that the indication by all the principals and PTA that cost-saving measures help improve internal efficiency is a demonstration that they appreciate that school efficiency has to be pegged on how education as a system operates to meet its objectives that is “holistic operation” (Abagi & Odipo, 1997) – the reason for which SSE policy was launched (ROK, 2008). Most importantly, it confirms the assertion by Hanushek (1996) that just providing more resources to schools is not sufficient to ensure gains in students’ outcomes. How money is spent is more important than how much money is spent. This agrees with Forojala (1993) that any measure taken to improve educational quality or opportunity without proper examination of its cost consequences is self-defeating

and that costs have little meaning or value unless they are set against educational results and in turn weighed against objectives. In tandem with that Levin (1995) emphasizes that the purpose of cost-effective analysis in education is to ascertain which programme or combination of programmes can achieve particular objectives at the lowest costs. By choosing those with the least cost for a given outcome, society can use its resources more effectively, saving some. The saved resources through such approach can be devoted to expanding programme or to other important educational and social endeavours.

The results also show that schools are not entirely relying on government and parent contribution but rather initiating and running projects which generate and supplement income. This is in tandem with the advice of Olembo (1985) . Oyaro (2008) concurs that such steps would help improve access and retention of students in secondary schools.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

Data for this study was obtained from 10 public secondary schools which were selected using random selection. The sample size was 103 respondents consisting of principals, teachers, PTA representatives of the sampled schools and the two AEOs together with the DEO. The respondents from the schools completed questionnaires while the AEOs and the DEO interviewed. In addition, more information was gathered from each of the sampled school using the document analysis guide and observation schedule.

5.2 Summary of Findings

This section summarizes the research findings presented, analyzed and discussed in chapter 4 by objectives that guided the study.

5.2.1 Cost-saving Measures employed by the principals

The first objective of the study was to establish cost-saving measures employed by the principals of public secondary schools in Kisumu West District. A number of findings were established as cost- saving measures.

5.2.1.1 Status of sampled public secondary schools

It was found out that most schools were Boarding schools while a few were pure day schools. There was need to establish more day schools or Day Wing in Boarding schools. It was also felt that mixed schools were more expensive to run than single sex schools in light of required facilities.

5.2.1.2 Availability and adequacy of various physical facilities and space

On this issue, it was established that : (a) All the sampled schools were connected with the mains electricity supply leading to all the schools having at least electronic gadgets such as

computers, photocopiers, printers etc. However, no school indicated it had employed E-learning as a cost-saving measure. The schools also had at least a water source. Alongside these, all the schools had classrooms, latrines/ toilets, laboratories and playgrounds.

(b) Majority of the schools had staff houses and dormitories. At the same time half of the sampled schools had buses while only a few had dining halls and school vans. In general, most of the schools sampled indicated that even though the physical facilities were available, they were inadequate.

5.2.1.3 Sharing Facilities between neighbouring schools

On this matter, it was discovered that: (a) Only 40 percent of the sampled schools shared facilities. However, 60 percent of the principals supported sharing of facilities between schools. (b) If sharing of facilities is not well regulated, it may be grounds for conflict/misunderstanding and inconveniences as represented by those principals who did not support sharing.

5.2.1.4 Frequency of repair and maintenance of school facilities

On this issue, it was revealed that half of the principals repaired and maintained their school facilities termly. The rest did so either regularly, when funds are available or annually as indicated by the other half. It was also found out that schools put measures in place to reduce cost on RM such as sensitizing the users, surcharging the culprits and using students to take part in RM.

5.2.1.5 Teachers Establishment in public secondary schools

Concerning this matter, it was found out that: (a) 32.9 percent of the teachers in the sampled schools were BOG teachers. The principals indicated that there was an increase in student enrolment and serious shortage of TSC teachers as major reasons for employing BOG teachers. These reasons were echoed also by the DEO and the AEOs. (b) Only teachers of English and Mathematics from nearly all of the sampled schools had teaching load of 28 and 27 lessons per week respectively. Teachers of Humanities from and teachers of Technical and

Applied from majority of the sampled schools both had teaching load of below 24 lessons. There was a clear indication of underutilization of teachers as per MOE (2007) recommendation.

5.2.1.6 Financial Management in public secondary schools

Regarding this matter, the study realized that: (a) All the schools had qualified accounts officers. (b) Majority of the principals had attended financial management courses. At the same time all the schools had their school accounts audited yearly. All these were signs of prudent financial management.

5.2.1.7 Whether the schools had made savings in the year 2011. It was revealed that: - (a) Majority of the schools did not make any savings in the year 2011. (b) Most of the savings were pumped into IGAs and in renovation of physical facilities by the schools which made savings.

5.2.1.8 Presence of extra time allocated for teaching hours

It was found out that: (a) All of the sampled schools had extra time allocated for teaching other than the normal teaching time. Such teaching was allocated for early mornings and evenings, Saturdays and during the school holidays. (b) Extra teaching was occasionally done at an extra cost; an extra burden to the poor parents who may be forced to withdraw their children from such schools thereby affecting internal efficiency.

5.2.1.9 Timely completion of the school projects. Concerning this, it was revealed that: (a) Majority of the schools never completed their projects in time. The principals blamed inadequate funds and insincere contractors for the delay. (b) Extra costs were incurred in case of delays.

5.2.1.10 Land utilization apart from buildings and playgrounds was another important area of concern. About this matter it was revealed that: (a) Ninety percent of the schools had their land utilized for crop/vegetable farming and tree planting while Horticultural and dairy farming were practised each by 80 percent of the schools on their land. Grazing Field was

also popular, being practised by a majority of the schools (b) Poultry farming and Flour milling were equally practised by 40 percent of the sampled schools.

5.2.1.11 Sources of financing public secondary school education

It was discovered that: (a) All schools had fees as the main source of finance. In addition, they all got financial assistance from Government grants, CDF/ LATF and Donors while nearly all of them had income generating activities as a supplementary source. (b) All the principals accepted payment of fees in kind with parents offering services like splitting firewood; and supply of firewood together with foodstuffs.

5.2.1.12 Presence of income generating activities in the public secondary schools. On this issue, it was revealed that: (a) Ninety percent of the schools had engaged in income generating with all of them practicing vegetable farming. (b) There was variation in income generating activities though not fully exploited. There was need to urge for full exploitation and the other schools not sampled to initiate more IGAs to supplement funding from other sources, of which some should be used to waive fees for needy students.

5.2.1.13 Acquisition of school materials by the principals. The study on this issue revealed that: (a) All of the principals acquired stationary by tendering while nearly all of them acquired text books and kitchen supplies in bulk. (b) Only 10 percent of the schools obtained text books by either donation or by direct purchase and kitchen supplies by direct purchase. (c) It was of importance that the principals adhered to the procurement procedures given by the MOE to ensure efficient utilization of financial resources.

5.2.1.14 The number of non-teaching staff in public secondary schools was also an issue of concern. The study found out that: (a) Fifty percent of the schools had above 15 non-teaching staff while the other half had below 15 non-teaching staff. (b) Possibility of not following strictly CBE when employing ancillary staff was evident.

5.2.1.15 Duty combination by non-teaching staff. Concerning this issue, it was discovered that: (a) All the principals indicated that there were cases of duty combination by the non-teaching staff in their schools. This was found necessary to reduce the expenditure on wages and redundancy in service delivery. It will also maximize human resource utilization. (b) Duty combination is a motivation to regular staff as promotion is based on acquisition of extra skills.

5.2.1.16 Hiring of non-teaching staff on contractual basis. The findings on this matter revealed that: (a) Ninety percent of the principals had employed some of their non-teaching staff on contract basis. This was seen as a cost- saving measure which should be practised in public secondary schools. (b) Some duties were given on contract basis due to shortage of auxiliary staff and inability to sustain monthly payments.

5.2.1.17 Summary of cost-saving measures to help reduce repeater and dropout rates in public secondary schools in Kisumu West District. On this issue, it was discovered that all the sampled schools employed the following measures: Bulk purchase were made through direct sourcing to avoid middle persons who demand for high pay, proper utilization of available resources such as electric lights through strict regulation, assigning students to perform general clearing duties within the schools instead of employing workers for pay, assigning multiple tasks to school workers for maximum human resource utilization, tree planting for firewood and timber that would otherwise be acquired by the school at a cost, accepting payment in kind through service delivery or supply of materials by parents and schools engaged in various income generating activities to supplement sources of funds. However, the major observation on these measures was that, schools did not fully exploit the cost-saving measures as indicated by the fact that many schools did not make savings in 2011. It was also observed that increase in class size, use of education media, multiple shifts and increase in number of lessons were yet to be explored and exploited.

5.2.2 The internal efficiency level

The second objective of the study was to determine the internal efficiency level in public secondary schools in Kisumu West District. In trying to determine the internal efficiency level in the 10 sampled schools for the study analysed the following flow of students' indices: Grade repetition, grade dropout, completion and graduation rates. Alongside these indices, the study also, established Average Years Per Grade leading to arriving at the coefficient of efficiency which is the most common indicator used to assess the educational efficiency (UNESCO, 2008).

5.2.2.1 The Repeater and Dropout Rates for the 2008- 2011. The results on this issue revealed that: (a) The year 2009 recorded the highest average grade repeater rate of 3.6 percent as compared to the average grade dropout rate of 1.126 percent in the same year which was the lowest average grade dropout rate recorded. (b) The year 2011 recorded the highest average grade dropout rate of 10.57 percent which was due to higher dropout rates between Forms 1 & 2 and between Forms 3 & 4 in the same year. The rates although generally lower than the international rates, had a negative impact on completion rates in the district. (c) While the repeater rate is fluctuating, the dropout rate is on a drastic increasing trend after a sharp drop in 2009 despite the affordability of the cost of education as purported by all the respondents including the DEO and AEOs. They attributed this affordability to the cost- saving measures put in place in all the schools, even though the measures had not been fully exploited by the schools, but warned that delay and low capitation of FSE funds if not checked could bedevil this trend further.

5.2.2.2 Completion rates were analysed using two cohorts i.e. 2008/2011 and 2009/2012.

The completion rate for 2008/2011 cohort was 80 percent while for 2009/2012 cohort the rate was 83 percent indicating improved internal efficiency.

5.2.2.3 Graduation rates for the years 2008-2012. It was established that all the years recorded over 99%. This was a very high internal efficiency.

5.2.2.4 Concerning Average Year Per Graduate. The study still used the two cohorts and it was discovered that 2008 Cohort spent 4.415 years while 2009 Cohort spent 4.409 years. This also showed an improved internal efficiency.

5.2.2.5 Finally, analysis of coefficient of the two cohorts revealed that coefficient of efficiency of cohort 2008/2012 was 90.6 percent while that of 2009/2012 was 90.7 percent. Even though, the coefficients reveal inefficiency because they are less than 100 percent according to UNESCO (2008), the trend shows an improved level of internal efficiency.

5.2.3 Influence of cost-saving measures on internal efficiency

The third objective of the study was to establish the influence of cost- saving measures on internal efficiency. The study revealed that cost- saving measures help improve internal efficiency as indicated by 100 percent of the principals and the PTA representatives and 85 percent of the teachers. The DEO and AEOs also held the same view.

5.3 Conclusion

The main aim of the study was to investigate cost-saving measures employed by public secondary schools in Kisumu West District and their influence on internal efficiency. On the basis of the research findings and summary, the following conclusions were made according to the objectives of the study:

First, Quite a number of cost-saving measures have been employed in public secondary schools such as bulk purchase avoiding middle persons who demand for high pay, proper utilization of available resources such as electric lights through strict regulation, assigning students to perform general clearing duties within the schools instead of employing workers for pay, accepting payment in kind through service delivery or supply of materials by parents and through involvement in income generating activities such as vegetable farming, horticultural farming, tree planting and hiring out of facilities among other activities. However, timely completion of school projects, increase in class size, use of electricity to

promote e-learning, multiple shifts and effective utilization of available TSC teacher are yet to be enhanced for schools to achieve more cost reduction. Moreover, the cost-saving measures were not fully exploited as indicated by the fact that most schools did not make savings in 2011. Perhaps this could be the reason why there were still cases of repetition and dropout. The study therefore suggests that income generating activities be intensified in public secondary schools and income generated be used to waive fees for the poor and needy students. It should be used as well to boost the internal bursaries for the needy students. This will help control cases of absenteeism, repetition and dropout caused by fees problems. In addition, schools should exploit other options in the utilization of physical facilities and land to generate income. The study as well suggests that apart from the government hiring trained and competent officers to manage school resources, schools should purchase goods in bulk, follow procurement procedures, base employment on CBE of concerned schools, practice hiring auxiliary staff on contract basis, share facilities between schools and ensure prudent use of all sourced funds.

Secondly, the study determined an increasing level of internal efficiency indicated by reduced repetition rate; increased completion rates and most importantly indicated by graduation rates and average years per graduate used to compute the coefficient efficiency. Average Dropout rates, though low, were increasing drastically. This partly explains the level of internal efficiency which was determined. The findings indicated that public secondary schools in Kisumu West District have a slightly lower internal efficiency of average years per graduate of 4.409 which translated to an additional .409 years needed to produce graduates that require an optimal 4 years of the secondary education course. A coefficient of efficiency of 0.907 or 90.7% which was consistent with the UNESCO recommended coefficient of efficiency of over 0.90 (90%) for an internally efficient education system was established.

Finally, the study established that cost-saving measures helped improve the level of internal efficiency.

5.4 Recommendations

Based on the findings, summary and conclusions, the following recommendations are made. The MOE together with the stakeholders in individual secondary schools may consider the following as cost-saving measures in order to improve on internal efficiency:

- (a) Increasing or creating the Day wing capacity of the schools / Increase class sizes.
- (b) Holding /organizing management courses on cost-saving measures for school administration.
- (c) Schools should diversity IGAs whose proceeds should be used to waive fees / start internal bursaries for the needy students to curb cases of absenteeism, repetition and dropouts.
- (d) The government (MOE) should make available grants on time to schools and implement recommendations of Task Force on Education 2012 on the amount of capitation.
- (e) MOE should intensify e- learning in schools. Most schools have its resources which are underutilized.
- (f) Schools should purchase goods and materials in bulk to minimize expense.
- (g) MOE should train principals on financial management and also conduct regular auditing of books of accounts to promote prudent and sound financing management.
- (h) Schools should encourage parents to offer services and materials as a way of payment of fees in kind.
- (i) Schools should be encouraged to promote sharing facilities as one of the cost-saving measures.
- (j) Schools should minimize repeater and dropout rates to ensure reduced Average Year Per Graduate in order to enhance high level of internal efficiency.

5.5 Areas for Further Research

On the basis of the research findings, summary, conclusion and recommendations, the following areas are worth researching on:

- (a) The study having covered only Kisumu West District other studies should be done in other districts of Kisumu County region to investigate cost-saving measures and internal efficiency in public secondary schools.
- (b) There is need to study on socio-economic factors and internal efficiency.
- (c) There is need to study on the transition rates from primary to secondary education in the district.
- (d) A study should be carried out to ascertain internal efficiency in public primary schools.
- (e) A study on e- Learning readiness in the public secondary schools in Kisumu West District.

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APPENDICES

APPENDIX A

QUESTIONNAIRES FOR HEADTEACHERS

INTRODUCTION

This questionnaire is designed to solicit information on cost saving measures in enhancing internal efficiency in public secondary schools in Kisumu West District.

Kindly answer all the questions in the spaces provided honestly. Information so obtained will be treated with high degree of confidentiality

Section A: Background information

1. Your gender male female
2. Academic qualification **MED** **BED** **DIP/ED**
Other (Specify)
3. i) Your experience in headship in years.....
ii) Your experience in headship in the current school.....years.

4a) Administration Division

b) Type and status of the school (tick appropriately)

- i) [] Boys [] Girls [] Mixed
- ii) [] Boarding [] Day [] Boarding and Day
- iii) [] National [] Provincial [] District

c) Sponsor

d) When was the school established?

5. Please complete the table below on enrolment

Year	No of streams per form				Enrolment per form				Total
	1	2	3	4	1	2	3	4	
2008									
2009									
2010									
2011									
2012									

b) Are there reasons for increase or decrease in enrolment? Specify

SECTION B: Physical and material resources

1 (a) What is the size of your school in acreage?

(b) Apart from land under buildings and playgrounds, how else is land utilised within the school? (Specify)

- i)
- ii)
- iii)

(c) What is the size of school farm in acreage?

2. Fill appropriately the table below on physical facilities

FACILITIES	AVAILABILITY		ADEQUACY	
	YES/NO	NUMBER	YES	NO
Classrooms				
Dormitories				
Laboratories				
Library				
Workshops				
H/ Science room				
Toilets /latrines				

Staff house				
Computer room				
Computers				
Photocopiers				
Printers				
Play grounds				
Dining hall				
Electricity				
Generators				
Piped water				
Tank/well/borehole				
School van				
School bus				
Others (specify)				

3. (a) In case of lacking /inadequate facilities what other alternatives do you use?

Facility	Alternative used
i)	
ii)	
iii)	
iv)	

(b) In your opinion how are the alternatives in terms of costs?

(c) i) Do the costs in (b) above enhance internal efficiency? **Yes** () **No** ()

ii) If NO, what cost- saving measures would you propose to enhance internal efficiency

when using such facilities?

a)

b)

c)

d)

4. a) Are there facilities shared between your school and another school? Yes () No ()

b) If yes, specify

c) Do you support sharing of facilities between schools? Provide a tick as necessary

YES () **NO** ()

d) Give reasons for (C) above

5 a) How often do you maintain and repair your facilities? Provide a tick appropriately

- i) Frequently []
- ii) Per term []
- iii) Yearly []
- iv) When funds are available []

b) What measures do you undertake to reduce costs on maintenance and repairs?

6 a) Which problems do you encounter in your endeavour to reduce costs on maintenance and repairs of physical facilities?(specify)

b) Suggests other ways you think can be undertaken to reduce costs on maintenance and repairs of physical facilities.

7a) How does the school acquire its text books?

- i) Purchase by the school []
- ii) Purchase by the parents and guardians []
- iii) Donation from sponsors/well wishers []
- iv) All the above []

8 a) How do you acquire the following materials?

Materials	Acquisition (tick)			Amount	
	Donor	tender	Direct purchase	Bulk	Units
Text books					
Stationeries					
Kitchen Supplies					

b) Briefly explain your answer in (a) above

c) Did you make any savings in 2011?

Yes [] NO []

d) If yes, specify the amount and how it was utilized

SECTION C: Human Resources

1 a) What is the total number teachers in the school?

b) Indicate the number of teachers under

i) TSC

ii) BOG

c) Give reasons for employing or not employing BOG teachers

i) For employing

ii) For not employing

2) Complete the following table on average teaching load per week for different subject categories

No.	Subject categories	Teaching load per week
i	Language	
ii	Mathematics	
iii	Sciences	
iv	Humanities	
V	Technical and applied	

3. a) How many non –teaching staff do you have in school ?

b) Are there cases of duty combination by the non teaching staff?

c) Give reasons for your answer

4. Indicate job specifications and the member of non teaching staff for each e.g security, accounts clerk, kitchen staff, grounds men etc

No	Job specification	Number
i		
ii		
iii		
iv		
v		
vi		
vii		

5. a) Are there situations when some of the non teaching staff are employed on contractual basis?

Yes () No. ()

b) If yes specify the duties

c) What are the reasons for (a) above?

d) Are there cases when you shares services of teachers from neighbouring school especially the graduate teachers in the primary schools?

Yes () No ()

ii) If yes specify

iii) Do you support sharing of services of teachers between schools, especially the graduates who are teaching in primary schools?

SECTION D: Financial resources

1. What are sources of finance for your school?

I)

ii)

c) What are your views about the fees charged?

d) Apart from cash do you accept payment in kind?

Yes () No. ()

If yes specify_____

E) Are there students who are sometimes sent home for lack of school fees?

Yes () No. ()

f) If yes how many times are they sent home for fees in a term?

Once () Twice () Thrice () Over three times ()

g) i) Are there any fee arrears?

Yes () No. ()

ii) If yes approximate the figure in Ksh. As at 31st December 2011

3ai) Does the school have a qualified accounts officer? Yes () No ()

ii) If yes, how efficient is he/she?

Very () average () Just () inefficient ()

iii) If no who prepares your books of accounts/ specify

iv) What is your opinion on the answer in (iii) above?

bi) How often are your accounts audited? Specify

ii) When was the last audit done?

ii) Since the inception of Subsidized Day Secondary Education, has there been any training on resource management for you and your BOG members? Yes () No ()

iii) If yes, explain how it has helped the school in enhancing internal efficiency.

4a) Does your school engages in any income generating activity? Yes () No ()

b) If yes specify

5 a) Did your school make any savings in 2011?

Yes () No ()

b) If yes, how were savings utilised? Specify

c) If no, what are some of the ways in your opinion would enhance making savings in future?
Specify

i)

ii)

iii)

SECTION E: Time Management and others

1. How do you rate time management by the following in your school?

a) Students very good () good () fair () poor ()

b) Teacher very good () good () fair () poor ()

c) Non teaching very good () good () fair () poor ()

2. Apart from normal teaching hours is there any other time allocated for the same?

Yes () No ()

If yes, is it done at an extra cost? Specify

3.i) Are projects within the school completed within the time frame?

Yes () No ()

ii) Give reason for your answer

iii) What are the sources of materials used on the projects?

a)

b)

c)

4. What cost saving measures are being practiced in your school in relation to time management?

5 a) Are there incidents of drop out, absenteeism and repetition in the school? **Yes** () **No** ()

b) If yes, what are the measures for:

i) Absenteeism

ii) Repetition

iii) Drop out

iv) To what extent is drop out, repetition and absenteeism a result of the cost of education?

6. What is the percentage of drop out, absenteeism, repetition, attributed to the unfavourable cost of education?

Problem	percentage
Absenteeism	
Repetition	
Drop out	

7a) What cost- saving measures have you tried to put in place to help control the scenario in (6) above? Specify

SECTION F: General view

1. With the introduction of FSE, parents still have the mandate to participate in the running of the schools. How is their participation?

Negative () Positive ()

2. What in your view is the school fees charged with regard to the income poor parents?

i) High ()

ii) Average ()

iii) Low ()

3. What do parents say with regard to fee charged?

4. Give your opinion about the influence of cost- saving measures on internal efficiency.

APPENDIX B

QUESTIONNAIRES FOR TEACHERS

This research is meant for academic purpose. It will try to find out the cost –saving measures in enhancing internal efficiency. You are requested to provide answers to these questions as honesty and precisely as possible. Responses to these questions will be treated with a lot of confidentiality please tick () where appropriate or fill in the required information on the spaces provided

Section A

Background Information

1. Your gender Male Female
2. Your age(in years)
[] between 20- 29
[] Between 30- 39
[] Between 40- 49
[] 50 and above
3. Level of education
[] Bachelor's Degree Diploma
[] Master Degree [Others (specify)]
4. How many years have you been a teacher?

SECTION B

Information on the cost saving measures influencing internal efficiency in class?

1. What is the total number of students in class?
2. What is the full capacity of the class?
3. a) Are there incidences of absenteeism, repetition and dropout in the class? If yes, what are the reasons for
 - i) Absenteeism
 - ii) Repetition
 - iii) Dropout
- b) To what extent is absenteeism, repetition and dropout a result of cost of education? Specify.

4. a) Are there students from your class sent home to bring school fees in the course of the term? **YES** **NO**
- b) If YES, how does it affect the internal efficiency in the class and school at large?

5. a) What is the percentage of absenteeism, repetition, and drop out attribute to the unaffordable cost of education?

	Percentage attributed to unaffordable cost of education
i) Absenteeism	
ii) Repetition	
iii) Drop out	

- b) What is your view on the cost of education? (Specify)

6. What cost –saving measures would you recommend to help in influencing efficient utilization of resources with regard to the poor?

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APPENDIX C

QUESTIONNAIRES TO THE PTA REPRESENTATIVE ON THE VIEWS OF PARENTS ON COST OF EDUCATION AND SCHOOL FEES CHARGED

Section A: Background Information

1. Your gender Male Female
2. Academic qualification Primary CPE/KCPE Secondary
KJSE/KCE/KCSE/KACE/EACE(Specify) University

Section B: Information on Cost of Education, school fees charged and cost- saving measures

1. What in your view is the rate of fees charged?
High []
Average []
Low []
2. Are there students within the community who have dropped out of school because of school fees? [] YES [] NO
3. What activities outside schooling hours do your children engage in to help raise their levies?
4. A part from paying hard cash/ cheque, are there other forms of fee payment e.g. in kind or through service that school offer to parents ?(specify)
5. What is the community's general perception towards cost of education?
6. What cost –saving measures should be put in place to enhance internal efficiency in secondary school?

APPENDIX D

INTERVIEW SCHEDULE FOR DEO

1. What are your views on the adequacy of physical facilities in public secondary schools in Kisumu West District?
2. How has the implementation of FSE affected adequacy of physical facilities?
3. What is the impact of the introduction of FSE on students' enrolment in secondary schools in Kisumu West District?
4. What are the positive and negative effects of the enrolment trend in the District?
5. What are your views on the adequacy of funds allocated to secondary schools by the government for FSE per student?
6. What are your views on the adequacy of teachers in the District?
7. Do students in your District pay user charges approved by the DEB?
8. Are there incidences of students within your District being sent home for fees?
9. In your opinion, are the user charges affordable?
10. Are there cases of absenteeism, repetition and drop outs in your district?
11. If yes, to what extent are the cases related to cost of education?
12. What are the cost-saving measures being implemented in the public schools in your District to enhance internal efficiency?
13. What obstacles are forced in the implementation of such measures?
14. What proposals would you make concerning cost-saving measures in enhancing internal efficiency?

APPENDIX E

INTERVIEW SCHEDULE FOR AEO

1. What is your educational administrative division?
2. What are your views on the adequacy of physical facilities in public secondary schools in your division?
3. How has the implementation of FSE affected adequacy of physical facilities?
4. What is the impact of the introduction of FSE on students' enrolment in secondary schools in your division?
5. What are the positive and negative effects of the enrolment trend in the division?
6. What are your views on the adequacy of funds allocated to secondary schools by government for FSE per student?
7. Are there incidences of students within your division being sent home for school fees?
8. Do students in your division pay user charges approved by the DEB.?
9. In your opinion, are the user charges affordable?
10. Are there cases of absenteeism, repetition and dropout in your Division?
11. If YES, to what extent are these cases related to cost of education?
12. What are the costs –saving measures being implementation in the public schools in your Division to enhance internal efficiency?
13. What obstacles are forced in the implementation of such measures?
14. What proposals would you make concerning cost-saving measures in enhancing internal efficiency ?

APPENDIX F

DOCUMENT ANALYSIS GUIDE

1. School enrolment between 2008 and 2012

YE AR	Enrolment Total			Total Repeaters				Total Dropout				TOTAL
	F1	F2	F3	F1	F2	F3	F4	F1	F2	F3	F4	
2008												
2009												
2010												
2011												
2012												

2. School expenditure between 2008 and 2012

YEAR	VOTE TUITION	HEAD	AMOUNT RECEIVED	AMOUNT SPENT
2008				
2009				
2010				
2011				
2012				

3. Income Generating projects for the year 2008-2011

ACTIVITY/PROJECT	EXPENDITURE	INCOME	PROFIT/LOSS	COMMENT
1				
2				
3				
4				

APPENDIX G

OBSERVATION SCHEDULE

To observe the available teaching and learning resources in schools:

Name of school

Date

A: Facilities in the school

Facility	Number/Amount of facilities available	Number /Amount of facilities required	Brief comments
1. Classrooms			
2. Admin office			
3. Library			
4. Text books			
5. Stationeries			
6 .Teacher's guides			
7. Reference materials			
8. T/Learning aids			
9. Laboratories			
10. Science equipment			
11 .Dormitories			
12. Games equipment			
13. Toilets/Latrines			

B. Kinds of buildings

1. Walls and floors

a) Permanent (cement, concrete, sand, stones)
tiles)

b) Semi-permanent (mud, tree poles, cement, sand)
reeds)

2. Roof

a) Permanent (iron sheets,

b) Semi-permanent (grass,

APPENDIXH

RESEARCH PERMIT

REPUBLIC OF KENYA



NATIONAL COUNCIL FOR SCIENCE AND TECHNOLOGY

Telephone: 254-020-2213471, 2241349, 254-020-2673550
Mobile: 0713 788 787, 0735 404 245
Fax: 254-020-2213215
When replying please quote
secretary@ncst.go.ke

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

Our Ref:

NCST/RCD/14/013/186

Date:

27th February, 2013

Ezekiel Onyango Nyangia
Kenyatta University
P.O.Box 43844-00100
Nairobi.

RE: RESEARCH AUTHORIZATION

Following your application dated 19th February, 2013 for authority to carry out research on “*Cost-saving measures and internal efficiency in public secondary schools in Kisumu West District, Kisumu County,*” I am pleased to inform you that you have been authorized to undertake research in **Kisumu West District** for a period ending 31st May, 2013.

You are advised to report to **the District Commissioner and the District Education Officer, Kisumu West District** before embarking on the research project.

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

DR M.K. RUGUTT, PhD, HSC.
DEPUTY COUNCIL SECRETARY

Copy to:

The District Commissioner
The District Education Officer
Kisumu West District.

“The National Council for Science and Technology is Committed to the Promotion of Science and Technology for National Development”

THIS IS TO CERTIFY THAT:

Date of issue 27th February, 2013

Prof./Dr./Mr./Mrs./Miss/Institution

Fee received

KSH. 1,000

Ezekiel Onyango Nyangia

of (Address) Kenyatta University

P.O. Box 43844-00100, Nairobi

has been permitted to conduct research in



Location
Kisumu West
Nyanza

District
Province

on the topic: Cost saving measures and internal
efficiency in public secondary schools in Kisumu
West District, Kisumu County

for a period ending: 31st May, 2013.

Applicant's
Signature

Secretary
National Council for
Science & Technology

CONDITIONS

1. You must report to the District Commissioner and the District Education Officer of the area before embarking on your research. Failure to do that may lead to the cancellation of your permit.
2. Government Officers will not be interviewed without prior appointment.
3. No questionnaire will be used unless it has been approved.
4. Excavation, filming and collection of biological specimens are subject to further permission from the relevant Government Ministries.
5. You are required to submit at least two(2)/four(4) bound copies of your final report for Kenyans and non-Kenyans respectively.
6. The Government of Kenya reserves the right to modify the conditions of this permit including its cancellation without notice.



REPUBLIC OF KENYA

RESEARCH CLEARANCE
PERMIT

GPK6055t3mt10/2011

(CONDITIONS-see back page)