

## **Cost- Saving Measures in Public Secondary Schools: Are these strategies making education affordable in Kisumu West District, Kisumu County, Kenya?**

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### **ABSTRACT**

The major thrust of the study reported in this paper was to examine the cost-saving measures employed by school managers to make education affordable in public Secondary Schools in the study locale of Kisumu West District. The objective was to establish the extent to which these strategies had reduced the cost of subsidized secondary education to become affordable to all, especially among students from poor backgrounds. The study was premised on Cost Effectiveness Analysis based on the works of Hanusek (1986) and Levin (1995) who contend that analytical decision should take incorporate alternatives of both costs and consequences in a more systematic way. A descriptive survey research design was adopted to guide the study. Combinations of purposive and stratified sampling techniques were used to draw a sample size of 103 subjects comprising of 10 principals, 60 teachers, 30 members of the PTA, and 3 Ministry of Education officials deployed in the study locale. Questionnaire for teachers and principals were used to collect quantitative data while interviews with members of the PTA and Ministry of education officers generated qualitative data. It was established that despite the introduction of free day secondary education (FDSE), the latent cost of secondary education was still high and beyond the reach of the poor households. As a result, schools in the study locale had devised cost saving measures including: outsourcing basic services like transport services, converting classrooms into micro-libraries, sharing facilities with neighbouring institutions, introduction of income generating activities and assigning multiple tasks to staff, amongst others. Despite these innovative strategies, the cost of education had not substantially decreased for a majority of students from poor backgrounds. It is recommended that the Government of Kenya through the Ministry of education should increase the amount of capitation and also encourage schools to intensify income generating and cost saving measures geared towards making education affordable by all [310 words].

**Key Words:** Cost-saving measures, affordable education, Public secondary schools, free day secondary education, Kisumu West District, Kisumu County, Kenya.

### **INTRODUCTION**

#### **Background Information**

In line with the international conventions and protocols that encourage governments all over the world to provide universal education to its citizens, the Government of Kenya launched Free Primary Education (FPE) in 2003 and free day secondary education (FDSE) in 2008 as a strategy to make education accessible and affordable to many households in the country (Getange, Onkeo & Orodho, 2014; Orodho, 2013, 2014; Republic of Kenya, 2013). As a result, enrolment in public primary schools rose from 5.9 million in January 2003 to 9.4 million in 2010, an increase of 59.32% in GER (Republic of Kenya/UNESCO, 2012). In terms of financial resources, a total of Ksh 63.4 billion has been spent on the program through purchasing instructional materials, as well as general-purpose expenses/recurrent expenditures through a capitation grant of Ksh 1,020 per child in 19,833 public primary schools (Orodho, 2014; Republic of Kenya, 2012a, 2012b).

The launch of Free Secondary Education (FSE) in 2008 was meant to address illiteracy, low quality education and low completion rates at the secondary level, high cost of education and poor community participation (Republic of Kenya, 2005a, 2005b). Unlike the FPE initiative, which had reference to enormous conventions, resolutions and literature, free secondary education initiative could have been triggered by the politically charged climate that engulfed the country during the 2007 general election which implied that the country may not have

been very prepared for its implementation (Orodho, 2014). However, there was government commitment to increase transition rate from primary to secondary by seventy percent in all districts (Republic of Kenya, 2013; Orodho, 2014).

According to the Free Secondary Education policy, the government was expected to meet the tuition fees of KShs 10,265 per student, while the parents were required to meet other requirements like lunch, transport and boarding fees for those in boarding schools, besides development of approved school projects. This was in line with the government commitment to ensure that regional special needs and gender disparities were addressed (Ohba, 2009). These efforts were a positive move towards the realization of the Millennium Development Goals (MDGs) and Education for All.

What is the rationale for cost saving measures on educational resources in public secondary schools in Kenya? 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. 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.

Accordingly, the Government of Kenya through the Ministry of Education has put in place strategies 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 (Republic of Kenya, 2005, 2012a, 2012b). These are geared towards the promotion a more efficient development of secondary education to improve access, equity and quality of education at this level. These efforts will ensure and assure the 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.

From the foregoing, it is arguable that sustainable provision of the quality subsidized secondary education is fraught with intertwined challenges which include 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. It is on the premise of this background that the study aimed at assessing cost-saving measures that had been put in place in public secondary schools in Kisumu West District, Kisumu County, Kenya.

### **The State of the Art Review**

In this study, cost-saving measure refers to strategies and alternatives that can reduce the cost of education. Farrell 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 not dropping out. Psacharopoulos (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.

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). This agrees with Psacharopoulos (1985) that 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.

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.

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 ( Republic of Kenya, 2005a,2005b,2012a,2012b).

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.

Even with the introduction of SSE, both parents and the school administrators have been left wondering how free it is! Abagi and Odipo (2000) 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.

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.

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. Pursuing this line of argument, Masimbwa (2010) insists that the problem has to do with inadequate budgetary data for a detailed study of costs since they cover expenditures rather than real resource, or the 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.

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, and 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.

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. 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 ). In Sessional 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, multigame 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.

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 (Republic of Kenya, 2008). According to Republic of Kenya (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!

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. Republic of Kenya (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. 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.

Orodho (2014) writing on financing education in Kenya notes that huge latent user fees have found their way into the free primary education (FPE) and free day secondary education ( FDSE) in most basic educational institutions in the country. He laments that although the parents teachers associations (PTAs) have been authorized to suggest extra levies to be imposed with their consent, the parents have ended up being mere

rubber stamps for excessive school levies being witnesses in schools. This tendency has made the fees being charged in most secondary schools to sky- rock beyond the financial means of most poor household hence locking out children from such vulnerable backgrounds (Orodho, 2014)

Getange, Onkeo and Orodho (2014) writing on alternative sources of funding secondary education in public secondary schools in Kisii Central District, Kisii county concluded that given that the financial sources in public day secondary schools are unable to meet the required facilities for enhancing quality education, the government should increase the amount disbursed to schools due to inflation and the high cost of living (Getange, Onkeo & Orodho, 2014). The government contribution should be disbursed in time preferably before the start of the term to avoid delay in disbursements which led to financial strains that hinder quality achievement in PDSS. Also provide enough funds for quality assurance officers. All these are based on promises made by the Government of Kenya and documented in the Basic Education Act, 2013 (Getange, Onkeo & Orodho, 2014).

The Getange, Onkeo and Orodho (2014) study , writing on the viability of income generating activities in schools in Kisii noted that it was evident that schools have IGAS, however, their contributions are minimal and schools should be encouraged to venture into lucrative and enterprising ventures which can generate supplementary income namely; brick making, housing units within the school, hire land for crop and animal production, intensive gardening and keeping poultry(Getange, Onkeo & Orodho, 2014). Schools can create production units with unit managers who can run the IGAS. Entrepreneurial education should be inculcated into the teaching profession (Getange, Onkeo & Orodho, 2014).

### **Statement of the problem**

Despite the bold steps taken by the Government of Kenya to make education affordable by putting in place policies on free primary education (FPE) and free day secondary education (FDSE), evidence from credible research studies indicate that the cost of education is still beyond the reach of most poor parents. Although individual schools have attempted to devise some coping strategies to reduce cost and make education accessible, most schools are not realizing the benefits of free education policies. 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.

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 overall problem of this study, stated in an interrogative fashion was that: Are strategies being adopted by schools in terms of reducing the cost of education meeting the objective of making the education affordable by all?

### **The Purpose and Objectives of the Paper**

The purpose of this paper was to investigate the cost-saving measures applied to reduce the cost of education in public secondary schools in Kisumu West District, Kisumu County. The paper had two objectives, namely:

1. Investigate the cost-saving measures on resources undertaken in public secondary schools to make education affordable to all.
2. Determine the sources of funds used in public secondary schools in Kisumu West District which ensure that students from economically poor families are cushioned.

### **The Theoretical Framework**

The study identified the theoretical framework relevant 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.

They both expected adequate supply of learning resources like more teachers, physical facilities and instructional materials. However, Hanusek (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.

## **RESEARCH METHODOLOGY**

The study used descriptive survey research design. The choice of the design is premised on the fact that survey research deal with incidence, distribution and interrelationships between variables and accurately describes the nature of existing conditions (Orodho, 2009, 2012a). 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. Four types of instruments: questionnaires, interview schedule, observation checklist and document analysis form were used. The questionnaires were used to generate data from the principals and teachers while focus group discussion interviews were used to collect data from 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 quantitative data collected through questionnaires were edited and 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 20.0. The descriptive statistics such as percentage and frequency distribution were used to analyze the quantitative data. Qualitative data was placed under themes consistent with research objectives; and conclusions made based on trends and patterns of responses (Orodho, 2012b).

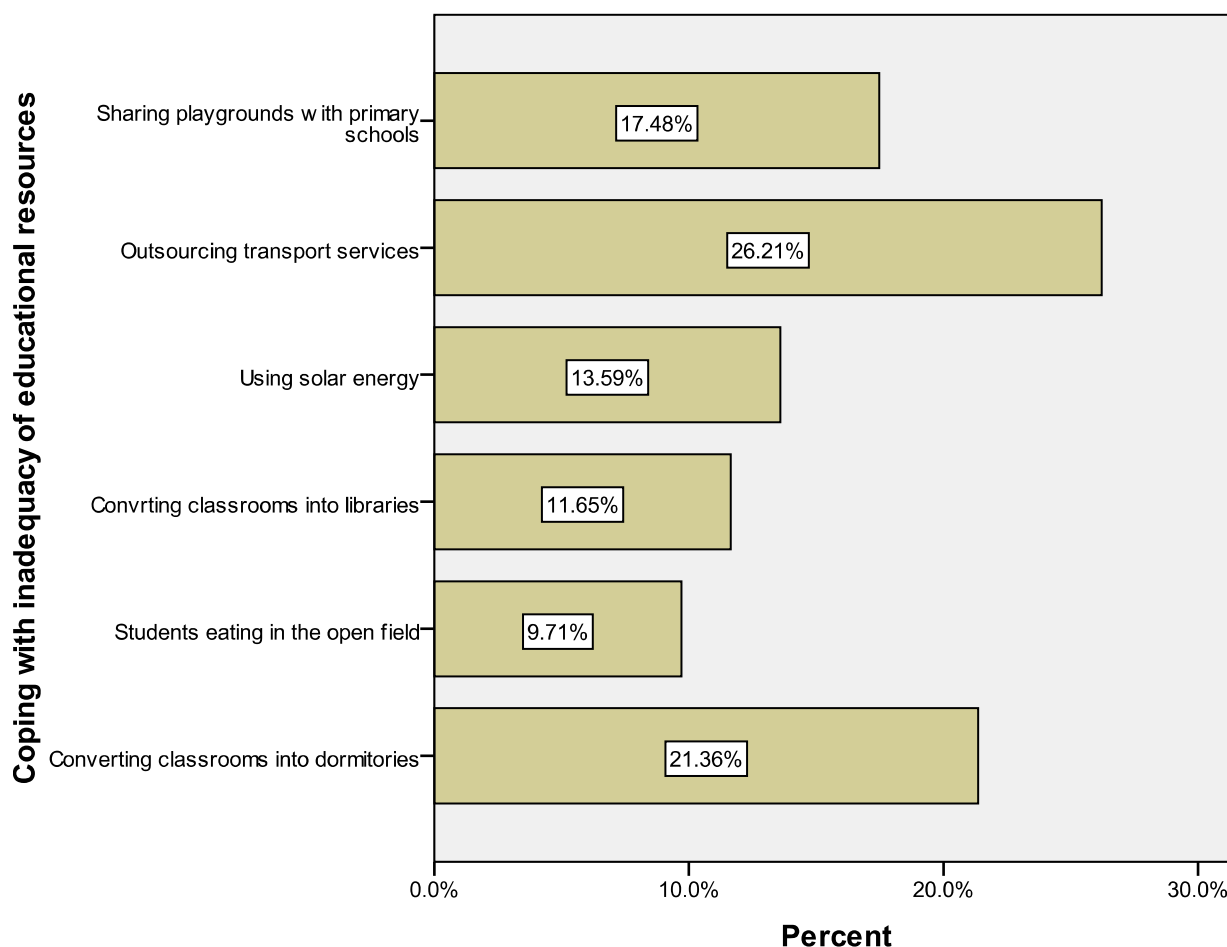
## **FINDINGS AND DISCUSSION**

### **Cost-Saving Measures Undertaken by Head Teachers on Educational Resources**

The school principals were requested to indicate the level of availability and adequacy of various resources in their respective schools. 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, and 20 percent had school van while 60 percent had dormitories for boarding. On the adequacy of the availability of educational resources, all the school principals concurred that they were insufficient. This is a fact that was equally emphasized by the District Education Officer (DEO) as well as the Assistant Education Officers (AEOs) in the area and supported by the findings from the AEOs during separate interviews. This finding is in tandem with the observations made by Getange, Onkeo and Orodho (2014) that the income provided to school does not provide enough money to purchase the necessary teaching and learning resources. This was due to the unreliable and inadequacy of the income sources.

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 (Heinemann, 1994).

Figure 1 carries information on the alternative facilities or options to cope with situations of inadequate resources and their costs implications. The first highly ranked coping strategy cited by a majority of school managers, constituting 26.2 % of the school managers, was outsourcing transport facilities during game balls, debates music festivals and other official educational tours by students and teachers. It was also clear that most schools transported foodstuffs and other school goods using hired transport rather than having own school bus or van for the purpose. The principals interviewed concurred that this mechanism was cheaper than having to budget for a bus or van whose overall cost was above the financial means of parents. They also pointed out that it saved the operational costs of acquiring insurance fir the vehicles and employing full time drivers.



The second highly ranked coping strategy was converting classrooms into dormitories. The strategy was cited by 21.36 % of all the school managers reached during the study. This was occasioned by the fact that a majority of students come from homes far away from schools in the area and cant arrive in school on time for morning or even attend late evening classes. This finding also implies that a majority of the schools sampled were day secondary schools without boarding facilities.

The third ranked coping mechanism, cited by 17.48% of the respondents was sharing some physical facilities especially playgrounds with adjacent primary schools or sharing laboratories during demonstrations with more established schools in the area. It should be emphasized at this juncture that most day secondary schools were developed from the parent primary schools and in most cases shared the same compound. In a majority of case there have been continued cordial relationships with the latter sharing facilities like classrooms and fields.

However in some worst case scenarios this co-existence has caused problems, especially when the secondary schools need to have their own compounds as well as own title deeds.

The other coping strategies cited by 13.59 %, 11.65 % and 9.71 % were using solar energy as a source of energy , converting classes into libraries, and students eating in the open field due to lack of dining halls, respectively. There is little debate that although these coping mechanisms have temporarily helped schools to cope with these problems and cut down costs, they certainly have related health and quality of service implications.

Nonetheless, some school principals had different opinions and argued that hiring facilities such as a bus was expensive, time wasting and unavailable. The other suggested option given by teachers as a cost saving measure was increase in student enrolment for underutilized facilities although it was yet to be explored. This is in tandem with Psacharopoulos (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.

#### **Utilization of savings made from cost saving mechanisms**

The principals were asked to indicate whether their schools made any savings in 2011 and therefore state how such savings were utilized. Majority of the principals numbering 60 percent reported that their schools did not make any savings in the year 2011 when the study was conducted. 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, they noted that:

....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. 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...

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.

The sentiments from the ministry of education official are in line with Heyneman (1994), who similarly earlier noted that 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 had been trained on financial management. According to Heyneman (1994), and Orodho (2014) 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.

As a follow up using focus group discussions, the principals, the teachers and the PTA representatives were asked separately to state cost-saving measures being practiced by their schools to reduce education costs. The following measures emerged:

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.

On the side of headteachers, half of them had similar coping strategies such as:

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 ...

The sentiments depicted in the foregoing citation are in line with Favell and Schiefelbein (1974) as well as Getange, Onkeo and Orodho (2014) who counsel that 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 viable cost sharing options albeit being unexplored. Even electricity which was available in all the sampled schools was not being used in promoting e-learning by most of the sampled schools, as cost-saving measure proposed by World Bank (2009).

The foregoing results in summary further find support in the earlier findings of Brodersohn (1978) whose study similarly revealed 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.

The overall messages from the foregoing research findings are that majority of respondents 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. These are in line with Heyneman (1994) , Orodho (2014, and Getange, Onkeo and Orodho(2014) 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. In a similar vein, UNICEF (1989) observes that a large burden was borne by parents in the provision, 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.

## **CONCLUSION AND RECOMMENDATIONS**

The main thrust of the study reported in this paper was to address the question regarding the extent to which the cost saving measures undertaken by schools in the study locale had substantially reduced the cost of secondary education and made it affordable by all. On the basis of the research findings and discussing of the finding in relation to the reviewed literature, it is concluded that despite the introduction of free day secondary education (FDSE), the latent cost of secondary education was still high and beyond the reach of the poor households. As a result, schools in the study locale had devised cost saving measures including: outsourcing basic services like transport services, converting classrooms into micro-libraries, sharing facilities with neighbouring institutions , introduction of income generating activities and assigning multiple tasks to staff, amongst others. Despite these innovative strategies, the cost of education had not substantially decreased for a majority of students from poor backgrounds. In addition, 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.

Based on the findings, summary and conclusions, the following recommendations are made. The Government of Kenya through the Ministry of Education together with the stakeholders in individual secondary schools should consider the following as cost-saving measures:

First, given that the financial sources in public day secondary schools are unable to meet the required facilities for enhancing quality education, the government should increase the amount disbursed to schools due to inflation and the high cost of living.

Secondly, the Government of Kenya through the Ministry of Education contribution should be disbursed in time preferably before the start of the term to avoid delay in disbursements which led to financial strains that hinder quality achievement in PDSS.

Third, addition to the cost saving measures being implemented, individual 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.

Finally, individual schools should encourage parents to offer services and materials as a way of payment of fees in kind. Similarly, schools should be encouraged to promote sharing facilities as one of the cost-saving measures.

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