FUNDING IN PUBLIC SECONDARY SCHOOLS AND ITS INFLUENCE ON ACADEMIC ACHIEVEMENT IN BUNGOMA COUNTY, KENYA

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A thesis submitted to the school of Graduate Studies in Partial fulfillment of the requirement for the award of the Degree of Doctor of Philosophy in Curriculum and Instruction of Masinde Muliro University of Science and Technology

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DECLARATION AND CERTIFICATION PAGE

This thesis is my original work prepared with no other than the indicated sources and support and has not been presented elsewhere for a degree or any other award

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DEDICATION

To my parents, Mrs. Tafrosa Simiyu and my late father Mr. Peter Simiyu.

ABSTRACT

Education is a human activity that fashions and models mankind for the society. It is for this reason that the Kenyan government has put emphasis on the pursuit quality education for its citizens since independence. The journey to realizing quality of education has had an implication on the funding policy. On February 11th, 2008, Free Day Secondary Education (FDSE) policy was introduced by the Government of Kenya with the aim of expanding access, equity as well as quality of education. The government of Kenya spends over 10% of the total annual budget on education to boost quality in the sector that should result in improved academic performance by learners in national examinations. However, funding of education especially at secondary school level still remains contentious as seen in the many calls by the public and even the Government of the day to reduce the burden on parents in terms of funding. The year 2018 marked the beginning of the full implementation of FDSE where all public day secondary school students were exempted from all tuition obligations. The study investigated funding practices in public secondary schools and their influence on academic achievement in Bungoma County. This was achieved by establishing the funding practices used in public secondary schools, analyzing the association of funding practices on the adequacy of teaching learning materials as well as that of the funding practices and the adequacy of physical infrastructure and investigating the association between funding practices on educational resources on learners' academic achievement in public secondary schools. A mixed research design was employed in the study. The target population consisted of 252 public secondary schools of which 36 constituted the study population. Stratified sampling was employed to ensure representation of all categories of public secondary schools and sub-counties in the county. Of the selected schools, the principals, bursars and heads of academic departments (HoDs) were respondents in this study. The County Director of Education was also a respondent in this study. The instruments for data collection for the study included the questionnaires, structured interview schedules and document analysis schedule. The SPSS Package was used in the analysis of quantitative data. Descriptive statistics using standard deviation and mean were utilized to organize, analyze, present and describe data from respondents by using tables and figures while inferential statistics were used to determine the association of funding practices on adequacy of teaching and learning resources and infrastructure. The Spearman's Rho correlations was used to determine the possibility of existence of any relationship between variables of the study. The study established that the main source of funding for public secondary schools in Bungoma County was FDSE and parents fees payment. It also found out that resource allocation is largely influenced by departmental budget, type of school and availability of funds. The study established that funding practices had a positive association with the physical infrastructure provision. It also found that there was a positive association between the funding practices and the teaching learning materials. The study determined that the provision of educational resources had a positive association with learners' academic achievement. On the overall the funding practices had positive association with provision of adequate physical resources, teaching and learning resources and academic achievement. The findings will be useful to policy makers in terms of making informed decisions that will guide better provision of learning resources in secondary schools. The study recommended a criteria of apportioning of funds available in the ratios of 0.38 on provision of staffing and training, 0.32 on teaching learning resources and 0.30 on physical facilities in order to realize higher academic achievement.

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ABBREVIATIONS AND ACRONYMS

AIR	_	American Institute for Research
BOM	–	Board of Management
CBO	_	Community Based Organizations
CDE	_	County Director of Education
CDF	_	Constituency Development Fund
EFA	_	Education for All
ESP	_	Economic Stimulus Programme
FDSE	–	Free Day Secondary Education
GNP	_	Gross National Product
GOK	_	Government of Kenya
HOD	_	Head of Department
KCSE	_	Kenya Certificate of Secondary Education
KESSP	_	Kenya Education Sector Support Programme
LATF	_	Local Authority Transfer Fund
MOEST	_	Ministry of Education Science and Technology
MOE	_	Ministry of Education
NAEP	_	National Assessment Progress
NARC	_	National Alliance of Rainbow Coalition
N.G.O	_	Non-Governmental organizations
PTA	–	Parent Teachers Association
SWAP	_	Sector Wide Approach to Programme Planning
TLM	_	Teaching and Learning materials
UNESCO	–	United Nations Educational Scientific and Cultural Organization
UNICEF	–	United Nations International Children's Education Fund

UPE _ Universal Primary Education

CHAPTER ONE
INTRODUCTION

1.1 Background to the Study

Education is a basis upon which training the human capital to serve in a number of social, cultural, economic and political sectors of the country is hinged. Therefore it's a catalyst for national economic development and the best way in which a person can hope to achieve better opportunities that may lead to a better standard of living (Benoit, 2013). The fundamental role of making living standards better can only be actualized by provision of quality education. Kenya's Vision 2030 envisages education as a means to industrialization and transit to a middle income country (Republic of Kenya, 2007). The constitution of Kenya 2010 reiterates all Kenyans right to education which is responsive to the tenets of Vision 2030. The Basic Education Act No. 14 of 2013 further gives direction through which quality and relevant education can be achieved.

From the time Education was declared a Human Right by the United Nations in 1948, each country endeavours to promote its access by her citizens. The demand for education has continued to increase mainly due to the realization that it improves both the social and economic status of an individual (Kromydas, 2017; Muricho & Chang'ach, 2013; Psacharopoulus, 1988). Subsequently this has led to an increase in expenditure on education as governments strive to relieve the funding burden from parents. Essentially the realization of millennium development educational related goals is depended on the availability of funds to acquire appropriate resources to support educational processes (Wamalwa & Odebero, 2014).

Kenya's education system is founded on the work of Christian missionaries specifically the Church Missionary Society which introduced formal western education with the aim

of enhancing the spread of Christianity and teaching technical subjects to Africans (MOE, 2008).

During the colonial period, educational opportunities for Africans remained very limited and more so at the secondary school level. The education provided was based on racial lines where we had schools for whites, Asians and Africans with differentiated learning facilities. Schools for Europeans were more endowed in terms of learning infrastructure (Ngware, Onsomu & Muthaka, 2007). At independence in 1963, the main challenges faced by the Nation of Kenya were diseases, poverty and ignorance. Consequently the new government embarked on the expansion of educational opportunities for all Kenyans as a means of not only fighting ignorance but also empowering people to be able to overcome diseases and poverty (Sessional Paper No 10 of 1965). Education at secondary school level was regarded as crucial in providing the much needed manpower for the newly independent nation (Bogonko, 1991). At independence Education was meant to fill the gap that had been created by the departure of white labour force by providing the much needed work force for the young Nation. The early years of independence were therefore devoted to expansion of the education sector.

The Ominde Commission of 1964 recommended the endorsement of free education at Primary level and a proposal for the regulation of the mushrooming of Harambee schools by government which lacked basic facilities and qualified personnel. Harambees schools in the late 60s and 70s in Kenya consisted of the secondary schools that were build and managed through the conscious partnership between communities and government. In most cases the government hardly gave any support to them. The management of the harambee schools was mainly by the local community leaders and church whose role included raising of funds to run the school as well as recruit the teachers. Considering the

economic endowment of most communities at the time, most harambee schools were not able to meet their recurrent expenditure. In order to provide education that was worth the quality to its citizen, the government of Kenya in the mid-seventies made it a policy to provide more support to harambee schools. Subsequently funding of education became a major element of the policy framework (World Bank, 2009).

The Ndegwa Commission recommendation of 1970-71 saw the government take over all harambee schools with the sole purpose of improving and maintaining education standards in the country. The Kenya School Equipment Scheme (KSES) established in 1972 by the government of Kenya was mandated to procure and distribute of textbooks to all public schools. Hence the government for the first time was directly involved in the purchase and distribution of text books to schools (Rotich, 2004). From 1974 the Government intensified its support for Harambee secondary schools. The Government took charge of paying teachers and provided the instructional materials as well as equipment needed for learning. The local communities were left with the responsibility of building new schools that were later on supported by the government.

The Gachathi Report of 1976 recommended the publication and printing of school textbooks centrally by the Jomo Kenyatta Foundation. The Kamunge Report of 1988 advocated for the improved funding of education for quality and relevance. In 1990 in Thailand, the World Declaration on Education for All observed the need for improvement of the education quality as a basis for achieving equity (Abioye *et al*, 2017). In 2000 in Dakar at the World Education Forum, signatory members agreed to improve all education dimensions to attain excellence in essential life skills, numeracy and literacy by all learners. The Oslo declaration of 2015 focused on funding education to enhance quality of learning. There was need to mobilize funds from both public and

private organizations in addition to using existing resources in a more effective and transparent manner (World Bank, 2015). Being a signatory to these international and regional organizations, Kenya as a country has realigned her educational policies to be compliant.

The constitution of Kenya recognizes that every child of school going age of between 4-17 years has a right to education. This implies that every Kenyan child is entitled to complete secondary education. Secondary school is a crucial stage for learners to acquire skills that could improve their chances of getting employed (EFA Global Monitoring Report 2012). Kenya has realized expansion in its education system at secondary school level of education. For instance, at independence, there were 151 secondary schools with a student population of 30,120. By 2007 the number of secondary schools had reached 6485 with a gross enrolment of 1,180,267 (Republic of Kenya 2008). The government views secondary school level education as a stage for producing middle grade level manpower and a preparation for those joining institutions of higher training (Eshiwani, 1993). Under the 8-4-4 education system, the secondary cycle lasts four years. At the end of the cycle, students take Kenya Certificate of Secondary Education (KCSE) examinations by Kenya National Examination Council (KNEC). The universities and other training institutions of higher learning use these KCSE results for placement.

The Government of Kenya in 2003 introduced Free Primary Education (FPE) aiming at increasing access to basic education. Sessional Paper No1of 2005 on Education, Training and Research proposed reforms on how education and training were to be handled at all levels. According to this paper secondary education is part of basic education. Strategies for every level of education were highlighted in order to promote access, quality, equity and completion rates. Some of the strategies at secondary school level included equitable

distribution of teachers and their optimum utilization, rehabilitation of schools that were in poor conditions, provision of science equipment and enhance teachers' subject mastery through in-service training. One of the vivid examples of the commitment by the Government to quality education was the establishment of the Kenya Education Sector Support Programme (2005-2010), whose goal was to ensure access to basic education by all children and improve its quality by 2010. This is in line with the government's strategy of a Sector Wide Approach to Programme Planning (SWAP) which engages all stakeholders in attainment of the set goals in every sector of the government.

On11th February 2008, Free Day Secondary Education (FDSE) was introduced by the government of Kenya with the purpose of enhancing access to quality of education to all students. This was another land mark in the education sector after the success of the Free Primary education especially in the area of increased enrolment and completion rates. The government was to pay for tuition fees while the parents or guardians meet the costs of boarding and buying of uniforms. The then president, Mwai Kibaki, announced plans for recruitment of more teachers and expansion of facilities within the education sector in order to cope with the extra demand for education. A sum of Ksh. 10,265 was allocated to each student to cater for tuition and administrative costs. The government adopted the policy of partnership with the local communities, religious communities, private investors and donors in the provision of education services.

According to Kenya's Vision 2030, on Basic Education infrastructure, the government planned to construct and fully equip 560 secondary schools, construct extra classrooms in existing schools and undertake rehabilitation process of school infrastructure. Transition rate to secondary schools from primary schools rose to 75%. All these illustrate the Government commitment to the success of the education sector. The

Government spends a higher percentage of its total budget on education which also includes the paying of teachers and other education civil servants. For instance, the total percentage spent on education from 2010 to 2013 has been 18.7%, 20.4%, 21.0% and 19.0% of all budgets respectively according to the Kenya National Bureau of Statistics. In the 2015/2016 budget, the government allocated Ksh 139 billion out of the total Ksh 1.7 trillion on education. Out of this money, 28.2 billion was meant for free tuition in public secondary schools.

In 2015 the capitation for FDSE was increased from ksh10, 265 to Ksh 12, 870 in response to heightened agitation for more funds to promote quality of education. Apart from the government capitation sent directly to schools, the government through the initiative of parliament introduced the Constituency Development Fund as a kitty to support constituency grass root development of which education is one of them. CDF money meant for education caters for construction of school buildings, purchase of school equipment and supplies and support needy students in paying for the legal school levies (MoEST, 2014). Another government's undertaking to promote education quality in order to achieve Vision 2030 was through the Economic Stimulus Programme (ESP). Under the ESP, Centres of Excellence were established with the government allocating funds to improve infrastructure. Measures by the Government of Kenya to make education accessible saw the learners enrolment change to over 1.9 million in 2012 from 1.03 million in 2006 (Sessional paper No 10 of 2012). The year 2018 marks the fulfillment of the government's promise of shouldering the entire tuition obligation in the FDSE Policy. The Government of Kenya has also rolled out the supply of books to all public secondary schools hence utilizing part of what was meant for tuition vote head. The year 2018 also marked a new dispensation where the government of Kenya

embarked on plans to roll out a new CBC system of education (2-6-3-3) replacing the 8-4-4 system of education with the aim of enhancing relevance and education quality.

There are various definitions of quality when dealing with education matters. Some educationists have defined quality in terms of results achieved by learners where as others view quality in terms of improved conditions of service. However there is a general agreement which looks at quality in terms of relevance, efficiency and something special that goes beyond the expectation of a school (UNESCO, 2003). UNICEF (2000) explored the concept of "Quality Education" to mean healthy learners, healthy learning environment that has adequate learning facilities, relevant content and child centred delivery and outcome that meets the national goals of education. Quality is the worth or value or degree of excellence of the educational system (Madani, 2019; Digolo, 2006). Sifuna and Sawamura (2010) observe that, in as much as there is no much agreement on the precise definition of quality, many studies show that this concept changes over time and is tied to societal values. In the case of Kenya, observation has shown that many stakeholders in education tie the definition of quality on learners' performance in national examinations as well as other tests given to learners. This perception is exemplified by the euphoria witnessed during the release of results of National examination for primary and secondary school levels. There has also been an observation that, most parents base the choice of schools for their children on examination results posted by those schools. In this context quality has to do with the mastery of curriculum content. A student who scores high marks is deemed to have received quality education. Academic performance being measured by results from examination has been a main goal of schooling for a long time hence an indicator of quality (MOEST, 2015).

O'Sullivan (2006) postulates that input indicators of quality education such as resource provision leads to output indicators such as learner academic achievement. Class size, teacher subject knowledge and experience, teacher wage compensation, libraries, instructional time and materials and laboratories have a great impact on learner achievement (Bunyi, 2013). The quest for quality education has to consider Teacher Student ratio, Teacher work load and the nature of the learning facilities (Felicity et al, 2013). On education quality, World Bank report shows that teacher quality strongly influences student outcome. Quality of education can therefore be improved by providing teachers with the current pedagogical skills in their pre-service and in-service training (World Bank, 2007).

Most policy makers in the 1970s and 1980s were pre-occupied with school access and enrolment in developing countries. However over years it emerged that access *per se* does not guarantee decent level of basic learning (ibid). A former president of the World Bank 1988, Barbra Conable, had the following to reiterate the importance of quality education:

> "Quality education is now an issue of global concern. Without quality education, development will not occur. Only the educated people can command the skills necessary for sustainable economic growth and for better quality of life"

In the Dakar Framework for Action, quality was the focal point of education. At this time quality was understood in the dimension of the learner, environment, content, process and outcome. To offer good education, educational institutions should have adequate facilities, competent and motivated teachers and adequate learning materials (UNICEF, 2000). Prior to 1990, focus on education by both bilateral and multilateral organizations was towards Primary, Vocational and Higher education. However with the success of Universal Primary Education (UPE) and a growing demand for higher level knowledge

and skills, the focus shifted towards promoting secondary education access and quality (AIR, 2002). The Government of Kenya is fully committed to its citizen having universal access to basic education through the enactment of the Education for All (EFA) initiative. The sixth goal of EFA emphasizes on improving all dimensions to quality of education in order to attain excellence in numeracy, essential life skills and literacy. The same is reiterated by the UN millennium Development Goals. The Kenyan government purposes to expand equity, access and raise the quality of education. To improve quality especially in vocational subjects as well as science ones, funds have to be provided for it. The same has to be done for acquisition of laboratory equipment, the improvement of physical facilities, supplementary teaching resources and textbooks (Sifuna & Sawamura, 2010). The funds have to be a portioned appropriately for them to be used to procure relevant resource to go towards realizing academic achievement. Where the resources have been availed, there is need to avail them in the right proportions to maximize the academic achievement. In the new dispensation where the government of Kenya is in the process of rolling out a new system of education whose focus is learner competence to replace the 8-4-4 system of education, the concept of learner achievement remains crucial. It is against this background that this research intended to investigate the funding practices and their effects on public secondary schools learners' academic achievement in Kenya.

1.2 Statement of the Problem

Students' academic performance in National Examinations has been a key issue in Kenyan education system as it forms the basis on which learners are placed in subsequent levels of education. Government funding of secondary education is meant to improve physical infrastructure, teaching and learning resources and the teaching work

force in the schools which should be manifest in good performance in national examinations. Examination has been a basis upon which education is evaluated and especially the attainment of students in them (Mbatia, 2004). Observation has shown that many school administrators are preferred on the basis of results posted in National Examinations. Students' academic outcomes in examinations at the national level in Bungoma County have been poor for a long time raising a state of concern among all the stakeholders. Preliminary data obtained at the Bungoma county education office has a trend that indicates the mean score stagnation at 4 out of 12 which is below average. The Table 1.1 shows the actual mean grade compared to the highest.

Table 1. 1: Bungoma County KCSE index 2013-2016

Year	Attained mean Score	Mean Grade	Highest Mean Score possible	Highest Mean Grade possible
2012	4.752	C-	12.0	A
2013	4.62	C-	12.0	A
2014	4.85	C-	12.0	A
2015	4.773	C-	12.0	A
2016	4.835	C-	12.0	A
2017	4.381	D+	12.0	A
2018	5.530	C-	12.0	A

Source: Bungoma County Education office 2018

Several factors have been attributed to this dismal performance in spite of remedial measures. The literature is rich with teacher, learner and administrative factors and how they influence student's achievement (Onderi, Kiplagat &Awino, 2014; Karue & Amukowa, 2013). The effect of funding practices on the other hand and how this affects

leaner academic achievement has been overlooked, for it is glaringly missing in the research literature. The government spends over 10% of it is total budget on education to ensure quality in the sector that should result in adequacy of physical infrastructure, adequate teaching and learning resources and subsequently in improved performance in national examinations. Despite the government support to cater for all tuition requirements in secondary schools and paying fees for the National Examinations for all candidates in public schools, many schools in Bungoma County continue to post poor results. Given the much input in terms of finances, the quest of quality becomes paramount. This research therefore investigated the funding practices and the influence they had on academic achievement within the Bungoma County public secondary schools.

1.3 Purpose of the Study

The purpose of the study was to fill the knowledge gap with regard to the public secondary schools funding influence on academic achievement in Bungoma County.

1.4 Objectives of the Study

The objectives of the study were to:-

i) Establish the funding practices used in public secondary schools in Bungoma County.

ii) To determine the association between funding practices and adequacy of physical infrastructure in secondary schools in Bungoma County.

iii) To determine the association between funding practices and adequacy of teaching learning materials in secondary schools in Bungoma County.

iv) Investigate the relationship between funding practices on educational resources and learners' academic achievement.

1.5 Research Questions

This study envisaged the following one (i) descriptive and three (ii – iv) inferential research questions to direct the study. Testing of corresponding Hypothesis was employed to answer the inferential research questions.

i) What funding practices are used in public secondary schools in Bungoma County?

ii) How are funding practices associated with the adequacy of physical infrastructure in secondary schools in Bungoma County?

iii) How are the funding practices associated with the secondary schools adequacy of teaching learning materials in Bungoma County?

iv) What is the relationship between funding practices on educational resource provision and learners' academic achievement in public secondary schools in Bungoma County?

The last three objectives were determined by testing hypothesis that were corresponding to the inferential questions:

ii) H_{01}: There is no statistical significant association between funding practices and adequacy of physical infrastructure in secondary schools in Bungoma County.

iii) H_{02}: There is no statistical significant association between funding practices and adequacy of teaching learning resources in secondary schools in Bungoma County.

iv) H_{03}: There is no statistical significant association between funding practices on educational resource provision and learners' academic achievement.

1.6 Significance of the Study

This research was important in providing insight into the education sector in terms of funding secondary school education through the knowledge that was generated. The study has shed light on the practices of funds allocation and their influence on adequate provision of physical, teaching learning and human resources that in turn affect the academic achievement to help educational stakeholders and policy makers to maximize on curriculum implementation to realize increased efficiency. The findings of the study are very useful feedback to curriculum implementers to review the proper use of available funds in public secondary schools in the implementation of the curriculum towards maximum academic achievement. This study's findings provided feedback on the status of the physical infrastructure, teaching and learning resources in Public secondary schools found within Bungoma County that will provide a guide to the school curriculum implementers, principals and policy makers to improve the resource allocation with the aim of improving academic achievement. This study was therefore necessary to come up with data on funding practices in public secondary schools and their influence on learners' academic achievement in Bungoma County in order to come up with funding recommendations that would enhance learners' academic achievements.

1.7 Justification of the Study

The quest for quality education has dominated the agenda of many countries. Funding should be commensurate to the output which is measured in terms of the status of learning resources and academic achievement. The relationship between funding and learners' academic achievement shall inform education stakeholders on the value of finances invested in education. The government of Kenya and other stakeholders will use the research findings to promote and sustain quality secondary school education. The

study also made recommendations on funding practices in order to promote quality education which is a major ingredient for the attainment of Kenya's Vision 2030.

Funding of secondary school education in Kenya has generated a lot of debate among various stakeholders. This has been evidenced by various task forces that have been assigned the duty of looking into possible solutions to the funding of secondary schools. According to Ouko (2015), ElimuYetu coalition has been at the fore front of pushing the government to ensure that education is not just a preserve of the rich. This quest for education for all should however not lose the focus of quality which is the vision for education sector for 2030. This study was therefore necessary to come up with data on funding practices in public secondary schools and their influence on learners' academic achievement in Bungoma County in order to come up with funding recommendations that would enhance learners' academic achievements.

1.8 Scope of the Study

This study had a focus on Secondary schools found within the county of Bungoma that are in the category of public secondary schools. The public secondary schools in the county operate under the same legal structure and funding model as provided by the national government unlike the private secondary schools which are guided by very varying funding model dependent on the proprietors. The study confined itself to principals of secondary school, Heads of Academic Departments, school Bursars and Director of Education of Bungoma County as respondents. The study's' specific area of investigation was funding and their influence on learners' achievement in terms of academic performance. The study limited itself to adequate provision of physical infrastructure, teaching learning resources and staffing and training and learners' academic achievement in KCSE. The study did not concern itself with the actual

teaching learning process. All other factors that affect academic achievement were assumed to be held constant in the study.

1.9 Limitation of the study

The information obtained from respondents in the study depended on their willingness and honesty and though public secondary schools in Bungoma County are considered to be managed in the same manner, some of them were hesitant in providing information on the funds allocation processes. The study was undertaken out in sampled public secondary schools only located in Bungoma County. As a result of this, the findings of this study are limited to public secondary schools in Bungoma County. They results cannot be generalized to apply to all counties found in Kenya or even to private schools within Bungoma County.

Due to the design of this study, to respond to the objectives it called for making correlations between the set out pairs of variables. This exploration of the relationship between two variables without manipulating them though indicating existence of a relationship does not by any means imply a causal relationship.

Another limitation was the time factor which would not allow for a census to be undertaken in all public secondary schools found within the county of Bungoma. All public secondary schools in Kenya are managed under the same legal structure however the study does not make any attempt to generalize the findings to the whole country of Kenya

1.10 Theoretical framework

The study employed the Education Production Function (EPF) theory. According to Hanushek (2007) inputs such as school resources affect a student's academic achievement. The proponents of this theory postulates that the higher the investment in school resources, the more the students will learn and consequently perform better. The

theory states “that education outcomes are a function of inputs to education process that are provided primarily by student families, students, community and schools” (Sifuna, 2009). This is a systems approach of viewing issues in totality. Students’ academic achievement in this context is a result of quality input and processes. Coombs (1970) and Likoko, Mutsotso and Nasongo (2013), postulate that education is mainly made up of inputs and outputs. They attribute to the fact that there are a set of inputs that undergo processing though the education processes to give educational outputs.

From this context, the study views inputs such as funding being able to provide other sets of inputs such as staffing and infrastructure as well as teaching learning resources. Therefore funding, human and material resources make up the inputs whereas the educational process outcomes and goals make the outputs. Likewise for this study funding, physical resources and teaching learning resources were considered to be inputs while the outcomes of the educational processes were adequacy of physical and teaching learning resources as well as learners KCSE achievements. UNICEF (2000) recognizes quality education to be the product of a combination of learners, environments, content, processes and outcomes. According to scholars such as Pritchett, Filmer, and Hanushek in line with this theory is that how much output an education system gets depends on how much inputs is made within the constraints imposed by the underlying technical education processes. Quality education is therefore an entire spectrum consisting of input, process and output. In this context, inputs include among other things the number of textbooks, number of teachers as well as level of their training. Processes comprise the instructional time and the actual learning. Outputs are seen in terms of the graduation rate and scores attained (Sifuna, 2009). Finances are inputs which influence the quality and adequacy of learning resources. Different inputs from schools affect the output or quality of the product.

1.11Conceptual Framework

The conceptual frame work as shown Fig 1.1 provided the guided to the study.

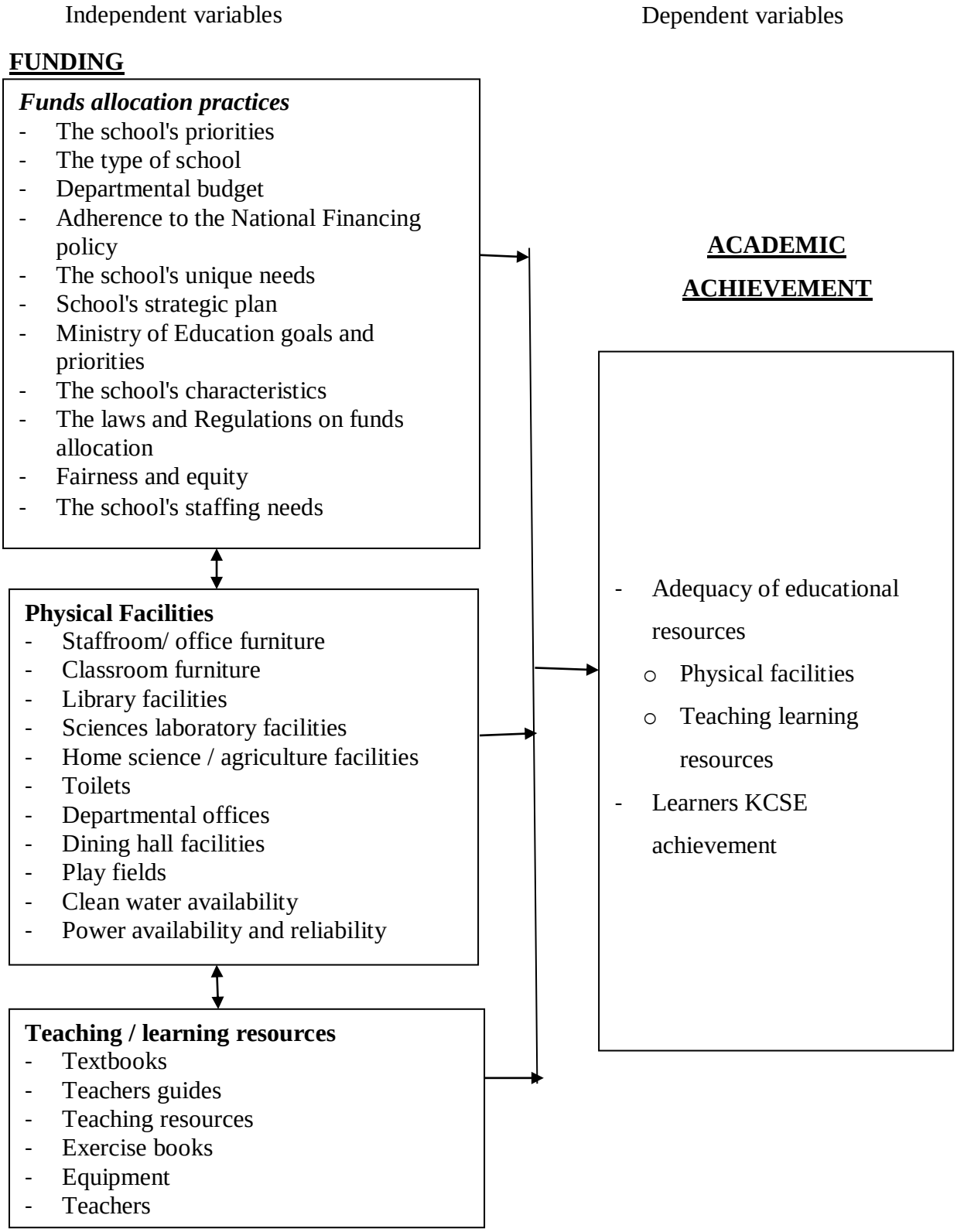

Figure 1. 1 : Interplay between funding practices and quality education in Secondary Schools
Source: Researcher

The conceptual framework addresses the interrelationship of variables between funding practices and academic achievement. The funding which is an input is an independent variable which affects the dependent variables of academic achievement. The learning outcome is a product of inputs from the school and the process of obtaining outputs from the inputs. The government of Kenya recognizes the contribution of other stakeholders in the funding of education. The government gives its subsidy in terms of Free Day Secondary Education (FDSE) while parents pay fees to cater for other recognized levies such as boarding, lunch and uniform. Parents also cater for Parents Teachers Association (PTA) projects. At the constituency level, there is a provision for funds to needy students and infrastructural development in schools. Other sources of finance are through grants from the national and county governments. Non-Governmental Organizations (NGO) and Community Based Organizations (CBO) have also been instrumental in the funding process. Some funds have also been raised from well-wishers and money raised through harambees. The available funds are allocated based on practices such as the school's priorities, type of school, departmental budget, adherence to the National Financing policy, school's unique needs, school's strategic plan, Ministry of Education goals and priorities, school's characteristics, laws and Regulations on funds allocation, fairness and equity and staffing needs of each school. The funding process is aimed at providing quality education in terms of adequacy and quality of teachers, physical facilities and learning environment.

The funds are used in the acquisition of both physical facilities and teaching and learning resources. The acquisition of educational facilities enhances its adequacy which in turn when put to proper use results into better academic achievement. The funding practices therefore are aimed at providing quality education in terms of educational facilities and learners academic achievement.

1.12 Operational Definition of Terms

Adequacy– Sufficient resources to support quality and quantity of education services.

Cost sharing- the system practiced in Kenya where the government and other education stake holders share the educational expenses.

Funding practices- Control system that determines funds allocation and use in schools.

Free Secondary Education-Government subsidy towards education introduced in 2008 to cater for Day secondary education.

Harambee Schools – secondary Schools in Kenya which were built, financed and managed by the communities themselves.

Policy - Plan of action set up by those in authority containing rules and expectations for delivery of services or programmes.

Public Secondary School – A school where government takes responsibility for maintenance.

Quality- the degree of excellence obtained as compared to standards agreed upon.

Quality Education- This is education where there are adequate educational resources and learners perform well in national examinations.

Quality grades- Refers to grades in the Kenyan KCSE of C+ (7 points) and above in a grading scale of 1 to 12.

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

Learner academic achievement- these are the learning outcomes which are measured in terms of grades earned at Kenya Certificate of Secondary Education (KCSE).

Special Needs Schools- Schools set aside to cater for learners who have any form of disability which may hinder the normal learning process.

Teacher Respondents- School principals and Heads of departments in the study.

Teaching Resources - Refers to teaching aids such as teacher's guides, manila papers, charts and models within this study.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

Chapter two provides a review of literature focusing on the educational funding policy in developing countries, background to financing education in Kenyan secondary and policy related to the same. It explores related literature on funding practices in secondary schools in Kenya and looks at the relationship that concerns relationship between funding and academic achievement, funding and availability of educational resources in terms of physical infrastructure and teaching and learning resources. Challenges of funding secondary education in Kenya have also been explored.

2.1 Funding of secondary education in developing countries

World Bank (2005) states that skills development and secondary education is priority areas for sub-saharan Africa when it comes to the economic and social development from a wider perspective. According to Marphatia, Reid and Yajnik (2019) and Lewin and Caillods (2001), Secondary school level education still remains inaccessible in many African countries due to funding challenges. Public funding is not able to satisfy the demand for more places. The enrollment growth has overtaken the proportionate increase in resources leading to inadequate instructional materials and facilities. Many of these countries have turned to private funding to fill the gap. There have also been improvement in the public participation within developing countries at primary school level. However the participation in secondary education is still wanting hence making secondary school education inaccessible to learners (Ombati & Mokua, 2012).

The Governments in Africa have undertaken various measures such as fee waivers, government scholarships and free text books to cushion learners in Public secondary schools (ibid).There are varied situations in each country as pertains funding education in secondary schools in Kenya and looks at developing countries as well. For instance, in Zimbabwe, there is relatively high rate of participation of parents as a result of significant commitment of public funds and a relatively lower unit cost per student as compared to other African countries. Many governments the world over have consistently allocated a bigger chunk of their GNP to educational investment (Asena, Simiyu & Riechi, 2016; Lewis, 2001).

Malawi and other French speaking African countries have problems which include low public participation in primary education and the high costs of educating a single student at secondary school coupled with the debt burden hence funding challenges in developing secondary education. Malawi in particular has been identified among the nations with the lowest enrolment rates at secondary school level in Sub-Saharan Africa (Rose, Downing, Asare & Mitchell, 2019; ibid, 2001).

Rwanda is one of the African countries which have made a notable progress in the funding of education. During the Oslo Declaration of 2015, the Rwandan president attributed this success to partnership and the mobilization of possible resources including the community (World Bank, 2015).

Immediately after independence for the Republic of Kenya, the private sector together with the government as well as the citizens were all enthusiastic in supporting the education sector. With time the household began feeling overwhelmed. A study on cost sharing policy in secondary education shows that majority of the parents looked at it as a burden to them. Most of these parents were unable to take their children beyond the

primary school level. The high cost involved in the provision of secondary education has therefore reduced parent participation in the same. Through the chairman of the Parents' Association of Kenya, many parents have always voiced their protest against high school fees (Ayodo & Too, 2010).

When the NARC government promised free education many parents send their children to school believing that education will be totally free (Mualuko & Muhavisi, 2013). With time parents fees exceeded the government subsidy which made parents from poor backgrounds demoralized. Wambugu and Mokoena (2013) carried out a research in Limuru Sub County to ascertain the perception of parents towards cost sharing. Their findings show that parents are overwhelmed by the burden of cost sharing in education. However this research was only conducted in two schools hence more research needed to be done in a larger region. Over time there have been calls to increase the government capitation to a higher figure. Since the introduction of FDSE in 2008, the government has increased capitation twice up from the initial figure of Ksh. 10,265.00 to Ksh. 22,244. This research therefore, intended to establish the attitude of stakeholders towards funding of education in Bungoma County.

Free Day Secondary Education is perceived to be the major leap in secondary education funding in Kenya. However, according to Murithi (2013), FDSE has had a myriad of challenges ranging from quality, efficiency, access, relevance and equity. The introduction of this programme led to upsurge of day secondary schools which absorbed the increased number of students who were transiting from the primary level (Ndiku & Muhavi, 2013). In a study carried out in Nyeri south Sub- County, the programme lacks clear policy and legislative framework which has made it remain a political endeavor. In

this research however, the researcher does not highlight the relationship between academic achievement and FDSE.

Some schools still overcharge parents by asking for more than the approved boarding fees from the ministry guidelines. Observation from schools show that added levies are passed through stage managed activities by a few parents in collaboration with the school administration and Boards of Management. Teachers in many of their forums such as the Annual General meetings of Secondary Schools Head Teachers have expressed their concern over delays in terms disbursement of funds from the Government. Basing on this claim the research intended to find out how funding policy is affecting academic achievement.

There has been a sharp rise in enrolment as a result of the FDSE programme. Prior to the introduction of FDSE, a report by the World Bank (2008) revealed that secondary schools were experiencing a shortage of educational resources in Kenya. FDSE had as one of its intentions the facilitation of acquisition of learning materials. The research carried out by Muriithi in Nyeri south in 2013 revealed that the money given by the government had not promoted the acquisition of learning materials which are essential for academic achievement. This research therefore purposed to address the level to which this money has contributed towards availing of learning materials to promote learner academic achievement in Bungoma County.

General observation however shows that costs per student in normal secondary schools are several times higher than costs in primary schools,(ibid, 2015)

2.1.1 Partnership in funding of secondary education in Kenya

According to World Bank Report of 2005, enrolments in Sub-Saharan Africa have outgrown the available resources resulting in inadequate instructional supplies and materials. The report further indicates that there will always be need for additional public resources in secondary education. Community participation and increased accountability can raise school attendance for learners which translates into effective instructional time that is a prerequisite for learning (World Bank, 2013). The aim of the Government of Kenya was to increase funding through the private sector partnership. In the management of education, the government acknowledges the importance of developing partnership with the private entities to enhance equity, access and quality in the education sector. This partnership is between the government, local communities, religious organization, private investors and donors (MOE, 2008). In line with this initiative, the Government had a plan to develop and implement a policy framework for its operation. The government's funding of secondary education has to a great extent been directed toward recurrent expenditure at the expense of development (Physical and instructional facilities). Hence need for partnership to bridge the gap.

The Kenya Constitution (2010) provides for basic education as a right and mandates both the state and parents to facilitate its achievement by all children. This means that both the state and parents should endeavor to finance quality education. The cost sharing strategy negatively impacts on the poor and vulnerable households who may fail to register their children in secondary schools or maintain them there (Asayo, 2011). Most of the bursary schemes do not have adequate guidelines that give direction on the amounts to be allocated to each genuine needy student (Njeru & Orodho, 2003).

Apart from the contribution of the Government, we also have donors like the African Development Bank. It has helped in staff development and provision of equipment to KESI and science equipment and textbooks to schools. DANIDA (Danish international Development Agency) supports the disabled through provision of facilities and capacity building. The DFID (British Government's Department for international Development) engages in the Provision of physical facilities equipment and capacity building in education. Japanese International cooperation Agency (JICA), supports technical education. The agency sponsors projects such as Strengthening of Mathematics and Science in Secondary Education (SMASSE) and Centre for Mathematics, Science, Technical Education (CEMASTEA). Other partners in education include UNICEF that mainly support primary school and UNESCO which supports Kenya in diversification and expansion of secondary and vocational education. The World Bank has supported programmes such as Kenya education sector project whose objective is to improve basic education. A report by UNESCO however shows a remarkable decrease in aid towards basic education by key players like the United Kingdom and World Bank. This is more so at the secondary school level. Currently there is a shift in funding where donors would want to peg their assistance not only to equity, efficiency but also the learning outcomes (Global Partnership for Education, 2014). The research looked at the contribution of other stake holders in funding secondary education in Kenya by looking at the respondents' perceptions on the main sources of funding.

2.2 Funding in public secondary schools in Kenya

The commitment by government of Kenya to have public resources used for the intended purposes effectively and economically cannot be over emphasized (Ngigi & Tanui, 2019; Abdulla, 2009). The government channels its funds to schools through FDSE, CDF, County Development Fund and other government grants. Parents cater for boarding

costs, uniform and lunch. This calls for accountability and transparency. The constitution of Kenya reiterates the importance of prudent and responsible use of public funds by all public officers. The schools principals fall under the public officers who by virtue of office have the responsibility of mobilizing and utilizing finances in a prudent manner (GOK 2010). According to Oboegbulem and Kalu (2013), financial management is such a sensitive issue as it attracts a lot of interest from both the government and the public who are eager to know how funds are planned, controlled and utilized in order to achieve the set goals. Budgeting becomes a crucial process to effective financial management in any functional organization the school notwithstanding which is a prerequisite for enhanced learner academic achievement (Waweru & Orodho, 2013).

Through budgeting wastage and reckless spending of public funds is not only controlled but also informs the education stakeholders on the projected income and expenditure for various educational services (ibid, 2013). The MOE has given guidelines providing for the maximum fees that parents may be charged in each category of schools. Table 2.7 shows the various vote heads in secondary schools to guide in the utilization of school funds.

Table 2. 1: Vote heads and their usage

Vote heads	Intended usage
Teaching Learning materials & Exams	Textbooks, exercise books, lab equipment & chemicals, teaching aids, reference materials, chalk, pens & facilitation of internal exams.
Boarding Equipment & Stores/meals	Foodstuffs, cooking equipment &materials, utensils &cutlery
Repairs, Maintenance & Improvement	Painting, repair of desks, chairs ,roofs fences, purchase of cleaning equipment &materials &drainage
Local Travel & Transport	Travelling and accommodation for school management officials, teachers, vehicle maintenance & educational tours
Administrative Costs	Office stationery, communication and postage, AGMs& prize giving days cashbooks &receipts, LPOs, office machine

	services, ledger books, medical examination for food handlers and uniform for workers
Electricity, Water & Conservancy	Utility bills, sewerage plumbing, boreholes & electric & solar fittings
Activity Fees	Games uniform and equipment &participation fee
Personnel Emolument	Salaries &allowances for non-teaching staff, gratuity & work related injury benefits for workers, social security &NHIF
Medical & insurance	Insurance for school workers and students against school based risks such as fire, theft, accidents & last respect send off for workers & students.
Top Up	Money given by the government to special Needs school.

Source: MoE (2017)

The Basic Education Act of 2013 empowers all schools to draw an institutional Budget whose focus is on quality education and providing of appropriate and adequate physical facilities (GOK, 2013). School administrators and the school Board of management therefore have the responsibility of budgeting in order to identify sources of funding and approving what is to be spent. According to Zakiriza, Walela and Kukubo (2015), since resources are always scarce and needs unlimited, it is upon the school managers to establish priorities and plan for the activities in schools (Orodho, 2014).

Obadara and Alaka (2010) assert that, schools have to ensure they allocate adequate resources to cater for priority goals first and thereafter consider the others in order to sustain improvement in learner academic achievement. The efficient utilisation of the resources available and other alternative sources of income are important towards ensuring access, retention and quality (Itegi, 2016). Principals of secondary schools in Kenya are the Chief Executives and chief accounting officers in their schools mandated to manage physical, human and financial resources in their institutions. They mobilize and translate these resources with the sole aim of achieving the set goals which include improved academic achievement for the students (Agbonghale & Adavbiele, 2018). In the year 2005 the MOE in its endeavor to achieve its goal of providing education to all

that is relevant and of quality introduced strategic management approach in all public learning institutions. The government of Kenya through the MOEST provided a five year strategic plan blue print with a vision of having internationally quality training and education to actualise Kenya's sustainable development. Budgets should therefore be aligned to the strategic plan. In each strategic plan, learner outcome was to be on the improvement trajectory. The research investigated on how schools allocate the available funds in order to improve the education standards.

2.2.1 Policy on Funding Secondary Education in Kenya

In Kenya, the government has played a fundamental role through annual budgetary allocation to fund public secondary schools (Ngigi & Tanui, 2019). From the time Kenya gained its independence in 1963, providing quality training and education has been a major concern for the policy formulators. At independence, secondary schools were categorized in three categories namely Government funded, Private and Harambee schools. Government schools were further subdivided into district, Provincial and National schools. Schools that were funded by the government were fully catered for in terms of finances, materials and human resource requirements. The Harambee schools relied on the community for funding though with some government assistance. The private schools were funded by private organizations and individuals. All stakeholders were passionate towards the development of education, (Ngware, Onsomu & Muthaka, 2007)

Currently Kenya has private and public school as the main categories of secondary schools. The government gives some subsidy to public secondary whereas other funding comes from parents and other stakeholders. Following the new constitution's promulgation, public secondary schools were divided into National, Extra-county,

County schools and Sub County schools based on the selection of Form One students. There is also a category of special schools which cater for students with special needs. The private schools are solely funded by the private entities. World Bank (2002) views the funding of education as a great challenge to education in secondary schools amongst others. However, all countries spend a big fraction of the national resources on education. Many countries continue to charge Secondary school fees which are sometimes high leading to inaccessibility to secondary education by the poor, (EFA, Global monitoring Report 2012). It is therefore necessary to abolish fees to improve the numbers of children accessing education from disadvantaged backgrounds.

Regarding provision of secondary education in Kenya, pressure from the World Bank and IMF through Structured Adjustment Programme (SAPs) compelled the Kenyan Government to introduce cost sharing policy in funding secondary education, (Achoka & Ogenga, 2008). Kamunge Report of 1988, focused on funding quality and relevant education. Following, this report the government came up with Sessional paper No.6 on Education and Training for the Next Decade and Beyond which officially ushered in the policy of cost sharing since the Government could not shoulder the whole burden of funding education. Under this policy the financing of education was to be undertaken through partnership of the public sector, NGOs, communities, individuals and private sector. Prior to cost sharing the government shouldered the whole burden of funding education. With the implementation of the policy, the government stopped the procurement of text books and shifted this role to the parents (Rotich, 2004). The government took over the role of hiring and remunerating teachers, providing teacher professional development, school infrastructure, administration and management of bursaries and scholarships. Other partners had a responsibility of providing physical

infrastructure, maintenance, examination fees, tuition fees, accommodation fees and students personal expenses (GOK, 1988).

According to Wambugu and Mokoena (2013) and the Institute of Policy Analysis and Research (2003), cost sharing created a heavy burden on households. However, the government introduced some safety measures such as bursaries to cushion the poor and the vulnerable. The government intervention was inadequate to cater for all needy students. Other challenges included weak administrative systems as observed in the delays in communicating bursary awards to the beneficiaries (Njeru & Orodho, 2003). The Koech Commission on education (1999) recommended that efforts be made by all stakeholders in the education sector to increase levels of funding by broadening the resource base. In spite of this policy shift the demand for education kept on increasing although the sources of finance remained a challenge. After the World Education Forum in Dakar in 2000 and the adaptation of the Millennium Development Goals (MDGs) and the Education for All (EFA), there was increased enrolment in primary schools that led to higher enrolment in secondary schools making funding a major challenge. The demand for quality education has been taken a step further beyond that of Millennium development Goals by the sustainable development goals. According to the sustainable goal 4, a nation that plans for inclusive education endears itself towards realizing upward social mobility and ending poverty amongst its citizen. It is fundamental for self-respect that unlocks the creativity of mind and ends up liberating the intellect. In line with this, the Government of Kenya has been making effort to make education affordable through paying tuition fees for all learners in public secondary school. By so doing the government looks forward to ensuring that all girls and boys complete free, equitable and quality primary and secondary education that results in learners gain relevant and effective learning outcomes. Effective outcomes can only be attained if the available

funds can be put to relevant and appropriate procurement of appropriate resources. This study sought to provide a guide towards this end as there is hardly any guide on how to a portion funds to resource in an informed way for attaining the best academic achievement. The integration of secondary education within basic education in line with the session paper No 1 of 2005 exacerbated the challenge of funding to cater for all primary graduates. During the 2007 election campaigns, major political parties namely Party of National Unity, Orange Democratic Movement-Kenya and Orange Democratic Movement had promised free secondary education.

In 2008, the Free Secondary Education was launched by the government of Kenya as an initiative to achieve Education for All (EFA). This was mainly to cater for Day secondary education. This meant that free tuition was guaranteed. This has been seen as a major policy reform where the government was targeting the poor and vulnerable groups to access secondary education. According to Munda and Odebero (2014), "introduction of free tuition in secondary schools was aimed at providing the economically disadvantaged with an opportunity to benefit from government sponsored education provision". The government allocated each student in public Secondary schools Ksh. 10,265. The funds were to be disbursed to schools in three tranches in January, April and August at the rate of 50%, 20% and 30% respectively. Schools were supposed to open two accounts to facilitate operations of the funds. One account was to cater for the general administration of the school while the second account was for the acquisition of the instructional resources. Parents were to continue meeting costs such as schools uniform, boarding costs, and lunch for day scholars and participate in the expansion of infrastructure. At the end of the day, parents with children in boarding schools were to pay 18,635 extra. Table 2.1 shows the distribution of the Government capitation per the recognized vote heads in public secondary in Kenya as per the 2007 circular.

Table 2. 2: Allocation of the free Day Secondary Education

S/N	Vote head	Amount (Kshs.)
1.	Tuition	3,600
2.	Repairs, maintenance and improvement	400
3.	Local travel and transport	400
4.	Administrative costs	500
5.	Electricity, water and conservancy	500
6.	Activity	600
7.	Personal emolument	3,965
8.	Medical	300
	Total	**10,265**

Source: Ministry of education (2007)

Despite this guidelines there were cases reported in the media of parents indicating that some schools especially National schools did charge up to ksh. 100,000/= (Kenya shillings one hundred thousands) during the period. Many schools then had their own policies as regards to fee payment in secondary schools.

Parents were therefore supposed to shoulder approximately up to 60% of secondary education total cost. In as much as the government continued to allocate money for the Constituency Bursary Fund, the burden of fees to the parents remained heavy. The near success of Free Primary Education (FPE) has made funding of secondary education to continue being a big challenge due to increased enrolment. According to the policy of FDSE, there is encouragement for community initiatives to finance expansion of physical facilities, transport and any other essential services. However development and improvement funds have to be agreed upon between the school's management and Board of Management who engage the parents. Hence FDSE was meant to promote joint responsibilities between parents, the government, sponsors and private initiatives in the spirit of partnership. The government had no clear provision for other stakeholders such

as the N.G.O.S, C.B.O.S and private sectors to participate in the funding. This research therefore looked at the role of these stakeholders in funding secondary education. Local Authority Transfer Fund (LATF) and Constituency Development Fund (CDF) were expected to supplement government funding especially in putting up physical facilities in schools.

Initially the government policy on raising funds by schools gave much free hand to principals on the educational levies that they would call on parents to support. Most of the levies were instituted with little consideration of the parent's ability to pay (1 per policy Brief Volume 9, issue 3, 2003). Kenya's Vision 2030 is anchored on social, political and economic processes in the country. Under the social pillar, education and training is aimed at providing internationally competitive training, quality education and research which are the basis for realization of the vision, (Kenya vision 2030). The vision is a long term development strategy covering the period between 2008 and 2030. Under this plan, education as a social pillar should drive the country into a middle level economy. This can only be achieved through increased funding of the education sector by the government while involving the private sector. The second medium term plan of vision 2030 whose implementation commenced in 2013 had an aim of promoting wide use of ICT as an instrument of instruction and training in schools. In addition there were plans to lower student teacher ratio and provide more text books and equipment to schools (GOK, 2010).

In the year 2015 the government of Kenya increased funding of Free Day Secondary Education from Ksh 10265 to Ksh 12870. The Government through the Kenya Gazette Notice dated 9th march 2015, come up with a new fee structure as shown in Table 2.2.

Table 2. 3: 2015 FSDE vote amount allocation

Vote heads	Boarding schools (KES)			Day schools (KES)			Special needs schools (KES)		
	Government	Parent	Total	Government	Parent	Total	Government	Parent	Total
Teaching learning materials and exams	4792	00	4792	4792	00	4792	4792	00	4792
BES and Meals / lunch	00	32385	32385	00	00	00	00	26790	26790
Repairs Maintenance and Improvement	800	2392	3192	800	1086	1886	800	800	1600
Local Travel Transport	800	1621	2421	800	1033	1833	800	800	1600
Administration costs	800	2516	3316	800	772	1572	800	600	1400
EWC	1500	6302	7802	1500	1651	3151	1500	1000	2500
Medical	278	508	786	278	411	689	278	860	1138
Activity fee	600	798	1398	600	656	1256	600	500	1100
Personal emolument	2700	5972	8672	2700	3056	5755	2700	5000	7700
Approved PTA development projects	00	00	00	00	00	00	00	00	00
Insurance (medical and property)	600	1060	1660	600	710	1310	600	860	1460
Top up	00	00	00	00	00	00	19730	00	19730
Total School Fees	12870	53554	66424	12870	9374	22244	32600	37210	69810

Source: The Kenya Gazette No. Vol. CXVII-23 (2015)

The government of Kenya through the gazette notice No. 1555 of March 2015 on public secondary schools fee guidelines set a ceiling on the maximum fees charged to parents in each category of schools. Public secondary schools could only lower the fee if they so wished but could not go beyond the recommended ceiling (GOK, 2015). The recommendation of the government was that the fee be spread across the three terms in the ratio of 50:30:20. According to the fee policy, schools in agreement with the PTA had a leeway in deciding the amount charged per student to cater for lunch and PTA project. According to FDSE policy, the money given fell under tuition and operation vote heads. The government also provided same budgetary allocations for every cent given to all public schools. FDSE funds are in two accounts namely operational funding and tuition funding. The operational funding which forms the bulk of the money caters for a school's administrative costs whereas the tuition account caters for learning resources.

The government of Kenya also embarked on payment of National examination levies for all candidates in public secondary education from the year 2015. The ultimate goal was to increase access and quality in education. A task force on secondary school fees chaired by Dr. Kilemi Mwiria had recommended free quality secondary education by 2015. Secondary education was to be made available to all learners by establishing realistic unit costs. In response to the report, President Uhuru Kenyatta pointed out that basic education must be accessible to every child. For this to be achieved there was need for the government to partner with other stake holders, (Wanyama, 2014). The beginning of 2018 witnessed the actualization of the government's commitment to shoulder all tuition fees and leaving the parents and guardians with the role of providing school uniform, personal effects and boarding fee for children in boarding schools. The government scrapped ksh 9378 which each student had been required to pay in order to complement the FSDE. Table 2.3 shows the fully implemented FDSE.

Table 2. 4: FDSE day school allocation

Vote Heads	Parents obligation	GOK
Teaching/Learning materials and exams	Ksh 0	Ksh 4792
Repairs, Maintenance and Improvement	Ksh 0	Ksh 2886
Local Travel and Transport	Ksh 0	Ksh 1833
Administration Costs	Ksh 0	Ksh 1572
Electricity water and Conservancy	Ksh 0	Ksh 2151
Activity Fees	Ksh 0	Ksh 1256
Personnel Emolument	Ksh 0	Ksh 5755
Medical and Insurance	Ksh 0	Ksh 1999
Top Up	Ksh 0	Ksh.0
Total School Fees	Ksh 0	Ksh 22244

Source MOE (2017)

According to the Kenyan Government directive of the year 2017, parents/guardians with learners who are day scholars were not to pay any extra levy on top of the government's capitation of Ksh. 22,244, but cater for their children's lunch, school uniform and other needs outside the school (GOK, 2017).

Table 2. 5: FDSE category A boarding school allocation

Vote Heads	GOK	Parent	Total
Teaching Learning Materials and Exams	Ksh 4792	Ksh 0	Ksh 4792
Boarding Equipment & Stores	Ksh 0	Ksh 32385	Ksh 32385
Repairs, Maintenance & improvement	Ksh 1886	Ksh 2960	Ksh 4846
Local Travel & Transport	Ksh 1833	Ksh 1621	Ksh 3454
Administrative Costs	Ksh 1572	Ksh 3516	Ksh 5088
Electricity, Water &conservancy	Ksh 3151	Ksh 6302	Ksh 9453
Activity fees	Ksh 1256	Ksh 798	Ksh 2054
Personnel Emolument	Ksh 5755	Ksh 5972	Ksh 11727
Medical Insurance	Ksh 1999	Ksh 0	Ksh 1999
Total fees	Ksh 22244	Ksh 53554	Ksh 75798

According to the government's policy, category A schools comprise of all National schools and Extra County schools situated in towns of Nairobi, Mombasa, Nakuru,

Kisumu and Eldoret (MOE, 2017). In these schools, parents/guardians have to to top up on some of the vote heads catered for by the government and also cater for boarding facilities. In total, parents/guardians are required to pay ksh 53,554 as school fees.

Table 2. 6: FDSE category B boarding school allocation

Vote Heads	GOK	Parent	Total
Teaching Learning Materials & Exams	Ksh 4792	Ksh 0	Ksh 4792
Boarding Equipment & Stores	Ksh 0	Ksh 27385	Ksh 27385
Repairs, Maintenance & improvement	Ksh 1886	Ksh 2400	Ksh 4286
Local Travel & Transport	Ksh 1833	Ksh 650	Ksh 2483
Administrative Costs	Ksh 1572	Ksh 1850	Ksh 3422
Electricity, Water &conservancy	Ksh 3151	Ksh 4900	Ksh 8051
Activity fees	Ksh 1256	Ksh 150	Ksh1406
Personnel Emolument	Ksh 5755	Ksh 3100	Ksh 8855
Medical Insurance	Ksh 1999	Ksh 0	Ksh 1999
Total fees	Ksh 22244	Ksh 40535	Ksh 62779

Source: MoE 2017

Category B schools comprise of Boarding schools which are either Extra county schools, County schools or Sub County schools situated in other areas of Kenya. Apart from ksh 22,244 from government capitation, these schools are required to charge each parent/guardian, a maximum of ksh 40,535 for boarding related expenses. Just like in the case of category A schools, students in these schools are required to top up on some vote heads catered for by the government.

Table 2. 7: Special Needs Education schools fees structure

Vote heads	GOK	parent	Total
Teaching Learning Materials & Exams	Ksh4792	Ksh 0	Ksh 4792
Boarding Equipment & Stores	Ksh 23220	Ksh 10790	Ksh 34010
Repairs, Maintenance & improvement	Ksh 1886	Ksh 0	Ksh 1886
Local Travel & Transport	Ksh 1833	Ksh 0	Ksh 1833
Administrative Costs	Ksh 1572	Ksh 0	Ksh 1572
Electricity, Water &conservancy	Ksh 3151	Ksh 0	Ksh 3151
Activity fees	Ksh 1256	Ksh 0	Ksh 1256
Personnel Emolument	Ksh 5755	Ksh 0	Ksh 5755
Medical Insurance	Ksh 1999	Ksh 0	Ksh 1999
Top up	Ksh 12510	Ksh 0	Ksh 12510
Total Fees	Ksh 57974	Ksh 10790	Ksh 68764

Source: MoE 2017

According to the National Special Needs Education Policy Framework, Special Needs Education Schools refers to schools set aside to offer education to learners with special needs based on their respective disabilities (MoE, 2017). Special Needs Education schools receive the highest amount of money from the government. Whereas other categories of schools receive ksh 22,244 from government capitation, Special Needs Education schools receive a capitation of ksh 57, 974. Parents/Guardians pay a maximum of ksh 10,790 to supplement the Boarding, Equipment and stores Vote head.

2.2.2 Determinants of funds allocation in public secondary schools

According to Triwiyanto (2015), “curriculum is the heart of the education”. The curriculum has the goals that lead students towards academic performance to achieve set targets. In addition it has the design of the content and how the teaching and learning should be conducted to equip the students with the academic skills for their needs in the future (Bettin, Ahmad, Imron & Huda, 2017).

The rational approach used by school in setting of budgets to deliver curriculum

objectives for the betterment of the learner requires both long term, mid-term and short term approach to funds allocation. This therefore calls for the use of the school's strategic direction to be taken into consideration. A school's budget thus is a framework within which the decisions with regard to sources of income to the school and its expenditure to accomplish curriculum implementation are planned, implemented, recorded and reported for the realization of academic achievement (Onyekan, Adelodun & Oresajo, 2015). This includes use of the school's strategic plan whereby strategic resource allocations has to cover the full strategic planning period. This has to include the process to design the curriculum documents, improvement of the teachers and educators' capability, the fulfillment of the facilities, funding system and the change on the school culture (Onyekan, Adelodun & Oresajo, 2015). In addition there is the school's characteristics, type of school, priorities of the school, departmental budgets (covers the various activities: curricular as well as extra-curricular), uniqueness of the school needs, staffing needs, laws and regulations on funds allocation, Ministry of education goals and priorities, Fairness and equity and adherence to the national financing policy.

According to OECD (2017), school funding need to be accompanied by adequate institutional and regulatory frameworks to optimize the role of each actor in ensuring an effective and equitable allocation of funds. The report further states that Well-designed school funding policies are crucial to achieve quality, equity and efficiency objectives in school education. As secondary schools seek to enhance the learners' achievement in performance, they have to provide more equitable learning opportunities for different groups by ensuring that resources are directed to the areas where improvements in teaching and learning outcomes can best be achieved. Baker (2012) strongly advocates that the average measure of per pupil spending is positively associated with learner's

academic achievement. Baker (2012) also asserts that class size reduction and lower student teacher ratios are positively associated with learner's academic achievement. While money alone may not be the answer, more equitable and adequate allocation of financial inputs to schooling provides a necessary underlying condition for improving the equity and adequacy of outcomes.

2.3 Funding and adequacy of Physical infrastructure

Adequate Physical facilities and materials to support learning such as textbooks, supplementary teaching materials and motivated teachers who are well trained as observed by the Department for International Development (DFID) as recorded in Guidance note, a DFID practice paper (2007), are the most important ingredient of improving a student's performance. Condron and Roscigno (2003), argue that spending on school buildings may also shape achievements since better physical facilities create a more conducive environment for learning.

Wamulla (2013) from his studies states that the availability of physical and teaching facilities influences a learners' academic performance positively. According to Onderi, Kiplangat and Awino (2014), in a study conducted in Kericho Sub- County, poor academic performance in K.C.S.E is as a result of a myriad of factors among them poor school infrastructure. Karue and Amukoa (2013), in their research in Embu District found out that poor performance in K.C.S.E was as a result of unfavourable school environment, home environment and family background. School environment is majorly constituted by the infrastructure. Generally, it is perceived that the learning environment more so the infrastructure influences learners' academic achievement. Other factors that facilitate effective learning in learning institutions are inclusive of adequate power and water supply, sporting equipment, classrooms, laboratories, furniture and libraries. The

index of quality assurance in the school is determined by quality of infrastructure. The academic standards have been found to be strongly influenced by quality of infrastructure (Sunday, 2012). According to many educationists the adequacy and availability of learning resources has an influence on the effectiveness of the learning processes. This is because teaching and learning resources are of critical importance to the understanding of ideas that are fairly abstract resulting to learners improved performance. Lack of laboratories affect delivery in sciences (Zaru'a, 2016) since this is where the learners practice the taught concepts. Well-equipped laboratories with apparatus and stocked chemicals are needed for learners' achievement. In terms of the library, it needs to be equipped with sufficient books. In general, "school facilities consists of all types of buildings that are used for academic and non-academic purpose. School equipment, classroom facilities, furniture, toilet, ICT facilities, library and laboratory materials play a pivotal role to smoothly enhance the teaching and learning process" (Hailu & Biyabeyen, 2014). According to Schneider (2002) school facilities influence the teaching and learning process, therefore unattractive physical structures could de-motivate learners academically. Generally, a favourable school environment stimulates students to work hard resulting in enhanced academic achievement (Lodhi *et al*, 2019; Sunday, 2012). Redan, Marlina and Betaubun (2014) in their research findings conclude that learners' academic achievement in schools is influenced by teaching learning process which in turn is influenced by adequate physical facilities and infrastructures.

A teacher is also seen as the most important tool for educational effectiveness. Teachers design, implement and evaluate the curriculum. They are a resource in the learning process by virtue of possessing knowledge, training and expertise (Dick & Carey, 1978). Educational planners, policy makers and educational administrators all over the world

agree that provision of quality education is dependent on teachers (Gachathi, 2013; Oluoch, 2011; Petty, 2009). Quality teaching begins with lesson planning because planning enables the teacher to organize material in a way that interests the learners (Otunga, 2011). Teachers need to have appropriate workload that will allow them to prepare adequately for lessons. A teacher with a heavy workload will not be able to prepare well and in the process therefore cannot plan their lessons effectively (Gachahi, 2014; Ndirangu, 2013; Imonje, 2011) to meet the learners needs hence impeding on learners academic achievement. Adequate planning and preparation leads to appropriate lesson presentation, efficient time management, mastery of content, and ability to use a variety of teaching techniques (Otunga, 2011). According to Mungai (2013), Kimamo (2012), in the process of planning, the teacher who does not have a heavy work load is also able to select appropriate teaching learning resources and thus communicates information more effectively to the learners, which enhances learner achievement (Mukwa & Too, 2002).

The quality of the teaching force, need to be assessed in terms of qualification, experience, teaching methodology and attitude towards the work in school, (Felicity et al, 2013). A research report on the UN Decade of Education for Sustainable Development shows that, many regions of the world lack teachers and especially trained teachers which has been an obstacle to achieving EFA goals (Muedini, 2015; UNESCO, 2012). A research conducted in Makueni county Kenya showed that availability of learning resources had a correlation with learners' performance (Kimeu, Tanui & Ronoh, 2015). A related research which had been conducted earlier in the former Rift Valley province had also shown that schools equipped with adequate and relevant learning resources performed better in National examinations than schools with inadequate learning resources (Kurgat, 2014). According to the Organization for Economic

Cooperation and Development (OECD), instruction is hindered by inadequate resources which in turn leads to student's low performance. Facilities such as good school Libraries facilitated students with additional reading chances that lead in improvement in learners' academic achievement across the curriculum. Such reading enables one to improve his or her comprehension, reading and writing skills, and develop clarity of expression. Mudulia (2012) underscores the importance of textbooks and other learning materials in raising academic standards and efficiency in the systems applied by a school. He further argues that shortage or lack of core textbooks has led to poor performance by schools in Sub Saharan Africa. Books give the foundation upon which effective instruction is done inside the classroom (GPE, 2014). Lockhead (1990) reiterates the importance of learning resources when he alludes that the implementation of the intended curriculum cannot be easy where the appropriate required materials which should be adequate and of good quality. Johan (2004) and Adeogon (2001) also observe that the use and adequacy of teaching and learning resources is closely related to educational outcomes in schools. This research therefore explored into the issue of secondary schools allocation of funds in relation to availability of learning resources and its influence on achievement in academics by learners in Bungoma County

2.4 Funding and adequacy of teaching learning materials

The government allocates funds toward secondary education in Kenya to cater for administrative processes and provision of learning materials in secondary schools. Adequate and proper allocation of funds greatly influences the success of curriculum development process, (Usman, 2016; Shiundu and Omulando, 1992). The pursuit of all human endeavours depends on the availability of funding resources Ibe-Bassey (1996). Odanga (2018) and Mbugua *et al* (2012) attribute poor academic achievement to factors such as understaffing, inadequate teaching and learning materials. Hence availability of

learning resources depends on adequate and proper allocation of finances. Okumbe (1998) notes that, in order to meet educational costs there is need for relevant stakeholders to allocate the available funds objectively since the management of school activities evolve around the collection and disbursement of money. Abayomi and Olukayode (2006), assert that learning resources in schools are a key component in education. It is through exploration, interaction and discovery of one's environment that learning takes place. Munda and Odebero (2014) argue that the attainment of millennium goals related to education in Kenya is mainly dependent on the funds availed and their correct use to acquire resources for supporting the education process. The government of Kenya provides for tuition vote head which is supposed to cater for text books, exercise books, laboratory equipment and chemicals, reference materials, teacher guides and any other stationery for use in the instructional process. The government also employs teachers who are in charge of curriculum interpretation, implementation and evaluation. Quality education indicators according to Global Education Monitoring Report (2012) include textbooks availability and teacher pupil ratios.

According to Oluoch (2011), for a curriculum to be implemented efficiently, relevant and quality durable materials such as text books should be provided. Oluoch (2011) further stresses the importance of provision of varied instructional materials, which can allow for flexibility in the teaching and learning process and improve learner academic achievement. When it came to teaching and learning materials, the study sought to know the adequacy of text books in schools. Research by Reche et al (2012) notes that text books facilitated the learners to follow how the teacher actualize the syllabus and as a result improving their understanding, hence better learners' academic achievement. Similar sentiments are held by Masimo and Zaru'a (2016) who assert that educational input in the form of

materials and human resources greatly improves the quality of learning which can be translated into students' grades.

The question that now begs answers is whether these resources are enough or not. And if they are not who fills the gap? The World Bank Groups Educational Strategy has recommended increased investment in education through putting in place enough resources (MoEST).

2.5 Funding Practices impact on educational resources and Academic Achievement

The aspect of quality education has been the guiding principle of the Kenyan Government. Government participation in the funding of education has the objective of increasing secondary education quality. The indicators of quality education according to UNICEF (2000) are inclusive of performance which could be in terms of test scores posted by students and a learning environment supported by adequate learning resources and facilities. Indeed the vision of the Kenyan government is to provide quality education and training to all which is perceived as a strategy for overall development. This vision has been reiterated in the mission of the education sector which is "To provide, promote and coordinate quality education and training, integration of science, technology and innovation in sustainable socio-economic process". Sifuna (2009) observes that quality education is associated with the improvement in the pupils' cognitive achievement as well as their social-economic status in the society.

Amongst educational resources, funding is a crucial part because it determines the acquisition of other resources such as physical resources in a school and instructional materials. An education sector review by the MoEST (2002) shows that schooling quality is manifested in cognitive abilities, literacy and better students' examination performance. This can only be realized with adequate human and physical resources.

Schools have an impact on learners when they allocate economic resources to create a conducive social environment (Ayoti, Koteng & Odhiambo, 2016; Wenglinsky, 1997). Studies by scholars in different countries have shown that students' academic attainment relies on the allocated resources in public schools (Lumuli, 2009). World Bank (2012) concurs that depending on settings and the correct learning environment, making an increase on scarce inputs results in a high marginal return on the learning process.

Low academic achievement by students in secondary schools has remained a major concern for stake holders for a long time. Many studies conducted attribute student academic performance to socio-economic, psychological and environmental factors. Some of the studies concentrate on individual subject performance while others dwell on the general performance of students in National examinations. The education system in Kenya has been examination oriented where passing of examinations has been seen as a criterion for performance (Reche et al, 2012 and Odhiambo, 2008). Research has shown that academic performance is positively affected by funding (Sherlock, 2011). These findings were validated by a later research conducted in Mumias region in Kenya in 2012 by Sisungo, Kaberia and Buhere which showed that there is a significant positive correlation between school level of funding and performance in KCSE examinations. Provision of required adequate physical facilities such as classrooms, libraries and laboratories is a prerequisite for good quality education. These facilities are only acquired through the available funds in schools. This makes funding a key aspect in the provision of education, (Mbatia, 2004). A study conducted in public secondary schools in the former Bungoma South District in Kenya by Bakari, Likoko and Ndinyo in 2012, revealed that schools enjoying superior academic advantage had provided adequate physical facilities as compared to those that provided less.

The Government of Kenya has been providing finances majorly for the acquisition of teaching and learning resources. Owolabi (2012) attributes inadequate provision of equipment, physical facilities, instructional materials and qualified teachers to poor performance in science in schools within Nigeria. According to Mbiti and Lucas (2011), National schools which admit top performing pupils from primary schools across the nation have better facilities as compared with provincial and district schools. Ndiku and Muhavi (2013) argues that "old well established schools have relatively higher levels of efficiency than the upcoming day secondary schools and district schools because they have much of the required infrastructure". The quality and relevance of the instructional process in Kenya is linked to the examination policies and practices where by performance in administered examinations is used to determine achievement of quality in education. Good performance implies quality education (Chiarini *et al*, 2020). The education system in Kenya has been characterized by high stakes examination. At the secondary school level summative evaluation has been through the Kenya Certificate of Secondary Education (KCSE) examinations. Students who score grade C+ and above qualify for university entry and therefore seen to have performed well.

One of the policy priorities in secondary education is to improve performance through deliberate bursary schemes to benefit the poor and improve quality of learning. The Kenya Education Support Sector Programme for 2005-2010 established the National Assessment Centre (NAC), to monitor learning achievements. Academic achievement determines whether the student will proceed to university or other tertiary institutions. Schools in Kenya are under pressure to improve academic performance (MOEST, 2005). According to Lips et al (2008), many people are of the view that spending more on education correspondents to academic achievement. World Bank report on education recommends for the investment in outputs that most effectively affect student learning

achievement (World Bank, 2008). Research carried out in American states in 2003 suggests that states with higher public school spending per student performed better in National Assessment of Educational Progress (NAEP). Julia Gillards who is the chair the Global Partnership for education affirms that if spending on education was efficient, then the world would not have such low learning outcomes (World Bank, 2018). Verspoor (2015), alludes that education at secondary school level does not directly contribute towards human capital development as expected due to low learning achievement as a result of funding practices that are unable to promote student learning achievements. In Kenya, a research in Mount Elgon constituency in Bungoma County also revealed that nonpayment of fees by most parents was to blame for the dismal performance of the region in national examination. However still, research conducted in America between 2004 and 2007 established that there was no correlation between long-term education spending and performance. Many other factors contribute to academic achievement of learners. Some of these factors include student willingness to learn and school factors such as adequacy of resources and facilities. Funding shortfalls however make it difficult for schools to make ends meet.

Physical facilities such as school buildings, toilet facilities, classroom, laboratories, library, amongst other infrastructures are very instrumental to effective teaching and learning positive affect academic achievement of any given school (Akomolafe & Adesua, 2016). While some of the infrastructure available are in dilapidated conditions others seem not to be of standard quality and still others seem to lack maintenance. A study by Akomolafe and Adesua (2016) in Nigeria found out that public secondary schools which lack the necessary physical facilities for facilitating effective teaching and learning results in low students academic achievement. This clear implies that inadequate physical facilities do have very adverse effects on students' interest to learn and hence

the low academic achievement. In addition the study observes that where learners lack access to adequate seats in the classroom or library equipment, they ended up realizing low academic achievement. Such physical facilities in a school plant include play fields, classrooms, laboratories, library, workshops and toilet facilities that contribute to motivation of learners towards learning.

The quality, appropriateness and adequacy of the physical infrastructure therefore contributes to performance in the school system (Adeyemi, 2008). Physical facilities according to Adewunmi (2000), are "important to achieving effectiveness in instructional delivery and supervision in the school system". For example effective teaching and learning of science subjects requires provision for as well as the laboratories that are in good working state if the schools have function properly. According to findings from studies by Adeyemi (2008) in Nigeria and Bakari J., Likoko S. & Ndinyo F. (2012) in Kenya availability of adequate number of physical facilities had significant influence on pupil's academic performance. Inadequate provision of school infrastructure contributes to poor learners' academic achievement (Akomolafe & Adesua, 2016). It's therefore clear that without adequate physical facilities, schools will continue to realize continuous decline in learners' academic achievement (Wambua, Murungi & Mutwiri, 2018). Physical facilities can only be obtained with allocation of funds to procure them. This calls for more priority to be given to allocating of funds to public secondary schools to enable them acquire adequate physical facilities to make them more conducive for teaching and learning to take place.

A research on the relationship between funding and academic achievement as reported in the Asian Journal of Educational Research (2010) showed that schools with a higher financial ability performed better than those without. This means that a school with a

strong economic base and enough resources is capable of providing facilities for curriculum implementation. On the other hand some research findings have shown that there are still variations in per pupil costs and performance and that there is little apparent relationship between funding and academic achievement (Gaudet, 1994). World Bank (2018), asserts that, in as much as educational resources are necessary, they may not be sufficient to produce higher levels of student learning especially in excessive large classes of more than 60 students. This research therefore sought to establish, whether a relationship exists or not by giving clear performance indices to support the research findings. The literature mainly addresses funding and challenges associated with it. The gap that the research addressed is the correlation between funding and academic achievement in Bungoma County. The Ministry of Education targets quality education for all learners to enhance societal and national development. This is in tandem with EFA goals and target.

2.6 Summary of Literature Review

Literature review has explored secondary Education funding with reference to developing countries and narrowing down to the Kenyan experience since independence. The literature shows an upsurge of enrollment in secondary schools due to international commitments and individual countries to ensure their citizens access education.

The literature highlights the funding practices used in public secondary schools and outlines how policy has influenced funding over the years. The literature also reviewed how funding practices contribute to provision of physical infrastructure and the teaching learning materials in secondary schools. The review has dealt with the policy of funding secondary education in Kenya which culminated in the scrapping of tuition payment by households and fully taken over by the government in public secondary schools. The

literature review further explores the issue of partnership in funding of secondary education and the attitudes of stakeholders towards the same. The relationships between funding and academic achievement based on other scholars findings was also highlighted. The area of causes of poor performance has also been put into consideration. Challenges related to the introduction of Free Day Secondary Education were explored in this chapter. Towards the end of the chapter, the literature discussed extensively how funding practices either directly or indirectly contributes to learners' academic achievement in school.

CHAPTER THREE
RESEARCH METHODOLOGY

3.0 Introduction

In chapter three, there is the presentation of the research design. The study population and location are also discussed. The chapter also presents sampling techniques, instruments used for data collection, procedures employed in collecting data, data analysis and ethical consideration.

3.1 Research Design

A research design is a guide that a researcher uses to collect, organize, asses and evaluate data (Kothari, 2010; Kothari, 2004). This study adopted the pragmatist approach. The study by its nature required collection of data from different source and this pragmatism allows for. This paradigm allows the research to bring together the scientific and humanistic domains to understand the environment in which the problem being solved lies. Applying this paradigm the researcher was able to focus on the essential concerns of funding and academic achievement. The pragmatism paradigm also allowed for mixed method to be employed to allow for collection of both quantitative and qualitative data in the study. Its pluralistic approaches allowed for a combination of methods that in conjunction were able to shed light on the actual behaviour of respondents that allowed for the actual behavior of how funding practices influenced the adequate provision of resources and learners achievement.

This study employed a mixed research design that combines elements of qualitative and quantitative research approaches (e. g., use of qualitative and quantitative viewpoints, data collection, analysis, inference techniques) for the broad purposes of breadth and depth of understanding and corroboration (Schoonenboom & Johnson, 2017). According

to Regnault, Wellgoss and Barbic (2018), mixed survey allows for the research problem meaning to come out of respondents by obtaining both qualitative and quantitative data whereby qualitative data findings are used to clarify quantitative data findings. The design was appropriate in collecting data in order to answer questions that were both descriptive and inferential (Moss, 2017). Kothari (2010) states that mixed research design allow the respondents point of view to be reflected to explore and fully describe a phenomenon. In this study the mixed research was applied at the point of data collection where both qualitative and quantitative data was collected.

3.2 Location of the Study

The study was undertaken in Bungoma County. It lies along the Kenya Uganda border having a population estimated at 1,670,570 (858,389 female and 812,146 male) based on the 2019 census. It also borders Trans Nzoia, Kakamega and Busia counties. Nine sub-counties that make up Bungoma County are Bungoma South, Bungoma North, Bungoma East, Bungoma West, Bungoma Central, Kimilili, Bumula, Cheptais and Mt Elgon with a total of 264 secondary schools based on data obtained from the county education Office. 252 of these schools are public while 12 are private. The climate of Bungoma County with a temperature range of between 15 degrees and 30 degrees centigrade and an average rainfall of 1500mm favours agriculture. The communities in this county are predominantly small scale farmers with low purchasing power. Maize and Sugarcane are the main crops cultivated. The declining returns from farming have affected family's provision towards the children's learning in schools. The county has two main highways that lead to neighbouring countries of Democratic Republic of Congo (DRC), Rwanda Burundi and Uganda. Bungoma County has all categories of public secondary schools hence the findings can be generalized to be representative of the nation.

The position of Bungoma County is given in Fig. 3.1. The figure also shows a few secondary schools in Bungoma County.

Figure 3. 1 A Map of sub counties that make up Bungoma County
Source: Google maps

The map clearly shows Sub counties found in Bungoma County as Kanduyi, Webuye, Sirisia, Kimilili, Tongareni, Cheptaisi, Kapsokwony and Mt. Elgon. Each of this sub counties has public secondary schools, have not all sub counties have all categories of

secondary schools. National schools category for example are found only in Kimilili and Webuye sub counties only.

3.3 Study Population

The target population is considered to be subjects under the study (Copper & Schindler, 2001). Records obtained from Bungoma County Education office pertaining to the number of registered schools as of 2016, indicated that a total of 264 secondary schools were in the county where 252 were public and 12 private schools. The sample was therefore drawn from the county education office and a population of 252 public schools. The respondents comprised secondary school principals, Heads of academic Department (HODs), school bursars and the County Director of Education. Principals were chosen in this study because of their role as chief executive officers (CEOs) of schools and accounting officers as far as school finances are concerned. HoDs on the other hand are curriculum implementers and coordinators of various curriculum Departments. They were therefore in a better position to understand the status of learning materials and facilities in schools. The school bursars have a role of advising the principals on how to utilize the resources of the school hence were an important respondent on matters of school finances. The County Director of education was included because of the role the officer plays in maintaining of standards in education and implementation of MOE in the county. According to World Bank Report (2015), high standards cannot be maintained in any profession without mechanism to ensure quality assurance hence education personnel's contribution to quality education was handy in the study.

3.4 Sample Size and Sampling Procedures

The unit of study was schools from which the respondents were identified. Stratified sampling was employed to take care of the different categories of schools that included

Special Needs, Sub-county and County, Extra County and National schools. Bungoma County has 9 Sub-Counties and therefore sampling ensured that all areas were represented for easy comparison and conclusion. Purposive sampling was employed to select heads of institutions, bursars and the Bungoma County Director of Education. After stratified sampling of schools according to their category and sub-counties where they are found, simple random sampling technique was employed to select 36 secondary schools that participated in the study. This represented 15% of county's schools. The sample size is within the acceptable size as recommended by Gay (1983), who recommends that a sample when consider of between 10% and 30% in comparison to the total population is ideal for survey study that is the case here. The essential requirement of any sample is that, it should be as representative as possible of the population it is drawn from (Nachiamis et al, 1994). Table 3.1 shows the number of schools sampled to represent all the sub-counties.

Table 3. 1: Population sample frame

	Sub-county	Total no of schools	Sample %	Number that participated (sampled)	Special needs school	National schools	Extra county schools	County and sub-county schools
1	Bungoma north	35	5.25	5	0	0	1	4
2	Bungoma south	36	5.4	5	0	0	2	3
3	Bungoma east	55	8.25	7	1	1	1	3
4	Bungoma west	14	2.1	2	0	0	1	1
5	Bungoma central	27	4.05	4	0	0	1	3
6	Kimilili	28	4.2	4	0	1	1	2
7	Bumula	30	4.5	5	0	0	1	4
8	Mt Elgon	13	1.95	2	0	0	1	1
9	Cheptais	14	2.1	2	0	0	1	1
Total		252	14.29%	36	1	2	10	23

One of the sampled schools in Bungoma east failed to take in the study due change of leadership. The new leadership was not willing to take part. Since the remaining schools still constituted 14.29% that was still within the recommended percent, the study never sought to include a new case.

3.5 Data Collection Instruments

The study relied on document analysis that provided secondary data. Interview schedule and a questionnaire were tools used to collect primary data.

3.5.1 Questionnaire

The researcher in consultation with the supervisors developed questionnaires (see Appendix 4) basing on the research objectives. The questionnaire constituted of both closed and open ended questions. The open ended items sought data about years of

experience one had in the present position, the number of teachers employed by the Board of Management, TSC, and volunteer teachers and the number of learners in a given class stream. The closed ended items sought data about main source of funding, determinants of funds allocation to physical resources and teaching learning resources as well as provision of the same using a five point Likert type scale for rating respondents response as either Strongly agree, agree, neutral, disagree or strongly disagree. Other set items of the questionnaire sought to establish the learner text book ratio using ratios and highest professional qualifications of respondents. Questionnaires were chosen because they are free from the interviewer bias as answers were given according to the respondents own understanding (Kothari, 1994; Trochim, 2006). In addition a questionnaire is capable of collecting a large amount of information within a relatively shorter period and guarantees anonymity (Orodho undated).

3.5.2 Interview guide

The CDE interview guide consisted of items on the role of the CDEs office in quality and financial management, quality education matters and learners achievement in the county. It mainly focused on sources of funds, determinants of funds allocation and teaching learning resources.

3.5.3 Document Analysis guide

The document analysis guide consisted of items concerning funding sources, policies on fund allocation and academic performance in the schools. It mainly focused on sources of funds, determinants of funds allocation and teaching learning resources provision.

3.6 Validity and Reliability of instruments

Pilot testing which according to Kothari (2011) is a preliminary survey was undertaken by having four principals, twelve heads of department from six selected schools in the Busia County respond to an administered questionnaire. Busia County was used because public secondary schools have similar characteristics like those in Bungoma County. The schools were categorized as a Special Needs school, Sub-County and County, National and Extra County schools hence the schools had the same social and economic environment with those under study. From each school the principal, senior teacher and three heads of departments were selected in the pilot study. Interview was conducted with six principals and six bursars of the six schools select for pilot study and with the Busia County Director of Education. Tromp (2006) and Orodho (2009), concur that piloting enables the researcher to find out if the items in the instruments measure what they are supposed to measure and if the measures are consistent when all other factors are constant. Participants in the pilot test were chosen in line with recommendation of Mugenda (2011). They were not part of the main study participants though they possessed similar characteristics with those in the main study. The comments and suggestions provided by the respondents in the pilot study were used to improve the items by re-wording the questionnaire and interview guides.

The deficiencies and difficulties that respondents experienced as they responded to the items during the pilot testing were addressed to make them more explicit. Through this the study was able to establish the questions that made respondents uncomfortable. This were then simplified or made more explicit to ensure the questions were simple to understand.

Moreover, the researcher established the length of time it took to complete the survey hence organized items to ensure easy interpretation and less time required to respond. The responses were analyzed for accuracy of meaning and objectivity. An instrument which measures accurately what the researcher expects to measure is said to be valid. The validity of the research instruments was determined based on the pilot study findings. The supervisors assessed the relevance of the content in the instruments developed and their advice was incorporated in the revised data collection instruments.

3.6.1 Validity

According to Cook and Campbell (1979), validity is the near to the truthfulness or falsity of a given assertion or conclusion made from the findings of the research out of an objective study undertaking. It refers to the level by which a measurement does what it is supposed to do. Validity is the degree of an instrument measure of what it intends to measure (Kothari, 2010). The validity of the instruments was subjected to scrutiny by the supervisors who gave their informed advice.

According to Mugenda (2008), validity is the degree to which obtained results from data analysis actually represent the phenomena under study. In essence, validity is the meaningfulness and accuracy of inferences drawn from research results, or the level of accuracy to which data obtained from a study represents the variables of the study. The corrections on the questionnaire's structure and wording, ambiguities and length of the interview schedule was undertaken to restructure the instrument. The modified version was then used for data collection. Kothari (2008) refers to content validity as the level to which adequate coverage of the topic under study is provided by measuring instrument.

Validity can be considered to be the degree to which analyzed data and results are representative of the phenomenon being investigation (Orodho, 2009). The instruments

were prepared by the researcher in consultation with the research supervisors to ensure specific areas or objectives were covered by the instruments.

As recommended by Tichapondwa (2013) supervisors being experts in the area of study may scrutinize items formulated in a questionnaire to check if they match the required criteria such as clarity and intelligibility, neutrality and others. The instruments used for the study were subjected to scrutiny of Curriculum and Instructional design experts. Expert judgment enabled the researcher to identify areas of weakness of the instruments and made the appropriate corrections which were incorporated in the instrument to increase its validity.

To determine the content validity, the questionnaires used in the study were pre-tested on a pilot set of respondents who were of similar characteristics to the actual respondents in the study. A research instrument is valid depending on how effective the items have sampled significant aspects of the study purpose. The research instrument should therefore provide adequate coverage of the topic. Content validity of the research instrument can be enhanced through expert judgment (Kuye & Akinwale, 2020; Best & Kahn, 2011). This enabled the researcher to revise the questionnaire based on the feedback from the pilot respondents.

3.6.2 Reliability

Reliability is the level of stability of a research instrument that is also known as its level of internal consistency. “It is a statistical concept that is related to consistency and dependability, that is, consistency in obtaining the same relative answer when measuring phenomena that have not changed” (Burns & Bush, 2010). If the measuring instrument is repeated a second time similar results are obtained under the same condition with the same subjects. According to Mugenda and Mugenda (2003), reliability in research is

influenced by random error. Random error refers to factors that normally have not been given due consideration by the researcher giving rise to deviation from a true measurement. An instrument is considered to be reliable only if its use would yield the same result over and over again (Kothari, 2011). Therefore, for a research instrument that gives consistent results when applied to different samples from a population drawn randomly is said to be reliable.

To determine the reliability of the instruments the Test- retest method was employed. The Cronbach's coefficient was utilised to establish the reliability of the questionnaire. The most commonly used internal consistency measure is the Cronbach's Alpha coefficient which is considered most appropriate measure when the tool used to gather data makes use of Likert scales (Taherdoost, 2016). Cronbach's coefficient, α, was applied to establish the internal consistency of questionnaire items on main source of funding, determinants of allocation of funds to physical resources, teaching learning resources, provision of teaching learning resources and learner textbook ratio. The findings are presented in Table 3.2

Table 3. 2: Reliability test

Items	Cronbach's Coefficient (α)
Main source of funding	0.7450 (7items)
Determinants of funds allocation	0.9654 (11 items)
Physical resources	0.9451 (11 items)
Influence of allocations of funds on learning achievement	0.8996 (3 items)
Provision and use of teaching learning resources	0.8692 (5 items)
Learner textbook ratio	0.9585 (5 items)

The items of the questionnaire were considered to have the required internal consistency reliability as all had values greater than 0.7 (Mugenda & Mugenda, 2003; Gay, 2005; Mugenda, 2011).

3.7 Data Collection Procedure

Data was collected from HODs and Principals by use of a questionnaire. The researcher used research assistants to deliver the questionnaires to the respondents and collected them after they had been filled. The research assistants after being trained were then send to the field to collect data. The use of research assistants also was to eliminate any form of the researcher bias in the data collected.

Face to face interviews were conducted to get data from school principals, the school bursars and County Director of Education. Permission was sought from the respondents in order to get information on funding practices and the influence on learner academic achievement. Interviews were selected due to their ability of being flexible and easily adaptable. Through the interviews with bursars, school principals and the County Director of Education (CDE) (see appendix 5, appendix 3 and appendix 2 respectively) the researcher was also able to get in-depth information through probing, (Prewitt, 1975). The interviews with principals was used to obtain clarification on information provided in the questionnaire. The interview with the bursar mainly focused on sources of funds and funds allocation practices.

Critical examination of records for information concerning sources of funding and academic achievement in public secondary schools was done by use of document analysis. Yim (2014) asserts that document analysis provides a stable and reviewable way of data collection. The researcher therefore examined records which included KCSE results analysis reports, financial reports, budgets and funds donation letters.

Annual budgets detailing requisitions by schools were handy in comparing funding practices in public secondary schools.

3.8 Data Analysis

Analysis of data was undertaken by employing both quantitative and qualitative methods. After collection of data editing and correction of any omission and errors was done. Thereafter, coding of data was done according to the main themes. This was in line with the research objectives. A variety of ways are used to present the findings. Both descriptive and inferential statistics were used to analyze the data obtained by the study. Within the descriptive statistics the study first of all established the arithmetic mean value of the responses. It is a popular measure of central tendency normally referred to as mean (Vanlalhriati & Singh, 2015). In addition standard deviation was evaluated alongside the mean. "Standard deviation is a mathematical tool to help assess how far the values are spread above and below the mean" (Manikandan, 2011). A high value of standard deviation is an indication that the data is more spread out and as such is less reliable while a low value of standard deviation indicates that the data are distributed around the mean which is an indication that they are more reliable (Mohini & Prajakt, 2012). The inferential statistics used included the Spearman's Correlation to determine if there was any relationship between variables of the study.

Data was then analyzed using SPSS to generate frequency tables, percentage and correlations. Table 3.3 summarizes how data was analyzed.

Table 3. 3: Summary table for data analysis

Objective	Data type	Statistical analysis
i) Establish the funding practices used in public secondary schools in Bungoma County.	Quantitative	Descriptive: Frequencies and Percentages, mean and standard deviation
ii) To evaluate the effects of funding practices on the adequacy of physical infrastructure in secondary schools in Bungoma County.	Quantitative	Descriptive: Frequencies and Percentages, mean and standard deviation Inferential: Spearman's Correlation
iii) To determine the effects of funding practices on the adequacy of teaching learning materials in secondary schools in Bungoma County.	Quantitative	Descriptive: Frequencies and Percentages, mean and standard deviation Inferential: Spearman's Correlation
iv) Investigate the relationship between funding practices and learners academic achievement.	Qualitative and Quantitative	Descriptive: Frequencies and Percentages, mean and standard deviation, scatter graph with trends Inferential: Spearman's correlation

3.9 Ethical Considerations

Ethical consideration in research entailed the moral standards put into consideration while gathering data. The principles of voluntary participation, informed consent, anonymity, confidentiality and the right of a person to service was considered (Trochim, 2006). The due process of seeking approval to carry out the research as a legal fulfillment was sought. Additional permission was sought from the Directorate of Postgraduate studies of Masinde Muliro University of Science and Technology (MMUST), National Commission of Science, Technology and Innovation (NACOSTI), Bungoma County Commissioner and the County Director of Education before embarking on data collection. Principals and Heads of Departments of participating schools were also consulted and permission sought. The researcher assured the respondents of confidentiality to enable them freely volunteer the information. Information was also gathered from respondents based on informed consent. This was done through explaining to them the purpose and benefits of the research. According to Nachmias and Nachmias (1996), informed consent is rooted in the aspect of freedom and self determination as fundamentals of Human Rights. It is also based on the elements of competence, voluntarism, full information and comprehension.

CHAPTER FOUR
DATA PRESENTATION, INTERPRETATION AND DISCUSSION

4.1 Introduction of chapter four

In this chapter the findings of the study are presented, interpreted and discussed. The findings are presented and discussed in context of the objectives of the study which were to:-

i) Establish the funding practices used in public secondary schools in Bungoma County.

ii) To determine the association between funding practices and adequacy of physical infrastructure in secondary schools in Bungoma County.

iii) To determine the association between funding practices and adequacy of teaching learning materials in secondary schools in Bungoma County.

iv) Investigate the relationship between funding practices on educational resource provision and learners' academic achievement.

The last three objectives were determined by testing the null hypothesis that were corresponding to the inferential questions:

ii) H_{01}: There is no statistical significant association between funding practices and adequacy of physical infrastructure in secondary schools in Bungoma County.

iii) H_{02}: There is no statistical significant association between funding practices and adequacy of teaching learning resources in secondary schools in Bungoma County.

iv) H_{03}: There is no statistical significant association between funding practices on educational resource provision and learners' academic achievement.

4.2 Demographics

The respondent's years of experience in their current position enables one to have a more clear understanding of the trends of the tasks and special roles they play in their position. In this regard the study sought to know the experience that the respondents had in their present position. The results obtained are as given in Table 4.1

Table 4. 1: Experience of respondents in their current position

Years	Category of respondent: Experience in current position in years									
	Principal		Head of Department		Bursar		County Director of Education (CDE)		Combined	
	Count	%	Count	%	Count	%	Count	%	Count	%
Up to one year	3	8.3	46	31.5	0	0	0	0	49	22.4
over 1 to 3 years	12	33.3	44	30.1	9	25.0	1	100.0	66	30.1
over 3 to 6 years	8	22.2	13	8.9	11	30.6	0	0	32	14.6
over 6 to 9 years	7	19.4	7	4.8	12	33.3	0	0	26	11.9
over 9 years	6	16.7	36	24.7	4	11.1	0	0	46	21.0
Total	36	100.0	146	100.0	36	100.0	1	100.0	219	100.0

At the time of data collection as revealed in Table 4.1, most respondents had served in their current positions for more than a year and hence were competent to provide informed responses with regard to their duties towards provision of educational services. From Table 4.1, 22.4% of the respondents had less than one year experience. Of this 3 were principals (8.3%) and 46 were HoDs (31.5%). 30.1% of the respondents had

experience of between 1 to 3 years which constituted 1 CDE (100%), 9 bursars (25%), 12 principals (33.3%) and 44 HoDs (30.1%). 32 (14.6%) of the respondents had over 3 to 6 years of serving experience with 8 being principals (22.2%), 13 HoDs (8.9%) and 11 (30.6%) being bursars. 26 (11.9%) of the respondents had over 6 to 9 years' experience which constituted, 7 principals (19.4%), 7 HoDs (4.8%) and 12 (33.3%) being bursars. Finally, 46 (21.0%) of all respondents had over 9 years' experience, of which 6 were principals (16.7%), 36 were HoDs (24.7%) and 4 were bursars (11.1%). On the overall close to a half of respondents, 104 (47.5%), had over three years' experience of serving in their current positions. Employee experience impacts everything in the school activities therefore the more experienced the staff the more accurate description of the school environment towards educational achievement.

The study also sought to get the highest teacher qualification held by the respondents who teachers. The findings are as given in Table 4.2. The teacher qualification makes one to be able to respond from an informed point of view on teaching and learning matters.

Table 4. 2: Teachers highest academic qualification

Qualification	Category of teachers					
	Principal		Head of Department		Combined	
	Highest professional teacher qualification		Highest professional teacher qualification		Highest professional teacher qualification	
	Count	%	Count	%	Count	%
B.Ed	24	66.6%	122	83.6%	146	80.2%
M.Ed	11	30.6%	23	15.7%	34	18.7%
PhD	1	2.8%	1	0.7%	2	1.1%
Total	36	100.0%	146	100.0%	182	100.0%

From Table 4.2, it is apparent that 1.1% of the respondents had their highest qualification as a Doctorate on top of having a Bachelor's degree qualification or postgraduate Diploma in education. These were 1 principal (2.8%) and 1 head of department (0.7%). 18.7 of the teachers had a Masters on top of a Bachelor's degree qualification or Postgraduate Diploma in an education field as their highest qualification. This constituted 11 (30.6%) being principals and 23 (15.7%) being HoDs. The rest of the teachers (80.2%) had a Bachelor of Education degree as their highest qualification of which 24 (66.6%) were principals and 122 (83.6%) were HoDs. Based on the requirement by the Teachers Service Commission that all teachers in secondary schools should have a minimum qualification of at least a Diploma in education to be appointed, all teachers had the required qualifications. They are assumed based on the training to have a better understanding of the resources needed to manage the schools to provide an informed point of view on matters of teaching learning resources.

Through interview, it was established that the CDE was a holder of a Masters of Education degree. It was also established that of the 36 bursars who participated in the study 25 of them were holders of Certified Public Accountants I (CPA I) and 11 had CPA II as their highest professional qualifications. All bursars had the required basic training in accountancy and hence were best placed to provide informed responses on financial matters.

The study also sought to establish the numbers of streams each school had. The findings are presented on Table 4.3.

Table 4. 3: Number streams in the schools

Number of streams	Frequency	Percent	Cumulative Percent
1	4	11.1	11.1
2	7	19.4	30.5
3	6	16.7	47.2
above 3	19	52.8	100.0
Total	36	100.0	

At the time of data collection as indicated in Table 4.3, 11.1% of the schools visited were single streamed, 19.4% were double streamed, 16.7% were triple streamed and 52.8% had over three streams per class. An interview with the principals in the schools revealed that most of the schools had increased the number of streams in the past few years after implementation of free day secondary education pointing towards increased enrolment and the most current government policy of 100% transition to secondary school.

The number of teachers posted to a school is normally determined by how broad the curriculum is and the number of streams the school has. The study sought to determine how many teachers the schools had according to the school category and the teacher's employment status. This was to indicate how many teachers in the school were employed by TSC, Board of Management, and volunteer teachers. The findings are presented in Table 4.4.

Table 4. 4: Number of teachers per type of employer and school category

Type of employer	Special needs school		National school		Extra county school		County and sub-county school		Total	
	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
Teachers Service Commission	8	61.54	89	80.18	321	68.01	383	66.26	801	68.23
Board of Management	4	30.77	22	19.82	142	30.08	180	31.14	348	29.64
Volunteer	1	7.69	0	0.00	9	1.91	15	2.60	25	2.13
Total	13	100	111	100	472	100	578	100	1174	100

From Table 4.4, it is clear that special needs school had 61.54 % of its staff employed by the Teachers Service commission with 30.77% being employed by the Board of Management and 7.69% being volunteer teachers. For National schools, 80.18% of its teachers were employed by TSC and 19.82% were employed by the Board of Management. The extra county schools had 68.01% of the teaching staff employed by the Teachers Service commission with 30.08% being employed by the Board of Management and 1.91% being volunteer teachers. Finally the county and sub-county schools had 66.26% of the teaching staff employed by the Teachers Service commission with 31.14% being employed by the Board of Management and 2.60% being volunteer teachers. When all respondents are combined, 68.23% of the teaching staff was employed by the Teachers Service commission with 29.64% being employed by the Board of Management and 2.13% being volunteer teachers. It is notable that no single school was adequately staffed by the Teachers Service Commission. In Bungoma County the best staffed public schools were the national school with only 19.12% teachers

employed by BOM. The second best staffed public schools category in Bungoma County were the extra county schools with 31.99% being employed by BOM and volunteers. The third best staffed public schools category in Bungoma County were the county and sub-county schools with 33.74% being employed by BOM and volunteers. The least staffed public schools category in Bungoma County were the special needs school with 38.46% being employed by BOM and volunteers. Learners attain better academic achievement from teachers in schools that are well staffed since the teachers have more time to pay attention to learner's individual needs than those where teachers are poorly staffed due to heavy workload. A heavy workload leaves teachers with no time to attend to the individual needs of each student.

The study also sought to establish the enrolment pattern of the students' population in the schools that took part in the study from 2013 to 2018. This period was during the years when the government was implementing policies to ensure that free day secondary education is actualized. The findings are as indicated by Table 4.5.

Table 4. 5: Student enrolment pattern after Free Day Secondary Education (FSDE) introduction

Year	Population of students	Population deviation
2013	16,364	
2014	17,036	672
2015	17,892	856
2016	18,930	1,038
2017	20,982	2,052
2018	22,393	1,411

From Table 4.5 it can be observed that there has been a general increase in the students population from 2013 to 2018. In 2013 the student's population was 16,364. In 2014 it increased by 672 to 17,036. In 2015 it increased by 856 to 18,892 and in 2016 it

increased by 1,038 to 18,930. In 2017 it increased by 2,052 to 20,982 while in 2018 it increased by 1,411 to 22,393. A report from the principals indicated that enrolment has been further boosted by the policy of 100% transition from primary to secondary schools. It is worth mentioning however, that the rate of increase of the students' population between 2017 and 2018 declined.

4.3 Funding practices used in Bungoma County Public secondary schools

In its first objective, the study sought to establish the funding practices used in the secondary schools in the County. The sources of funds to schools was determined and how the funds obtained were allocated towards provision of educational services.

4.3.1 Sources of funds for Bungoma County Public secondary schools

The study asked respondents to indicate the extent to which they agreed with a list of statements concerning sources of funds within the schools on a five points scale with 1 being the lowest corresponding to strongly disagree, 2 disagree 3 neutral 4 agree and 5 being the highest corresponding to strongly agree after coding. The sources of funds listed were FDSE, Non-Governmental / Community Based Organization, National Government grants, Constituency development fund (CDF), County Government grants, Parents and Harambees / Friends contributions.

4.3.1.1 Perception of sources of funding per category of respondents

In Table 4.6, the means on the findings of the sources of funding to the schools in Bungoma County are presented as per the category of respondents.

Table 4. 6: Main source of funding per respondents category

Category of respondents	Main source of funding	FDSE as funding source	Non-Governmental / Community Based Organization	National Government grants	Constituency development fund	County Government grants	Parents	Harambees / Friends
Principal	Mean	2.47	1.00	3.08	1.94	1.14	4.00	1.14
	N	36	36	36	36	36	36	36
	Std. Deviation	.774	.000	.500	.333	.351	.000	.351
Head of Department	Mean	3.71	2.02	1.98	2.93	2.42	3.47	2.26
	N	146	146	122	146	146	146	146
	Std. Deviation	.469	.765	.522	.785	.878	.744	.588

From Table 4.6, it can be observed that principals were fairly neutral to the fact that FDSE was a main source of funding of the schools with their response mean being 2.47. The standard deviation of their responses being a low value close to zero of 0.774 clearly indicates that their responses were not varied. The HoDs on the other hand indicated that FDSE was a main source of funding to the schools with their responses having a mean score of 3.71. The responses were not varied given that the standard deviation was a low value of 0.469.

From presentations in Table 4.6, the respondents of both categories indicated that Non-Governmental / Community Based Organization was not a sources of funding in Bungoma County towards secondary school education with mean response value for principals being 1.00 implying strongly disagreeing and HoDs being 2.02 implying disagreeing with both having respective standard deviations of 0.000 and 0.765. From

the standard deviation value it is apparent that the principals were all certain in their response with no variation in their response while HoDs' response had very little variation as implied by the very low value of standard deviation.

While the principals perceived the National Government Grants as one of the main sources of funds to the school, the HoDs did not. The principals' responses had a mean score of 3.08 corresponding to being in agreement with minimal variation in that response as indicated by the low value of standard deviation of 0.500, the HoDs had their responses having a mean score of 1.98 corresponding to disagreement with a low value standard deviation of 0.522, therefore the responses were not varied.

In accordance to the findings on Table 4.6, the principals did not perceive the Constituency Development Fund (CDF) as one of the main sources of funds to the school with their responses having a mean score of 1.94 that corresponds to disagreeing with minimal variation in their response as indicated by the low value of standard deviation of 0.333. On the other hand, the HoDs remained neutral on CDF being a main source of funding with their responses having a mean score of 2.93 with a low value standard deviation of 0.785, therefore the responses did not vary widely.

From presentations on Table 4.6, the respondents of both categories were not in agreement to the response on County Government grants being the main source of funds for secondary schools. While the principals strongly disagreed to County Government grants being a main sources of funding to secondary schools with the means response value of 1.14, the HoDs only disagreed with their response mean being 2.42 with both having respective standard deviations of 0.351 and 0.878. From the standard deviation value it is apparent that the principals were all certain in their response with very

minimal variation in their response while HoDs' response had very little variation as implied by the very low value of standard deviation.

According to findings in Table 4.6, the respondents of both categories indicated the parents were a major source of funding to secondary schools in Bungoma County with the mean response value for principals being 4.00 and HoDs mean being 3.47 with both having respective standard deviations of 0.000 and 0.744. From the standard deviation value it is apparent that the principals were all certain in their response with no variation in their response while HoDs' response had very little variation as implied by the very low value of standard deviation.

From presentations in Table 4.6, although, both categories of the respondents were not in agreement to the response with regard to harambees / friends contributions being a main source of income to Bungoma County public secondary schools their response had a variation. While the principals were strongly in disagreement to Harambees / friends contributions being a source of funding to secondary schools in Bungoma County with the means of 1.14, the HoDs only disagreed with their response mean being 2.26 with both having standard deviations of 0.351 and 0.588 respectively. From the standard deviation value it is apparent that the principals were all certain in their response with negligible variation in their response while HoDs' response had very little variation as implied by the indicated low value of standard deviation.

4.3.1.2 Perception of sources of funding per school category

From the literature review it was observed that secondary schools in Kenya are funded with a slight variation in terms of their category. When the sources of funding were analyzed as per the different categories of schools, the results in Table 4.7 were obtained.

Table 4. 7: Sources of funds as perceived by respondents per category of schools

Category of school		FDSE as funding source	Non-Governmental / Community Based Organization	National Government grants	Constituency development fund	County Government grants	Parents	Harambees / Friends
Special needs	Mean	2.67	1.17	2.83	2.00	1.17	4.00	1.83
	N	6	6	6	6	6	6	6
	Std. Deviation	.816	.408	.753	.632	.408	.000	.408
National	Mean	2.91	1.27	2.36	2.27	1.36	3.91	1.82
school	N	11	11	11	11	11	11	11
	Std. Deviation	1.044	.467	.809	.467	.674	.302	.405
Extra county	Mean	3.06	1.46	2.16	3.00	1.88	3.84	1.82
school	N	50	50	50	50	50	50	50
	Std. Deviation	.843	.676	.618	.700	.659	.548	.438
County and	Mean	3.74	2.06	2.21	2.70	2.43	3.40	2.17
sub-county	N	115	115	91	115	115	115	115
school	Std. Deviation	.460	.787	.707	.858	.992	.747	.805

From Table 4.7, it is apparent that respondents in all categories of schools except for county and sub-county schools indicated that FDSE was not a main source of funding based on the means of 2.67, 2.91 and 3.06 for Special Needs, National schools and Extra County schools respectively which were neither in the range of agreeing or disagreeing. It was only in the County and Sub-county schools respondents whose response mean score of 3.74 was in the range of agreement to FDSE being a main source of funding. In all categories the standard deviations were low values close to zero hence implying very little variation in the responses provided. The response in County and Sub-County schools as regards to FDSE as the main source of funding was higher than respondents in the other categories of schools. This could be as a result of a large number of the schools being day schools which mainly rely on Government capitation for most of their

operations. Literature review revealed that the year 2018 the actualization of free Day Secondary Education where all day secondary schools were exempted from any tuition obligations hence most day schools to be dependent on only government capitation.

In the case of NGOs /CBOs being a main source of funding, respondents of all categories strongly disagreed with the statement. Respondents' means from county and sub-county, extra county, National, and special needs schools were 1.17, 1.27, 1.46 and 2.06 with standard deviations of 0.408, 0.467, 0.676 and 0.787 respectively.

As can be observed from Table 4.7 in terms of the National government grants being a main source of funds, only special needs schools respondents were neither agreeing nor disagreeing with a mean score of 2.83 and a standard deviation of 0.753). Their response could be due to the grants they receive from the national government that the other categories of schools do not get to cater for the needs of special learners as indicated in the literature review. Respondents from the other categories of schools generally disagreed that National government grants were a main source of funding with the means of 2.21, 2.16 and 2.36 and with the standard deviations of 0.707, 0.618 and 0.809 for County and Sub-County, Extra County and National schools respectively.

Further it can be observed from Table 4.7 that both respondents in the Special Needs Schools and National schools category indicated that CDF funds were not a main source of funds with means of 2.00 and 2.27 and standard deviations of 0.632 and 0.467 respectively. The Extra County, County and Sub-County schools' respondents on the other hand, were neither agreeing nor disagreeing with response means of 3.00 and 2.70 a standard deviations of 0.700 and 0.858 respectively. This implies that much as they perceived it as a source of funding they did not consider it as a main source. This

findings agrees with findings of a study by Kaboro (2018) that CDF is not a main source of funding schools.

Data from Table 4.7 show that respondents from all categories except County and Sub-County schools indicated that parents provided the main source of funding for the schools. They all had a mean value within the agree range of 4.00, 3.91 and 3.84 and standard deviations of 0.000, 0.302 and 0.548 for Special Needs ,National and Extra-County schools respectively. However, the respondents in the County and Sub-County school were neither agreeing nor disagreeing hence their response was in the neutral responses range with a mean of 3.40 and a standard deviation of 0.747. This implies that as much as they perceived parents as a source of funds, they did not consider them to be a main source.

Finally, from the presentations in Table 4.7, the respondents from all categories of schools, indicated that Harambees / friends contributions was not a main source of funds to the schools since all their mean values were in the range of disagree. The respondents from Special Needs schools, National schools, Extra County, County and Sub-County schools had a mean response score of 1.83, 1.82, 1.82 and 2.17 with standard deviations of 0.408, 0.405, 0.438 and 0.805 respectively.

Since parents are considered the main source of funding, schools have to put in place strategies to collect as much funds as possible from parents. The collected funds can then be used to procure physical, material and human educational resources for implementation of curriculum. In addition, for County and sub-county schools whose main source of funding is FDSE, the schools have to plan FDSE funds for optimal utilizations to procure physical, material and human educational resources for

implementation of the curriculum. Learners gain more academic achievement where curriculum implementation resources have been availed and are utilized.

The study findings for combined respondents (HoDs and principals) are presented in Table 4.8.

Table 4. 8: Main source of funding for combined respondents

	Main source of funding		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	No response	Total	Mean	Std. Deviation
1	FDSE	Count	6	8	63	105	0	0	182	3.467	0.733
		%	3.3%	4.4%	34.6%	57.7%	0%	0%	100%		
2	NGO / CBO	Count	77	61	44	0	0	0	182	1.819	0.797
		%	42.3%	33.5%	24.2%	0%	0%	0%	100%		
	NGF	Count	18	92	42	6	0	24	182	2.228	0.695
		%	9.9%	50.5%	23.1%	3.3%	0%	13.2%	100%		
3	CDF	Count	7	70	69	36	0	0	182	2.736	0.819
		%	3.8%	38.5%	37.9%	19.8%	0%	0%	100%		
4	CGF	Count	49	73	40	20	0	0	182	2.170	0.951
		%	26.9%	40.1%	22.0%	11.0%	0%	0%	100%		
5	Parents	Count	0	22	34	126	0	0	182	3.571	0.700
		%	0%	12.1%	18.7%	69.2%	0%	0%	100%		
6	Harambees / Friends	Count	35	112	28	7	0	0	182	2.038	0.708
		%	19.2%	61.5%	15.4%	3.8%	0%	0%	100%		

From Table 4.8, 105 (57.7%) respondents agreed to the fact that FDSE formed the bulk of the schools source of funds, 63 (34.6%) were neutral with 8 (4.4%) disagreeing and six (3.3%) strongly disagreeing. Only 7.7% of the respondents disagreed to FDSE being the main source of funding for their schools. This indicates that most respondents indicated that schools relied on government funding for their running. The mean score of

the responses was 3.467 with a standard deviation of 0.733. The low deviation with a value close to zero shows that the responses were very consistent to the fact that respondents generally agreed to FDSE being among the main sources of funding of secondary schools in Bungoma County.

Interview with principals especially from day schools indicated that they mainly depended on FDSE as most parents hardly contribute for the lunch programmes as they ought to. Document analysis on fees statements showed that there was much fees arrears in day secondary schools. They however admitted that third term of the school calendar was the most difficult term due to the smaller fraction of the government capitation. Due to the many activities that require more finances, most schools resorted to sending students home for school fees. When students are send home, it interferes with the implementation of curriculum in class. The absence of the learner leads to him/her losing out on the covered lesson. This was seen as one of the contributors of poor results in KCSE.

In other instances some schools are funded by NGOs / CBO. The response was sought to establish their contribution in funding the county's secondary schools. From Table 4.8, it can be observed that no respondent (0%) indicated that Non-Governmental Organization (NGO) or Community Based Organizations (CBO) contributed to funding of the schools, 24.2% neither agreed nor disagreed, 33.5% disagreed and 42.3% strongly disagreed. This means that 76.9% of the respondents indicated that NGO / CBO had not funded them at all. The mean score of the responses was 1.819 with a standard deviation of 0. 797. The low deviation shows that the responses were very consistent to the fact that respondents generally did not consider NGOs/CBOs as one of the main sources of funding in secondary schools in the County.

Besides FDSE the government provided grants to some school. From Table 4.8, the respondents' response of National Government Grants as the main source of funding reveals that only 3.3% (6) of the respondents agreed to having government grants as the school's main source of funding, 23.1% (42) neither agreed nor disagreed, 50.5% (92) disagreed, 9.9% (18) strongly disagreed while 24 respondents failed respond to the item. This was mainly attributed to the possibility of them not being aware of any grants as a source funding for their schools. The mean score of the responses was 2.228 with a standard deviation of 0.695. The low deviation value close to zero shows that the respondents were neither in agreement nor disagreement with regards to national government grants being among the main sources of funding in secondary schools in the County. Interview with County Director of Education in Bungoma County, established that Government grants initially had a criteria that was followed before awarding schools. However with time, government grants became politicized. Most principals interviewed agreed with the sentiments of the County Director of Education. Grants from the government are subject to connection that schools have with those in charge of the grants docket. Further interviews with bursars established that for schools to receive grants, there was need to write proposals towards the same. They further indicated that since obtaining grants as a source of funding was not a sure bet, most schools did not bother to write the proposals.

Another source of funding to school is the Constituency Development Funds (CDF). The respondents' response on CDF being the main source of funding is provided in Table 4.8. Findings reveal that 36 (19.8%) respondents agreed to having constituency development funds as their main source of funding, 69 (37.9%) neither agreed nor disagreed, 38.5% (70) disagreed with 7 (3.8%) strongly disagreeing. The mean score of the responses was 2.736 with a standard deviation of 0.819. The low deviation value

close to zero, shows that, the responses were very consistent to the fact that respondents generally neither agreed nor disagreed with regards to CDFs being among the main sources of funding in secondary schools in the County. Interviews with the principals also established that just like the government grants, CDF also depended on the schools connections with the officials in charge of disbursement. The interview also revealed that some fraction of CDF was retained by officials in charge of the disbursement and principals had to find ways of filling the gap. This interfered with the projects that CDF was meant to fund.

County governments have also been funding secondary schools in terms of grants and bursaries to students. With regard to County Government Funds (CGF) being the main source of funds, findings as presented in Table 4.8, show that only 20 (11.0%) respondents indicated that County Governments Grants (CGG) contributed to funding of the schools, 40 (22.0%) neither agreed nor disagreed, 73 (40.1%) disagreed and 49 (26.9%) strongly disagreed. Hence 67.0% of the respondents indicated that county government had not funded them at all. The mean score of the responses was 2.170 with a standard deviation of 0. 951. The low standard deviation close to zero shows that the respondents were neither in agreement nor disagreement with regards to county government grants being among the main sources of funding in secondary schools in the County.

The findings as regards to parents being the main source of funds for schools were as presented in Table 4.8. Findings show that 126 (69.2%) respondents indicated that parents formed the main source of funds for schools, 34 (18.7%) neither agreed nor disagreed and 22 (12.1%) disagreed. The mean score of the responses was 3.571 with a standard deviation of 0.700. The deviation being a low value close to zero shows that

respondents generally agreed that parents were among the main sources of funding in secondary schools in Bungoma County. Interview with the principals however indicated that very few parents cleared their fees. In cases where government capitation delayed, the schools sent students back home to collect fees for the operations of the schools to continue. When students are sent back for fees, most teachers wait for students to come back hence interfering with curriculum implementation. An interview with the CDE revealed that absenteeism was a reason for poor performance. An interview with the school Bursars revealed that if parents could pay their allocation in full then financing school programmes would not be a challenge.

The findings on Harambees / friends donations as a main source of funding were as presented in Table 4.8 which shows that only 7 (3.8%) respondents indicated that schools benefit from Harambees and friends donations, 28 (15.4%) neither agreed nor disagreed, 112 (61.5%) disagreed and 35 (19.2%) strongly disagreed. In general, 80.8% of the respondents disagreed to schools ever benefiting from Harambees or friends donations to fund their operations. The mean score of the responses was 2.038 with a standard deviation of 0. 708. The deviation being a low value close to zero shows that respondents were neither in agreement nor disagreement with regards to Harambees / friends donations being among the main sources of funding in secondary schools in the County.

Interviews with bursars and document analysis of financial reports indicated that parents and FDSE were the main and consistent contributors of funds to schools. Bursars in day schools rate FDSE to be the main source of funding to the school while those from boarding schools rated parents as the main source of funding. In a few schools, bursars indicated that they occasionally received funds from of National government grants, CDF, Non-Governmental / Community Based organization, County government grants

and friends and harambees towards learners' fees and infrastructure development. Analysis of financial statements did indicate receipt of funds from national government grants, CDF, county government grants and friends and harambees though in just a few schools. The bursars of national school acknowledged that their schools received the National government grants only once when they were upgraded from extra county school to National status.

Figure 4.1 shows the percentage of responses on sources of funds for schools.

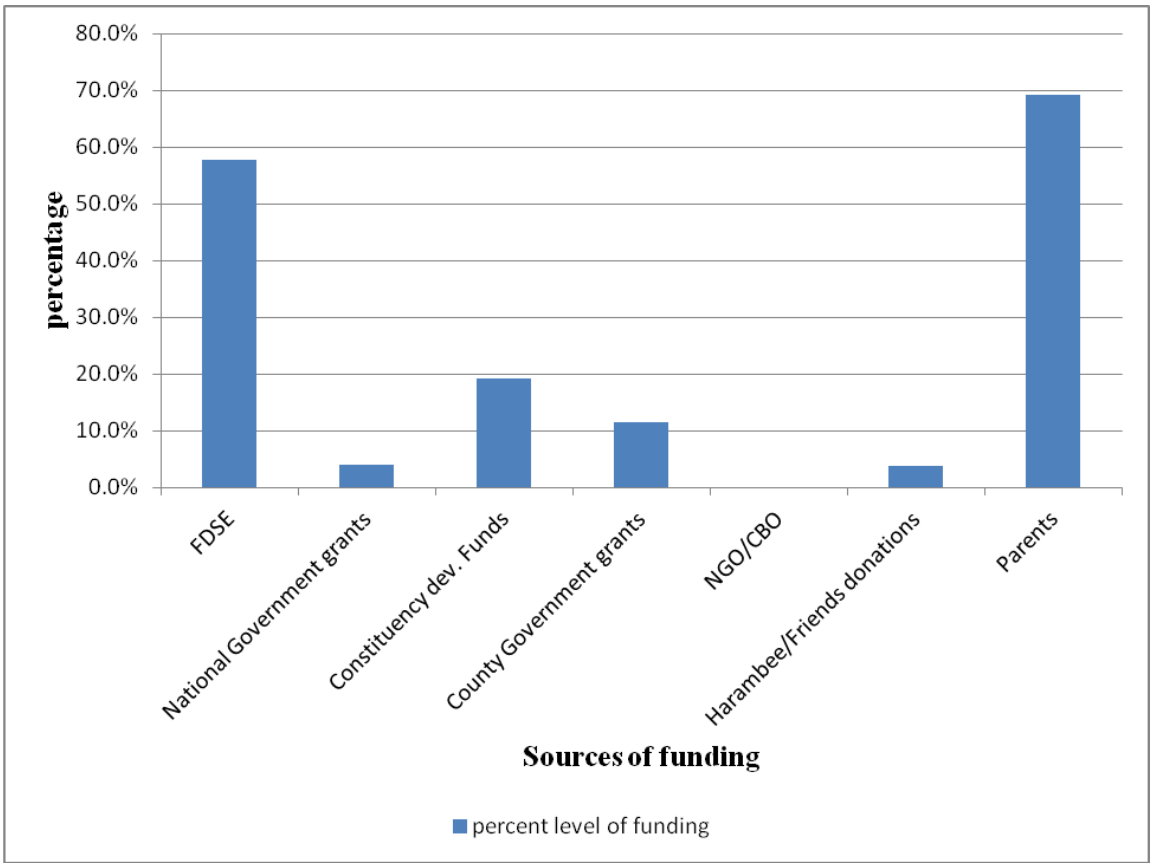

Figure 4. 1: Percentage response on main source of funding

According to fig.4.1, the main source of funds in secondary schools in Bungoma County was parents at 69.2%, followed by free day secondary education funds (FDSE) at 57.7%, then CDFs at 19.2%, then county government grants at 11.5%, Harambees / friends donations at 3.8% and finally National Government grants at 3/3%. No respondent

indicated that their school received funds from Non-Governmental organizations (NGO) / Community Based Organizations (CBO).

From the findings presented above, it is apparent that the main sources of funds for secondary schools in Bungoma County are parents represented with a mean score of 3.571 on a scale of 5 or 69.2% respondents and FDSE represented with a mean score of 3.467 on a scale of 5 or 57.7% of respondents'.

Despite parents being the main source funding, interviews with principals and bursars revealed that they did not generally pay the fees on time. They indicated that the non-timely payment of funds did affect the procuring and utilization of educational service and hence affecting the learner's academic achievement and provision of adequate educational resources. Interview with bursars revealed that third term was seen as the most difficult term due to the lower percentage of funds which is normally disbursed by the government and parents. Majority of the principals interviewed indicated that if parents could pay 100% school fees then it could fill the gap in the availability of funds needed in secondary schools. They further indicated that schools have a challenge in collecting full fee payment from parents following a ministry circular directing them not to send any learner out of school for non-fee payment. They stated that while some parents were not able to pay genuinely, there were few who took advantage of the circular to delay paying. The inability of parents to pay fees could also be attributed to the low purchasing power as established from the preliminary information where most of the parents in the County were peasant farmers. Delays in payments do affect the ability by the schools in all categories to be able to smoothly provide for the educational services needed by learners.

4.3.2 Bungoma county public secondary schools practices of funds allocation

The study further required respondents to indicate their position on the practices of allocation of funds in the county's secondary schools. The study asked respondents to indicate the extent to which they agreed with a list of statements concerning factors that influence the allocation of funds within the schools on a five points scale with 1 being the lowest corresponding to strongly disagree, 2 disagree 3 neutral, 4 agree and 5 the highest corresponding to strongly agree. The factors influencing allocation of funds were listed as, the School's strategic plan, Departmental budget, the school's priorities, school's characteristics, type of school, school's unique needs, school's staffing needs, laws and Regulations on funds allocation, Ministry of Education goals and priorities, Fairness and equity and Adherence to the National Financing policy.

The findings with regard to criteria with which funds were allocated towards provision of educational services are presented in Table 4.9.

Table 4. 9: Teacher respondents' on the rating of determinants of funds allocation

	Determinants of funds allocation		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Total	Mean	Std. Deviation
1	School's strategic plan	Count	0	8	0	83	91	182	4.412	0.713
		%	0%	4.4%	0%	45.6%	50.0%	100%		
2	Departmental budget	Count	0	0	0	72	110	182	4.604	0.490
		%	0%	0%	0%	39.6%	60.4%	100%		
3	The school's priorities	Count	0	6	0	15	147	168	4.804	0.612
		%	0%	3.6%	0%	8.9%	87.5%	100%		
4	The school's characteristics	Count	0	14	0	72	96	182	4.374	0.836
		%	0%	7.7%	0%	39.6%	52.7%	100%		
5	The type of school	Count	0	0	0	51	131	182	4.720	0.450
		%	0%	0%	0%	28.0%	72.0%	100%		
6	The school's unique needs	Count	0	9	0	68	105	182	4.478	0.741
		%	0%	4.9%	0%	37.4%	57.7%	100%		
7	The school's staffing needs	Count	0	91	0	91	0	182	3.000	1.003
		%	0%	50.0%	0%	50.0%	0%	100%		
8	The laws and Regulations on funds allocation	Count	0	21	0	52	109	182	4.368	0.964
		%	0%	11.5%	0%	28.6%	59.9%	100%		
9	Ministry of Education goals and priorities	Count	0	7	0	90	85	182	4.390	0.687
		%	0%	3.8%	0%	49.5%	46.7%	100%		
10	Fairness and equity	Count	0	49	0	54	79	182	3.896	1.228
		%	0%	26.9%	0%	29.7%	43.4%	100%		
11	Adherence to the National Financing policy	Count	0	22	0	27	133	182	4.489	0.990
		%	0%	12.1%	0%	14.8%	73.1%	100%		

Based on findings in Table 4.9, 8 (4.4%) of the teacher respondents indicated that the school's strategic plan hardly had any influence in the allocation of funds to educational resources, 83 (45.6 %) agreed that the strategic plan influenced in the allocation of funds

to educational resources while 91 (50%) strongly agreed that the strategic plan strongly influenced the allocation of funds to educational resources. The mean score of the responses was 4.412 with a standard deviation of 0.713. The low deviation value close to zero shows that the responses were very consistent to the agreement that the strategic plans of schools influenced the allocation of funds towards provision of educational resources in Public secondary schools in the county of Bungoma.

From the findings presented on Table 4.9, it is apparent that the respondents indicated that departmental budgets strongly influenced the allocations of funds during budgeting for educational resources. For instance, 72 (39.6%) of the respondents agreed that departmental budgets strongly influenced the allocation of funds towards provision of educational services while 110 (60.4%) strongly agreed that departmental budgets influenced the allocations of funds towards provision of educational services. None of the respondents was of the contra response on the influence of departmental budgets in the allocations of funds towards provision of educational services. The mean score of the responses was 4.604 with a standard deviation of 0.490. The low deviation value close to zero shows that the responses were very consistent to the agreement that departmental budgets strongly influenced the allocation funds towards educational service provision in Bungoma County's Public secondary schools.

With regard to whether the school's priorities influenced the funds allocation, the findings in Table 4.9 indicate that only 6 (3.6%) respondents were of the view that the school's priorities hardly had any influence on the allocation of funds to educational resources. 15 (8.9%) were neither agreeing or disagreeing in response whereas 147 (87.5%) strongly agreed. The mean score of the responses was 4.804 with a standard deviation of 0.612. The low deviation value close to zero shows that the responses were

very consistent to the agreement that the school's priorities strongly influenced the allocation of funds towards provision of educational services. Interviews with school bursars indicated that as much as budgets are drawn on how to spend school funds, most schools do not stick to the projected expenditure due to more pressing matters such as clearing creditors, suppliers and salaries for BOM teachers and non-teaching staff.

From Table 4.9, 14 (7.7%) of the respondents were of the view that school characteristics did not have any influence on allocation of funds for educational resources, 72 (39.6%) agreed to the view that school characteristics influenced on allocation of funds for educational resources while 96 (52.7%) indicated that school characteristics strongly influenced the allocation of funds for educational resources. The mean score of the responses was 4.374 with a standard deviation of 0.836. The deviation being a low value close to zero shows that the responses were very consistent to the agreement that school characteristics influenced the allocation of funds towards provision of educational services in the county's Public secondary schools.

The study also sought to find out if the type of school (Special needs school / normal learners school) had any influence on the allocation of funds. Based on the findings in Table 4.9, 51 (28%) of the respondents agreed that the type of school had influence on allocation of funds during budgeting. 131 (72%) of the respondents strongly agreed that the type of school had influence the allocation of funds during budgeting. None of the respondents was of the contra response regarding the influence of the type of school on allocation of funds during budgeting. The mean score of the responses was 4.720 with a standard deviation of 0.450. The deviation being a low value close to zero shows that the responses were very consistent to the agreement that the type of school strongly influenced allocation of funds towards provision of educational services in Bungoma

County Public secondary schools. Findings from interviews with principals revealed that boarding schools were better off in terms of resources due to money that parents paid in terms of school fees. Some principals indicated that most parents had a bias when it came to paying fees whereby, national and extra county schools were better placed when it came to fee payment. The findings collaborate with literature where different categories of schools have some variations in school fees structures.

When the response on the influence of school needs on allocation of funds during budgeting for provision of educational service was sought, the findings as presented in Table 4.9 revealed that 9 (4.9%) of the respondents disagreed that school needs influenced the allocation of funds during budgeting for provision of educational service. 68 (37.4%) of the respondents agreed while 105 (57.7%) of the respondents strongly agreed that school needs influenced the allocation of funds during budgeting for provision of educational service. The mean score of the responses was 4.478 with a standard deviation of 0.741. The deviation being a low value close to zero shows that the responses were very consistent to the agreement that the needs of the school strongly influenced the allocation of funds towards provision of educational service.

The study also purposed to establish if staffing needs of a school had any influence on the allocation of funds for the provision of educational service. From the findings in Table 4.9, the respondents were divided right in the middle in their response towards staffing needs of a school having influence on the allocation of funds for the provision of educational service. It was observed that 91 (50%) respondents indicated that it hardly had any influence while 91 (50%) agreed that it had influence. The mean score of the responses was 3.000 with a standard deviation of 1.003. This shows a mixed response of the respondents. The levels of shortage of teachers in schools could have influenced the

response. Principals and bursars interviewed revealed that staffing needs influenced the allocation of funds during budgeting and was a key area that should be addressed by the government.

The study further sought to establish whether laws and regulations influenced the allocation of funds towards provision of educational services. According to the presentation in Table 4.9, 21 (11.5%) respondents were of the view that laws and regulations hardly influenced the allocation of funds towards provision of educational services. 52 (28.6%) respondents indicated that laws and regulations influenced the allocation of funds towards provision of educational services while 109 (59.9%) indicated that it did influence to a great extent. The mean score of the responses was 4.368 with a standard deviation of 0.964. The low deviation value close to zero shows that the responses were very consistent to the agreement that laws and regulations influenced the allocation of funds towards the provision of educational services in the county's Public secondary schools.

The study also purposed to establish if Ministry of Education goals and priorities did influence allocation of resource. From the findings in Table 4.9, only 7 (3.8%) of the respondents indicated that the Ministry of Education goals and priorities hardly influenced the allocation of funds. 90 (49.5%) respondents agreed that the Ministry of Education goals and priorities strongly influenced the allocation of funds towards provision of educational services while 84 (46.7%) indicated it did to a great extent. The mean score of the responses was 4.390 with a standard deviation of 0.687. The deviation being a low value close to zero shows that the responses were very consistent to the agreement that the Ministry of Education's goals and priorities influenced the funds

allocation towards provision of educational services in Bungoma County Public secondary schools.

On whether fairness and equity influenced allocation of funds to provision of educational services, responses as presented in Table 4.9 reveals that 49 (26.9%) of the respondents indicated that fairness and equity hardly influenced the allocation of funds towards provision of educational services, 54 (29.7%) of the respondents agreed that fairness and equity strongly influenced the allocation of funds while 79 (43.4%) of the respondents indicated that fairness and equity to strongly influenced the allocation of funds towards provision of educational services. The mean score of the responses was 3.986 with a standard deviation of 1.228. The deviation being a low value close to zero shows that the responses were very consistent to the agreement that the fairness and equity influenced the allocation of funds towards provision of educational services among the county's Public secondary schools.

The study also sought the response on the use of National Financing policy as a determinant of allocation of funds. In Table 4.9, 22 (12.1%) of the respondents indicated that funds to provision of educational services was not done in adherence to National Financing policy while 27 (14.8%) of the respondents were agreed that the allocation was done in adherence to National Financing policy. 133 (73.1%) of the respondents strongly agreed that allocation of funds for educational services was done in adherence to National Financing policy. The mean score of the responses was 4.489 with a standard deviation of 0.990. The low deviation value close to zero shows that the responses were very consistent to the agreement that adherence to National Policy influenced the allocation of funds towards provision of educational services in Bungoma County's public secondary schools.

Based on the mean ratings of the respondents' response on the factors that influence the allocation of funds for educational services, the means were ranked to ascertain the order of influence. The findings are presented in Table 4.10.

Table 4. 10: Determinants of allocation of funds influence as per teachers ranking

	Determinants of funds allocation	Mean
1	The school's priorities	4.804
2	The type of school	4.720
3	Departmental budget	4.604
4	Adherence to the National Financing policy	4.489
5	The school's unique needs	4.478
6	School's strategic plan	4.412
7	Ministry of Education goals and priorities	4.390
8	The school's characteristics	4.374
9	The laws and Regulations on funds allocation	4.368
10	Fairness and equity	3.896
11	The school's staffing needs	3.000

From Table 4.10, it can be observed that school's priority was the most influential consideration in the allocation funds within public secondary schools of Bungoma County. Other determinants in descending order were the type of school, departmental budget, adherence to the National Financing policy, the school's unique needs, school's strategic plan, Ministry of Education goals and priorities, the school's characteristics, the laws and Regulations on funds allocation, fairness and equity and finally the school's staffing needs.

4.4 Funding practices and adequate provision of physical facilities

The second objective sought to determine the association between funding practices and adequacy of physical infrastructure in secondary schools in Bungoma County. The study

did this by looking at the adequacy of physical resources that support education. School physical facilities have been attributed to being fundamental for better learning environment and achievements by scholars indicating that this results in the outcome of the student's achievement (Saeed & Wain, 2011). Other studies have shown that availability of the physical facilities like drinking water, technology, toilets, furniture, playgrounds, and libraries have a significant positive role on the performance of the students and their academic achievement (Bijaya & Maharjan, 2015).

The study asked respondents who were teachers to indicate the extent to which they agreed with a list of statements concerning adequacy of provision of physical facilities within the schools on a five points scale with 1 being the lowest corresponding to strongly disagree, 2 disagree, 3 neutral, 4 agree and 5 the highest corresponding to strongly agree after coding. The physical facilities listed were furniture in the staffroom/offices, furniture in the classrooms, library facilities, science laboratory facilities, home science / agriculture room facilities, latrines / toilets, offices allocated to departments, dining hall facilities, play fields, availability and reliability of clean water, and availability and reliability of power.

When the findings on adequacy on physical facilities were analyzed with both categories of teacher respondents combined, the findings are as presented in Table 4.11. The respondents were asked to make a choice that best describes their level of agreement to the adequacy of provision of physical facilities that include furniture in staffroom / offices, furniture in the classrooms, Library facilities, Science laboratory facilities, home science / agriculture room facilities, latrines / toilets, offices allocated to departments, dining hall facilities, play fields, availability and reliability of clean water, and power availability and reliability.

Table 4. 11: Adequacy of physical facilities

	Type of physical facility		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Total	Mean	Std. Deviation
1	Furniture in staffroom / offices	Count	0	14	21	107	40	182	3.95	0.802
		%	0%	7.7%	11.5%	58.8%	22.0%	100%		
2	Furniture in the classrooms	Count	0	16	12	98	56	182	4.07	0.851
		%	0%	8.8%	6.6%	53.8%	30.8%	100%		
3	Library facilities	Count	7	63	35	63	14	182	3.08	1.074
		%	3.8%	34.6%	19.2%	34.6%	7.7%	100%		
4	Science laboratory facilities	Count	0	70	21	82	9	182	3.16	1.006
		%	0%	38.5%	11.5%	45.1%	4.9%	100%		
5	Home science / agriculture room facilities	Count	21	49	42	49	0	161	2.74	1.034
		%	13.0%	30.4%	26.1%	30.4%	0%	100%		
6	Latrines / Toilets	Count	0	49	42	77	7	175	3.24	0.909
		%	0%	28.0%	24.0%	44.0%	4.0%	100%		
7	Offices allocated to departments	Count	7	49	35	77	14	182	3.23	1.052
		%	3.8%	26.9%	19.2%	42.3%	7.7%	100%		
8	Dining hall facilities	Count	42	63	21	28	28	182	2.65	1.389
		%	23.1%	34.6%	11.5%	15.4%	15.4%	100%		
9	Play fields	Count	16	68	40	44	7	175	2.76	1.056
		%	9.1%	38.9%	22.9%	25.1%	4.0%	100%		
10	Availability and reliability of clean water	Count	6	22	42	77	35	182	3.62	1.032
		%	3.3%	12.1%	23.1%	42.3%	19.2%	100%		
11	Power availability and reliability	Count	0	0	21	123	38	182	4.09	0.563
		%	0%	0%	11.5%	67.6%	20.9%	100%		

With regard to adequacy of furniture in the staffrooms as observed from Table 4.11, 22.0% of the respondents strongly agreed, 58.8% agreed, 11.5% neither agreed nor disagreed, 7.7% disagreed and 0% strongly disagreed. It can be observed that 80.8% indicated that staff rooms were adequately equipped with furniture. The mean score of the responses was 3.95 with a standard deviation of 0.802 the deviation being a low value close to zero shows that the responses were very consistent to the agreement with adequate provision of furniture in the staff room / offices in the county's secondary schools.

On the adequacy of furniture in the classrooms as indicated in Table 4.11, 31.9% of the respondents strongly agreed, 52.7% agreed, 6.6% neither agreed nor disagreed, 8.8% disagreed and 0% strongly disagreed. It can be observed that 84.6% had the response that indicated classrooms were adequately equipped with chairs and desks. The mean score of the responses was 4.07 with a standard deviation of 0.851 the deviation being a low value close to zero shows that the responses were very consistent to the agreement with adequate provision of furniture in the class rooms in Bungoma County Public secondary schools. Adequate furniture in the classrooms is likely to make learners spend more time in the classrooms and therefore do more revision as well as learning outside the normal class time. This results in a better way of accomplishing curriculum implementation that would lead to better learner's achievement. Availability of furniture in the classroom translates into a good learning environment which positively impacts on curriculum actualization and learners' academic achievement (Wamulla, 2013).

With regard to library facilities, it is noticeable in Table 4.11 that 7.7% of the respondents strongly agreed, 34.6% agreed, 19.2% neither agreed nor disagreed, 34.6% disagreed and 3.8% strongly disagreed. This indicated that 42.3% of respondents were of

the view that the libraries had capacity needed and were adequately equipped while 38.4% were of the contrary response. The mean score of the responses was 3.08 with a standard deviation of 1.074 which was a low value close to zero hence the responses were very consistent to the agreement with adequate provision of library facilities in Bungoma County Public secondary schools. The more adequate the library facilities are the more likely they will attract teachers and learners to spend their time there undertaking preparations for lessons and undertaking further research respectively. This is likely to improve the understanding of learnt content by learners that is likely to result in better academic achievement by learners. Schools with inadequate library facilities were more likely to get "lower test scores and higher grade repetition than schools which had adequate learning infrastructural resources" (Khan & Iqbal, 2012)

With regard to science laboratory facilities, the respondents' responses were as presented in Table 4.11. Research by Sunday (2012) found out that students perform better in schools with adequate laboratory facilities as compared to those with less or without. This is associated to the fact that the laboratories form the learning centre of the learners' experience. With regard to adequacy of science laboratory facilities 4.9% of the respondents strongly agreed, 45.1% agreed, 11.5% neither agreed nor disagreed, 38.5% disagreed and 0% strongly disagreed. This means that 50% of the respondents were of the view that the science laboratories had capacity needed and were adequately equipped while another 38.5% were of the contrary response. The mean score of the responses was 3.16 with a standard deviation of 1.006. The deviation being a low value close to zero shows that the responses were very consistent to the neutral position with regard to adequate provision of science laboratory facilities in Bungoma County Public secondary schools. This means that the adequacy in the science laboratory facilities is average. The more adequate the science laboratory facilities are, the more they will enable teachers

and learners to spend their time performing more experiments. This results in a better way of implementing the curriculum. The practical experience by learners translates to better academic achievement by learners.

With regard to home science / agriculture rooms facilities based on the presentation in Table 4.11, 0% of the respondents strongly agreed, 30.4% agreed, 26.1% neither agreed nor disagreed, 30.4% disagreed and 13.0% strongly disagreed. Therefore, only 30.4% of the respondents indicated that the home science / agriculture rooms had facilities while 43.5% were of the contrary response. The mean score of the responses was 2.74 with a standard deviation of 1.034. The deviation being a low value close to zero shows that the responses were very consistent to the neutral position with regard to adequate provision of home science / agriculture rooms facilities in the county's secondary schools.

With regard to adequacy of latrines/toilets for the students population it can noted from presentations in Table 4.11 that 4.0% of the respondents strongly agreed, 44.0% agreed, 24% neither agreed nor disagreed, 28.0% disagreed and 0% strongly disagreed. In general, 48.0% of the respondents indicated that the latrines/ toilets were adequate for the student populations in the schools while 28.0% were of the contrary response. The mean score of the responses was 3.24 with a standard deviation of 0.909. The deviation being a low value close to zero shows that the responses were very consistent to the neutral position with regard to adequate provision of latrines/ toilets in Bungoma County Public secondary schools. Adequate provision of latrines / toilet facilities improve the learning environment in that there will be little wastage of teaching learning time by teachers and learners whenever one has to attend to the call of nature. This reduces time wastage which would allow for increased contact time between learners and teachers that is likely to result in better academic achievement by learners.

With regard to adequacy of the number of offices allocated to departments observation from Table 4.11 indicate that 7.7% of the respondents strongly agreed, 42.3% agreed, 19.2% neither agreed nor disagreed, 26.9% disagreed and 3.8% strongly disagreed. This means that 50.0% of the respondents indicated that the offices allocated to departments were adequate while 30.8% were of the contrary response. The mean score of the responses was 3.23 with a standard deviation of 1.052. The deviation being a low value close to zero shows that the responses were very consistent to the neutral position with regard to adequate provision of offices allocated to departments in Bungoma County Public secondary schools. The more adequate the departmental offices are, the more teachers would have places to work from outside the staffroom and hence attract learners to spend their time consulting with them more freely. This results in learners gaining more from the teachers to improve their understanding of learnt content that in turn results in better learner's academic achievement.

On the adequacy of the dining hall facilities in line with the student population, findings in Table 4.11 indicate that 15.4% of the respondents strongly agreed, 15.4% agreed, 11.5% neither agreed nor disagreed, 34.6% disagreed and 23.1% strongly disagreed. It can be observed that 30.8% of the respondents indicated that the dining halls had the capacity and were adequate for the student population while 57.7% were of the contrary response. The mean score of the responses was 2.65 with a standard deviation of 1.389. The deviation being a low value close to zero shows that the responses were very consistent to the neutral position with regard to adequate provision of dining hall facilities in Bungoma County Public secondary schools.

With regard to the adequacy of the play fields in line with the student populations, the findings are as presented in Table 4.11 shows that 4.0% of the respondents strongly

agreed, 25.1% agreed, 22.9% neither agreed nor disagreed, 38.9% disagreed and 9.1% strongly disagreed with regard to adequacy of play fields. Hence 29.1% of the respondents indicated that the play fields were adequate while 48.0% were of the contra response. The mean score of the responses was 2.76 with a standard deviation of 1.056 the deviation being a low value close to zero shows that the responses were very consistent to the neutral position with regard to adequate provision of play fields in Bungoma County Public secondary schools. Adequate play fields attract more learners to spend time playing to refresh their mind. These learners have a better level of concentration when they get back to class for studies and hence gain more from the revision and reading. This improves the understanding of learnt content by learners that is likely to result in better academic achievement by learners.

With regard to reliability and availability of the clean water, observations from Table 4.11 indicate that 19.2% of the respondents strongly agreed, 42.3% agreed, 23.1% neither agreed nor disagreed, 12.1% disagreed and 3.3% strongly disagreed. Therefore 61.5% of the respondents indicated that the clean water was available and reliable while 15.4% were of the contrary response. The mean score of the responses was 3.62 with a standard deviation of 1.032. The small deviation shows that the responses were very consistent to the response that clean water was adequate, and reliable in Bungoma County Public secondary schools. Clean water is essential for the learning environment. It is used to clean, prepare meals as well as drinking. When available it reduces on time spend searching for it and even the time spend seeking treatment of diseases that are water born. Availability of clean water therefore creates a conducive learning environment where learners and even teachers spend more time on the core business of the school that is likely to translate into better academic achievement.

The study in addition purposed to have an insight on the reliability of power supply. Power supply plays a great role in lighting up the classrooms. Research has shown that good lighting and a safe learning environment are important for general positive academic achievement of learners (Lemasters, 1997; Lackney, 1999; & Schneider, 2002). The lighting in a classroom plays a particularly critical role because of the associated students' performance that has a direct relationship good lighting. Where there is inadequate lighting, students cannot study. Bad light leads to discomfort which may translate to poor academic performance (Chukwuemeka, 2013).

With regard to reliability of the power supply it can noted from presentations in Table 4.11 that 20.9% of the respondents strongly agreed, 67.6% agreed, 11.5% neither agreed nor disagreed, none disagreed and none strongly disagreed. This is a clear indicator that the power supply was reliable. The reliability of power has been as a result of the government's initiative to connect all public learning institutions to the national grid to enhance ICT integration in the learning process. The mean score of the responses was 4.09 with a standard deviation of 0.563 hence a low value close to zero showing that the responses were very consistent to the agreement of adequate provision of reliable power in the county's secondary schools.

The comparison of the degree to which respondents agreed to the adequacy of the physical facilities was as presented in figure 4.2.

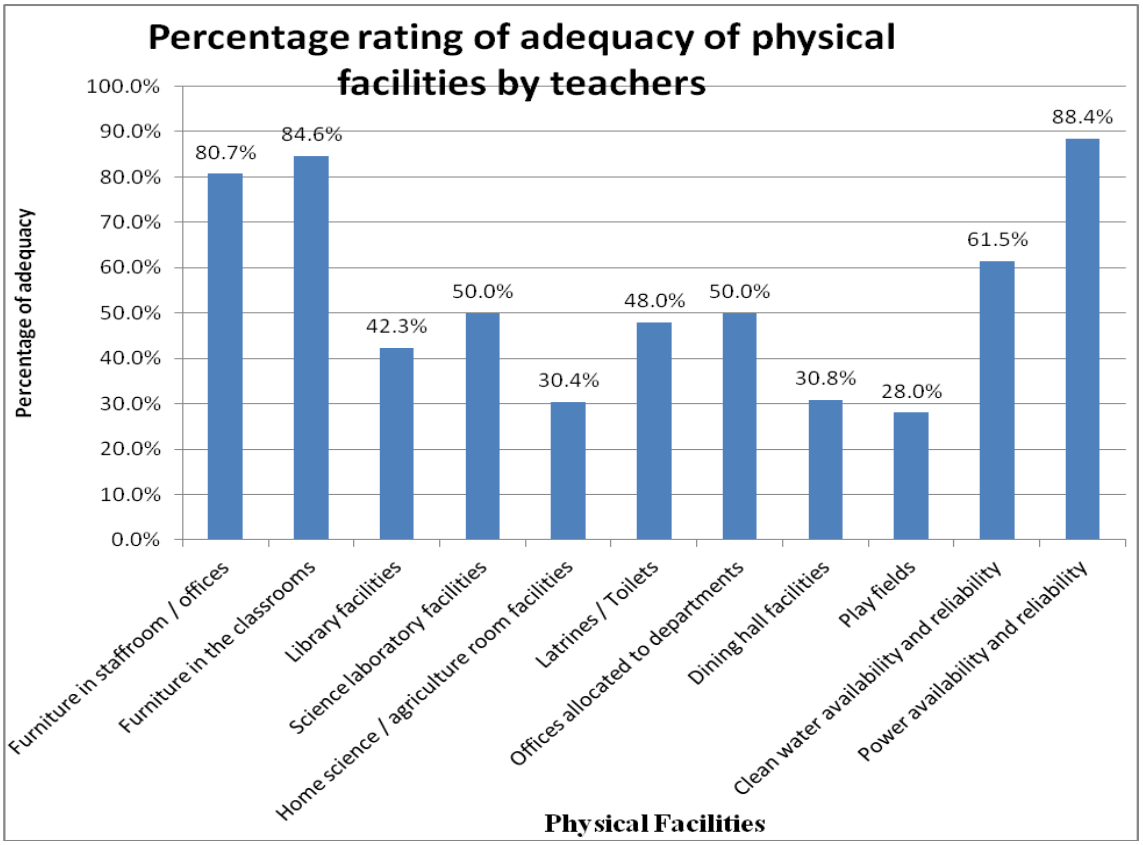

Figure 4. 2: Level of physical facilities provision

Considering 60% as the pass level for adequate provision, it would be observed from figure 4.2 that furniture in the staffroom (80.7%) as well as classrooms (84.6%), power supply (88.4%) and clean water supply (61.5%) meet the threshold. The rest of the facilities are below threshold. The play grounds (28%), capacity and equipment for home science /Agriculture (30.4%) and dining hall facilities (30.8%) were the least. For schools in Bungoma County to realize better academic achievement, they will need to invest more in the provision of play grounds, capacity and equipment for home science /Agriculture and dining hall facilities. Facilities such as libraries, home science / agriculture facilities, latrines / toilets, dining hall and play fields form the basis on which learners' achievements rests. It is therefore important for such facilities to be enhanced in order to positively impact on the learner's academic achievement.

An interview with the County Director of Education, Bungoma County revealed that the general status of schools infrastructure across the county was below average and there was need to sensitize stakeholders to understand where the county was and make improvement. Most of the principals interviewed indicated that there was an assumption by the government that schools have adequate infrastructure. Most schools prioritized the area of staffing instead of infrastructure. The operational money they acknowledged was used to pay BOM teachers instead of developing the infrastructure of the schools.

Spearman's Correlation was applied to establish whether there was any association between the funding practices and the provision of physical resource and the findings are presented in Table 4.12. This was an appropriate test as each of the respondents response were independent to each other and there were no out layers as observed from the small standard deviation values observed in earlier findings. However all the responses failed the Shapiro-Wilk tests of normality as none of the variables had all responses posting a significance value greater than 0.05. According to Asuoro, Sayago and Gonzalez (2006), Spearman's rho Correlation coefficients of 0.00 to 0.29 implies little if any association, 0.3 to 0.49 implies low association, 0.5 to 0.69 implies moderate association, 0.7 to 0.899 implies high association and 0.9 to 1.00 implies very high association. The association normally will have either a positive or negative direction as indicated by the sign on the coefficient value. For the purpose of this study, all spearman's rho correlation coefficients testing was done at 0.05 confidence level which automatically takes care of the 0.01 also provided in the tables.

Table 4. 12: Spearman's correlation between funds allocation determinants and adequacy of physical facilities

		Furniture / desks in staffroom / offices	Furniture / desks in the classrooms	Library facilities	Science laboratory facilities	Home science / agriculture rooms facilities	Latrines / Toilets	Offices allocated to departments	Dining hall facilities	Play fields	Availability and reliability of clean water	Power availability and reliability
School's strategic plan	Correlation Coeff.	.576(**)	.400(**)	.431(**)	.628(**)	.787(**)	.831(**)	.718(**)	.668(**)	.713(**)	.707(**)	.588(**)
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
	N	182	182	182	182	161	175	182	182	175	182	182
Departmental budget	Correlation Coeff.	.537(**)	.334(**)	.542(**)	.714(**)	.731(**)	.766(**)	.860(**)	.653(**)	.700(**)	.807(**)	.551(**)
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
	N	182	182	182	182	161	175	182	182	175	182	182
The school's priorities	Correlation Coeff.	.415(**)	.208(**)	.358(**)	.360(**)	.270(**)	.461(**)	.527(**)	.356(**)	.457(**)	.499(**)	.362(**)
	Sig. (2-tailed)	.000	.007	.000	.000	.001	.000	.000	.000	.000	.000	.000
	N	168	168	168	168	147	163	168	168	164	168	168
The school's characteristics	Correlation Coeff.	.498(**)	.360(**)	.570(**)	.745(**)	.737(**)	.766(**)	.887(**)	.604(**)	.758(**)	.800(**)	.617(**)
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
	N	182	182	182	182	161	175	182	182	175	182	182
The type of school	Correlation Coeff.	.595(**)	.288(**)	.524(**)	.566(**)	.536(**)	.667(**)	.774(**)	.526(**)	.616(**)	.741(**)	.508(**)
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
	N	182	182	182	182	161	175	182	182	175	182	182
The school's unique needs	Correlation Coeff.	.559(**)	.364(**)	.542(**)	.718(**)	.779(**)	.791(**)	.845(**)	.624(**)	.742(**)	.780(**)	.582(**)
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
	N	182	182	182	182	161	175	182	182	175	182	182

The school's staffing needs	Correlation Coeff.	.606(**)	.388(**)	.523(**)	.727(**)	.801(**)	.858(**)	.729(**)	.662(**)	.768(**)	.636(**)	.525(**)
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
	N	182	182	182	182	161	175	182	182	175	182	182
The laws and Regulations on funds allocation	Correlation Coeff.	.535(**)	.354(**)	.504(**)	.664(**)	.705(**)	.756(**)	.853(**)	.611(**)	.715(**)	.837(**)	.602(**)
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
	N	182	182	182	182	161	175	182	182	175	182	182
Ministry of Education goals and priorities	Correlation Coeff.	.580(**)	.422(**)	.448(**)	.660(**)	.820(**)	.837(**)	.728(**)	.683(**)	.723(**)	.700(**)	.625(**)
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
	N	182	182	182	182	161	175	182	182	175	182	182
Fairness and equity	Correlation Coeff.	.537(**)	.349(**)	.445(**)	.681(**)	.769(**)	.816(**)	.769(**)	.667(**)	.726(**)	.775(**)	.562(**)
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
	N	182	182	182	182	161	175	182	182	175	182	182
Adherence to the National Financing policy	Correlation Coeff.	.444(**)	.240(**)	.416(**)	.465(**)	.550(**)	.571(**)	.691(**)	.534(**)	.567(**)	.725(**)	.545(**)
	Sig. (2-tailed)	.000	.001	.000	.000	.000	.000	.000	.000	.000	.000	.000
	N	182	182	182	182	161	175	182	182	175	182	182

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

* Correlation is significant at the 0.05 level (2-tailed).

From findings presented in Table 4.12, the school's strategic plan had a moderate (ρ = 0.576) positive association with furniture in the staff room, a low (ρ = 0.400) positive association with furniture in the class room, low (ρ = 0.431) positive association with library facilities, moderate (ρ = 0.628) positive association with science laboratory facilities, high (ρ = 0.787) positive association with home science / agriculture rooms facilities, high (ρ = 0.831) positive association with latrines / toilets, high (ρ = 0.718) positive association with offices allocated to departments, moderate (ρ = 0.668) positive association with dining hall facilities, high (ρ = 0.713) positive association with play fields, high (ρ = 0.707) positive association with availability and reliability of water and a moderate (ρ = 0.588) positive association with power availability and reliability at 0.05 significant level for all values.

Based on findings in Table 4.12, the departmental budget had a moderate (ρ = 0.537) positive association with furniture in the staff room, moderate (ρ = 0.334) positive association with furniture in the class room, moderate (ρ = 0.542) positive association with library facilities, high (ρ = 0.714) positive association with science laboratory facilities, high (ρ = 0.731) positive association with home science / agriculture rooms facilities, high (ρ = 0.766) positive association with latrines / toilets, high (ρ = 0.860) positive association with offices allocated to departments, moderate (ρ = 0.653) positive association with dining hall facilities, high (ρ = 0.700) positive association with play fields, high (ρ = 0.807) positive association with availability and reliability of water and a moderate (ρ = 0.551) positive association with power availability and reliability at 0.05 significant level for all values.

According to Table 4.12 findings, the school's priorities had a low (ρ = 0.415) positive association with furniture in the staff room, low (ρ = 0.208) positive association with

furniture in the class room, low (ρ = 0.358) positive association with library facilities, low (ρ = 0.360) positive association with science laboratory facilities, low (ρ = 0.270) positive association with home science / agriculture rooms facilities, moderate (ρ = 0.461) positive association with latrines / toilets, moderate (ρ = 0.527) positive association with offices allocated to departments, low (ρ = 0.356) positive association with dining hall facilities, low (ρ = 0.457) positive association with play fields, low (ρ = 0.499) positive association with availability and reliability of water and a low (ρ = 0.362) positive association with power availability and reliability at 0.05 significant level for all values.

From findings presented in Table 4.12, the school's characteristics had a low (ρ = 0.498) positive association with furniture in the staff room, low (ρ = 0.360) positive association with furniture in the class room, moderate (ρ = 0.570) positive association with library facilities, high (ρ = 0.745) positive association with science laboratory facilities, high (ρ = 0.737) positive association with home science / agriculture rooms facilities, high (ρ = 0.766) positive association with latrines / toilets, high (ρ = 0.887) positive association with offices allocated to departments, moderate (ρ = 0.604) positive association with dining hall facilities, high (ρ = 0.758) positive association with play fields, high (ρ = 0.800) positive association with availability and reliability of water and a moderate (ρ = 0.617) positive association with power availability and reliability at 0.05 significant level for all values.

According to findings presented in Table 4.12, the type of school had a moderate (ρ = 0.595) positive association with furniture in the staff room, little (ρ = 0.288) positive association with furniture in the class room, moderate (ρ = 0.524) positive association with library facilities, moderate (ρ = 0.566) positive association with science laboratory

facilities, moderate (ρ = 0.536) positive association with home science / agriculture rooms facilities, moderate (ρ = 0.667) positive association with latrines / toilets, high (ρ = 0.774) positive association with offices allocated to departments, moderate (ρ = 0.526) positive association with dining hall facilities, moderate (ρ = 0.616) positive association with play fields, high (ρ = 0.741) positive association with availability and reliability of water and a moderate (ρ = 0.508) positive association with availability and reliability of power at 0.05 significant level for all values.

Based on the findings on Table 4.12, the school's unique needs had a moderate (ρ = 0.559) positive association with furniture in the staff room, low (ρ = 0.364) positive association with furniture in the class room, moderate (ρ = 0.542) positive association with library facilities, high (ρ = 0.718) positive association with science laboratory facilities, high (ρ = 0.779) positive association with home science / agriculture rooms facilities, high (ρ = 0.791) positive association with latrines / toilets, high (ρ = 0.845) positive association with offices allocated to departments, moderate (ρ = 0.624) positive association with dining hall facilities, high (ρ = 0.742) positive association with play fields, high (ρ = 0.780) positive association with availability and reliability of water and a moderate (ρ = 0.582) positive association with power availability and reliability at 0.05 significant level for all values.

The staffing needs based on the findings presented in Table 4.12 had a moderate (ρ = 0.606) positive association with furniture in the staff room, low (ρ = 0.388) positive association with furniture in the class room, moderate (ρ = 0.523) positive association with library facilities, high (ρ = 0.727) positive association with science laboratory facilities, high (ρ = 0.801) positive association with home science / agriculture rooms facilities, high (ρ = 0.858) positive association with latrines / toilets, high (ρ = 0.729)

positive association with offices allocated to departments, moderate (ρ = 0.662) positive association with dining hall facilities, high (ρ = 0.768) positive association with play fields, moderate (ρ = 0.636) positive association with availability and reliability of water and a moderate (ρ = 0.525) positive association with power availability and reliability at 0.05 significant level for all values.

From findings presented in Table 4.12, the laws and regulations on allocation of funds had a moderate (ρ = 0.535) positive association with furniture in the staff room, low (ρ = 0.354 positive association with furniture in the class room, moderate (ρ = 0.504) positive association with library facilities, moderate (ρ = 0.664) positive association with science laboratory facilities, high (ρ = 0.705) positive association with home science / agriculture rooms facilities, high (ρ = 0.756) positive association with latrines / toilets, high (ρ = 0.853) positive association with offices allocated to departments, moderate (ρ = 0.611) positive association with dining hall facilities, high (ρ = 0.715) positive association with play fields, high (ρ = 0.837) positive association with availability and reliability of water and a moderate (ρ = 0.602) positive association with power availability and reliability at 0.05 significant level for all values.

Based on findings on Table 4.12, the Ministry of Education goals and priorities had a moderate (ρ = 0.580) positive association with furniture in the staff room, low (ρ = 0.422) positive association with furniture in the class room, low (ρ = 0.448) positive association with library facilities, moderate (ρ = 0.660) positive association with science laboratory facilities, high (ρ = 0.820) positive association with home science / agriculture rooms facilities, high (ρ = 0.837) positive association with latrines / toilets, high (ρ = 0.728) positive association with offices allocated to departments, moderate (ρ = 0.683) positive association with dining hall facilities, high (ρ = 0.723) positive association with

play fields, high (ρ = 0.700) positive association with availability and reliability of water and a moderate (ρ = 0.625) positive association with power availability and reliability at 0.05 significant level for all values.

From findings presented in Table 4.12, fairness and equity had a moderate (ρ = 0.537) positive association with furniture in the staff room, low (ρ = 0.349) positive association with furniture in the class room, low (ρ = 0.445) positive association with library facilities, moderate (ρ = 0.681) positive association with science laboratory facilities, high (ρ = 0.769) positive association with home science / agriculture rooms facilities, high (ρ = 0.816) positive association with latrines / toilets, high (ρ = 0.769) positive association with offices allocated to departments, moderate (ρ = 0.667) positive association with dining hall facilities, high (ρ = 0.726) positive association with play fields, high (ρ = 0.775) positive association with availability and reliability of water and a moderate (ρ = 0.562) positive association with power availability and reliability at 0.05 significant level for all values.

Finally, based on findings presented in Table 4.12, adherence to the national financing policy had a low (ρ = 0.444) positive association with furniture in the staff room, little (ρ = 0.240) positive association with furniture in the class room, low (ρ = 0.416) positive association with library facilities, low (ρ = 0.465) positive association with science laboratory facilities, moderate (ρ = 0.550) positive association with home science / agriculture rooms facilities, moderate (ρ = 0.571) positive association with latrines / toilets, moderate (ρ = 0.691) positive association with offices allocated to departments, moderate (ρ = 0.534) positive association with dining hall facilities, moderate (ρ = 0.567) positive association with play fields, high (ρ = 0.725) positive association with

availability and reliability of water and a moderate ($\rho = 0.545$) positive association with power availability and reliability at 0.05 significant level for all values.

Based on the findings on Table 4.12 and the discussion of the results above, the study failed to accept the hypothesis, H_{01}: There is no statistical significant association between funding practices and adequacy of physical infrastructure in secondary schools in Bungoma. In all the 121 association tests between determinants of funds allocation and provision of physical facilities, there was a significant statistical positive association for secondary schools in Bungoma County. Since there was statistically significant association between funding practices and adequacy of physical infrastructure in secondary schools in Bungoma, educationists should apply the funding practices in a manner that ensures adequate provision of physical infrastructure. The physical infrastructure of a given school are closely associated with the teaching learning environment of the school and hence the level of curriculum implementation.

4.5 Funding practices on adequate provision of teaching and learning resources

The third objective sought to determine the association between funding practices and adequacy of teaching learning materials in secondary schools in Bungoma County. The study did this by looking at the adequacy of the teaching learning resources. Orodho, Waweru, Ndichu and Nthinguri (2013) in their study found out that "availability and adequacy of learning resources affect teacher effectiveness in the use of teaching methods as well as focus on individual learner, hence fostering discipline and attainment of good academic results." The study sought to establish the adequacy of English, Kiswahili, Mathematics, Physics, Chemistry, Biology, Geography, History and Christian Religious Education (CRE) textbooks in the first part (4.5.1) and the teaching learning resources in the second part (4.5.2).

4.5.1 Text book student ratio in selected subjects

The study sought to establish the adequacy of text books in the compulsory subjects, sciences and humanities. The study asked respondents to indicate the textbook student ratio from a set of provided ratios for the following subjects: English, Kiswahili, Mathematics, Physics, Chemistry, Biology, Geography, History and Christian Religious Education (CRE). The response was sought from both HoDs and principals.

The study also sought to find out the text book student ratio per category of schools they belonged to. The findings are as presented in Table 4.13 (a), (b) and (c).

Table 4. 13(a): Text book student ratio in selected subjects per respondent's school category

Subject		English				Kiswahili				Mathematics				Physics			
		Special	National	Extra county	County and sub-county	Special	National	Extra county	County and sub-county	Special	National	Extra county	County and sub-county	Special	National	Extra county	County and sub-county
Text book student ratio	1:1	5	11	49	112	5	11	48	109	4	11	45	107	5	11	46	92
	%	83.33	100.00	98.00	97.39	83.33	100.00	96.00	94.78	66.67	100.00	90.00	93.04	83.33	100.00	92.00	80.00
	1:2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	4	9
	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	16.67	0%	8.00	7.83
	1:3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	1:4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	1:5	1	0	1	3	1	0	2	6	2	0	5	8	0	0	0	10
	%	16.67	0%	2.00	2.61	16.67	0%	4.00	5.22	33.33	0%	10.00	6.96	0%	0%	0%	8.70
	1:6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	3.48
	1:8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	1:10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	1:12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total	6	11	50	115	6	11	50	115	6	11	50	115	6	11	50	115
	%	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Table 4. 13(b): Text book student ratio in selected subjects per respondent's school category

Subject		Chemistry				Biology				Geography				History			
		Special	National	Extra county	County and sub-county	Special	National	Extra county	County and sub-county	Special	National	Extra county	County and sub-county	Special	National	Extra county	County and sub-county
Text book student ratio	1:1	4	11	46	101	5	11	48	97	4	11	40	1	5	11	35	5
	%	66.67	100.00	92.00	87.83	83.33	100.00	96.00	84.35	66.67	100.00	80.00	0.87	83.33	100.00	70.00	4.35
	1:2	2	0	4	6	1	0	2	9	2	0	4	22	1	0	8	5
	%	33.33	0%	8.00	5.22	16.67	0%	4.00	7.83	33.33	0%	8.00	19.13	16.67	0%	16.00	4.35
	1:3	0	0	0	0	0	0	0	0	0	0	3	25	0	0	5	44
	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	6.00	21.74	0%	0%	10.00	38.26
	1:4	0	0	0	0	0	0	0	0	0	0	1	20	0	0	2	12
	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	2.00	17.39	0%	0%	4.00	10.43
	1:5	0	0	0	8	0	0	0	0	0	0	2	19	0	0	0	7
	%	0%	0%	0%	6.96	0%	0%	0%	0%	0%	0%	4.00	16.52	0%	0%	0%	6.09
	1:6	0	0	0	0	0	0	0	9	0	0	0	7	0	0	0	14
	%	0%	0%	0%	0%	0%	0%	0%	7.83	0%	0%	0%	6.09	0%	0%	0%	12.17
	1:8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	1:10	0	0	0	0	0	0	0	0	0	0	0	21	0	0	0	21
	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	18.26	0%	0%	0%	18.26
	1:12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	6.09
	Total	6	11	50	115	6	11	50	115	6	11	50	115	6	11	50	115
	%	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Table 4. 13(c): Text book student ratio in selected subjects per respondent's school category

Subject		CRE			
		SNS	National	Extra county	County and sub-county
Text book student ratio	1:1	5	9	15	29
	%	83.33	81.82	30.00	25.22
	1:2	1	2	4	7
	%	16.67	18.18	8.00	6.09
	1:3	0	0	14	21
	%	0%	0%	28.00	18.26
	1:4	0	0	8	13
	%	0%	0%	16.00	11.30
	1:5	0	0	6	15
	%	0%	0%	12.00	13.04
	1:6	0	0	3	11
	%	0%	0%	6.00	9.57
	1:8	0	0	0	7
	%	0%	0%	0%	6.09
	1:10	0	0	0	12
	%	0%	0%	0%	10.43
	1:12	0	0	0	0
	%	0%	0%	0%	0%
	Total	6	11	50	115
	%	100	100	100	100

From the findings presented in Tables 4.13 (a), (b) and (c) it can be observed that respondents from National schools are of the response that the ratio of text books to students is 1:1 in all subjects except in CRE where 18.18% of the national school respondents indicated a ratio of 1:2. This is as an indicator that at the National schools text books are adequately provided for. An interview with the principals of the National schools revealed that in a number of subjects, there were more text books than the number of students. This was attributed to the government policy of supplying text books to schools without taking into consideration the needs of individual schools. In the National schools, the principal indicated that even before the government programme for supplying books they already had enough books.

From Tables 4.13 (a), (b) and (c) findings of special schools, shows that all respondents indicated that the text book student ratio was either 1:1 or 1:2 in most subjects save for English where 16.6% of the special school's respondents indicated the ratio of 1:5. In Kiswahili 16.6% of the special schools respondents indicated the response of 1:5. In Mathematics 33.3% of the respondents indicated the ratio of 1:5.

Based on Tables 4.13 (a), (b) and (c), findings in extra county schools, reveal that, with the exception of Physics, Chemistry and Biology where all respondents indicated the text book student ratio of 1:1 or 1:2, 2.0% of the respondents indicated the ratio of a 1:5 in English, 4.0% indicated the ratio of 1:5 in Kiswahili, 10% indicated 1:5 in Mathematics, 2.0% indicated 1:4 and 4.0% indicated a ratio of 1:5 in Geography. 2.0% of the respondents indicated a ratio of 1:3 and 4.0% indicated a ratio of 1:4 in History. In CRE, 28.0% of the respondents indicated a ratio of 1:3, 4.0% indicated a ratio of 1:4, 12.0% indicted a ratio of 1:5 while 6.0% indicated 1:6.

The findings presented in Tables 4.13 (a), (b) and (c) provide clear indication that the county and sub-county school respondents indicated ratios of above 1:2 in all subjects. For instance in English 2.61% of the respondents from county and sub-county schools indicated ratios of 1:5, in Kiswahili 5.22% indicated a ratio of 1:5 and in mathematics 6.96% indicated a ratio of 1:5. In physics 8.70% indicated a ratio of 1:5 while 3.48% indicated a ratio of 1:6. In chemistry 6.96% indicated a ratio of 1:5. In biology 7.83% indicated a ratio of 1:6. In Geography 21.74% indicated a ratio of 1:3, 17.39% indicated a ratio of 1:4, 16.52% indicated a ratio of 1:5, 6.09% indicated a ratio of 1:6 and 18.26% indicated a ratio of 1:10. In History 38.26% indicated a ratio of 1:3, 10.43% indicated a ratio of 1:4, 6.09% indicated a ratio of 1:5, 12.17% indicated a ratio of 1:6, 18.26% indicated a ratio of 1:10 and 6.09% indicated a ratio of 1:12. Finally in CRE 18.26% indicated a ratio of 1:3, 11.30% indicated a ratio of 1:4, 13.04% indicated a ratio of 1:5, 9.57% indicated a ratio of 1:6, 6.09% indicated a ratio of 1:8 and 10.43% indicated a ratio of 1:10.

From the findings in Tables 4.13 (a), (b) and (c), it is apparent that compulsory subjects were adequately provided for. It was observed from interviews with head teachers that the government had provided text books for six subjects directly to schools. The government had provided for English, Kiswahili, Mathematics, Physics, Biology and Chemistry at the launch of the scheme. The provision for the science subjects was equally good as can be seen from Tables 4.13 (a), (b) and (c). Equitable investment is not observed in the three humanities subjects, though well provided for but not in comparison to the level of the sciences and compulsory subjects. From interviews with the respondents, books for Geography, History and CRE had not been supplied. The low text book student ratio in compulsory subject and science implies that students do not have to share a text book. This allows for more time to be spent by learners reading and

doing extra work hence leading to better learner achievement. The moderately high text book student ratio in humanities implies some students have to share a text book. Sharing of books deprives the learners of time to interact with the instructional material and thus leads to poor learner achievement. The student textbook ratio in the humanity subject was better in the national and extra county schools as compared to county and sub county schools and this was attributed by interviewed principals to the higher funds availability in the national and extra county schools.

Prior to the government direct supply of text books in secondary schools, the scenario was worse in humanities according to principals who were interviewed. In a number of schools visited, the interviewed principals had fears that the number of text books could be higher than the students if the government continued supplying text books without establishing the needs of each specific school. Some schools had well stocked text books even before the government project while others did not. According to the principals interviewed, schools have so many academic programmes that require finances apart from text books. Initially schools used to get money for instructional materials and they would use part of it in financing other programmes such as purchase of reference and revision materials. They indicated that as much as there was a vote for learning materials, the amount was insignificant as compared to the needs of schools. Money meant for textbooks was subtracted at the source and used to purchase textbooks without the input of individual schools.

An interview with the County Director of Education confirmed that reports from schools to his office indicated that most schools had adequate textbooks in English, Kiswahili, Mathematics, Physics, Chemistry and Biology. According to the County Director of Education, this had led to some slight improvement in the learners' achievement in the

subjects. However the CDE was not able to provide evidence to support the improved learner achievement in the subjects. The County Director of Education acknowledged that most schools did not have adequate text books in Geography, History and Christian Religious Education (CRE). This was attributed to the government just having begun to supply books in the humanities subject at the time of the study. Further interview with the County Director revealed that generally National schools had lower textbook student ratios than the other categories of schools.

From the findings presented in Tables 4.13 (a), (b) and (c), it is majorly in county and sub-county schools where you will to find more than two students sharing a text book in all subjects. The principals attributed this to the initial limited financial base before the start of the government programme of taking text books directly to the schools. It is also at the extra county schools that you are will find students sharing a text book however to a very limited extent especially in the humanities. The Government programme of supplying books directly to schools started at the form one level.

4.5.2 Adequacy of teaching learning resources

The study further sought to find out the adequacy of provision of selected teaching learning resources that included number of reference materials, teachers' guides, teaching resources (Manila paper, charts and models), student exercise books and storage for text books and equipment. They were required to select the response that best describes the adequacy on a five point Likert scale option of strongly agree, agree, neutral, disagree and strongly disagree.

When responses were analyzed on adequate provision of teaching learning resource, the findings are as given in Table 4.14

Table 4. 14: Respondents' response on teaching learning resource provision adequacy per school category

Category of school		Number of student's textbooks	Number of teacher's guides	Teaching resources	Student exercise books	Equipment
Special needs	Mean	4.17	4.17	4.17	4.83	4.17
	N	6	6	6	6	6
	Std. Deviation	.408	.408	.408	.408	.408
National school	Mean	4.09	4.18	4.18	4.36	4.09
	N	11	11	11	11	11
	Std. Deviation	.539	.405	.405	.505	.539
Extra county school	Mean	3.98	4.02	4.14	4.00	3.84
	N	50	50	50	50	50
	Std. Deviation	.622	.714	.495	.756	.738
County and sub-county school	Mean	3.43	3.53	3.80	3.60	3.00
	N	115	115	115	115	115
	Std. Deviation	.839	.949	.728	1.114	1.147

According to Table 4.14, respondents from special needs schools were in agreement to adequate provision of teaching learning resources with a mean range of 4.17 for text books, 4.17 for teacher's guides, 4.17 for provision of teaching resources, 4.83 for students exercise books and 4.17 for equipment, all of which are in the agree range.

Based on the findings presented on Table 4.14, respondents from National school were in agreement to adequate provision of teaching learning resources with a mean score value of 4.09 for student's textbooks, teacher's guides was 4.18, provision of teaching resources was 4.18, students exercise books was 4.36 and equipment was 4.09.

Based on findings of Table 4.14, respondents from Extra County school were in agreement to adequate provision of teaching learning resources with a mean score value of 3.98 for student's textbooks, teacher's guides was 4.02, provision of teaching resources was 4.14, students exercise books was 4.00 and equipment was 3.84.

Respondents from County and sub-county schools as indicated in Table 4.14, were only in the agree range to the provision of the teacher's guides with a mean score of 3.53, provision of teaching resources at 3.80 and students exercise books at 3.60. They were however in the neutral response range to adequate provision of student's textbooks with a mean score of 3.43, and equipment at 3.00.

The respondents' response of teaching learning resources without any categorization was presented on Table 4.15.

Table 4. 15: Adequacy of teaching learning resources for combined respondents

	Teaching learning resource		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Total	Mean	Std. Deviation
1	Number of student's textbooks	Count	0	20	42	102	18	182	3.65	0.806
		%	0%	11.0%	23.1%	56.0%	9.9%	100%		
2	Number of teacher's guides	Count	0	27	22	107	26	182	3.73	0.887
		%	0%	14.8%	12.1%	58.8%	14.3%	100%		
3	Teaching resources (Manila papers, Charts, Models, etc)	Count	0	6	29	119	28	182	3.93	0.665
		%	0%	3.3%	15.9%	65.4%	15.4%	100%		
4	Student exercise books	Count	4	24	21	89	44	182	3.80	1.023
		%	2.2%	13.2%	11.5%	48.9%	24.2%	100%		
5	Equipment	Count	16	26	35	91	14	182	3.34	1.094
		%	8.8%	14.3%	19.2%	50.0%	7.7%	100%		

According to Table 4.15, with regard to adequacy of text books, 9.9% of the respondents strongly agreed to textbooks being adequate, 56.0% agreed, 23.1% neither agreed nor disagreed, 11.0% disagreed and 0% strongly disagreed. In general only 11.0% disagreed and 65.4% agreed to text books being adequate. The high percentage could be as a result of the government's policy to provide core text books to all public secondary schools which starting in 2018.

According to Table 4.15, with regard to adequacy of teachers' guides, 14.3% of the respondents strongly agreed to them being adequate, 58.8% agreed, 12.1% neither agreed nor disagreed, 14.8% disagreed and 0% strongly disagreed. In general, therefore only

14.8% disagreed and 73.1% agreed to teachers guides being adequate. Just like in the case of text books, the Kenyan government commenced the supply of teachers' guides in the year 2018.

For a curriculum to be implemented well, schools should be supplied with adequate instructional resources such as textbooks, teaching aids, and stationery (Mungai, 2013). According to SACMEQ, (2000), inputs such as the instructional resource utilization and availability influence teaching as well as learning process which influences the pupils achievement. The study also sought to determine if teaching resources like manila papers, chalk, dusters, charts, and models among others were adequately provided for in the teaching learning process.

According to Table 4.15, with regard to adequacy of teaching resources, 15.4% of the respondents strongly agreed to teaching resources being adequate, 65.4% agreed, 15.9% neither agreed nor disagreed, 3.3% disagreed and 0% strongly disagreed. In general, only 19.2% did not agree and 80.8% agreed to teaching resources being adequate. This clearly shows that teaching resources were adequately provided for. The government has allocated an equal amount in its capitation to all categories of schools which should be used to purchase the teaching learning resources. The smaller percentage could be as a result of schools being given a leeway to purchase other teaching aids besides the textbooks and teachers guides which are directly supplied by the Government.

According to Table 4.15, with regard to students having adequate number of exercise books, 24.2% of the respondents strongly agreed to them being adequate, 48.9% agreed, 11.5% neither agreed nor disagreed, 13.2% disagreed and 2.2% strongly disagreed. Only 17.6% disagreed and 73.1% agreed to students having adequate number of exercise books. Just like in the case of other teaching aids, schools directly procure exercise

books. If books and equipment are to support educational service provision for a longer periods of time, then they have to be stored well. Funds need to be provided to enhance development of storage infrastructure.

According to Table 4.15, with regard to adequacy of equipment in the schools, 7.7% of the respondents strongly agreed to them being adequate, 50.0% agreed, 19.2% neither agreed nor disagreed, 14.3% disagreed and 8.8% strongly disagreed. In general only 23.1% disagreed and 57.7% agreed to books and equipment storage facilities in the schools being adequate. The findings suggest the books and equipment storage facilities for the learning process were moderate.

In order to establish whether there was any association between the funding practices and the provision of teaching learning resources, the study applied spearman's correlation on the responses and findings are presented in Table 4.16. For the purpose of this study, all spearman's rho correlation coefficients testing was done at 0.05 confidence level which automatically takes care of the 0.01 also provided in the tables.

Table 4. 16: Correlation of determinants of funds allocation and adequate provision of teaching learning resources

Determinants of allocation of funds		Number of student's textbooks	Number of teacher's guides	Teaching resources	Student exercise books	Equipment
School's strategic plan	Correlation Coefficient	.734(**)	.684(**)	.633(**)	.737(**)	.654(**)
	Sig. (2-tailed)	.000	.000	.000	.000	.000
	N	182	182	182	182	182
Departmental budget	Correlation Coefficient	.832(**)	.721(**)	.619(**)	.736(**)	.822(**)
	Sig. (2-tailed)	.000	.000	.000	.000	.000
	N	182	182	182	182	182
The school's priorities	Correlation Coefficient	.574(**)	.645(**)	.530(**)	.609(**)	.564(**)
	Sig. (2-tailed)	.000	.000	.000	.000	.000
	N	168	168	168	168	168
The school's characteristics	Correlation Coefficient	.767(**)	.689(**)	.641(**)	.754(**)	.838(**)
	Sig. (2-tailed)	.000	.000	.000	.000	.000
	N	182	182	182	182	182
The type of school	Correlation Coefficient	.783(**)	.730(**)	.694(**)	.718(**)	.792(**)
	Sig. (2-tailed)	.000	.000	.000	.000	.000
	N	182	182	182	182	182
The school's unique needs	Correlation Coefficient	.808(**)	.724(**)	.646(**)	.748(**)	.771(**)
	Sig. (2-tailed)	.000	.000	.000	.000	.000
	N	182	182	182	182	182
The school's staffing needs	Correlation Coefficient	.717(**)	.654(**)	.589(**)	.709(**)	.648(**)
	Sig. (2-tailed)	.000	.000	.000	.000	.000
	N	182	182	182	182	182
The laws and	Correlation Coefficient	.815(**)	.763(**)	.680(**)	.776(**)	.822(**)
Regulations on funds	Sig. (2-tailed)	.000	.000	.000	.000	.000
allocation	N	182	182	182	182	182
Ministry of Education	Correlation Coefficient	.701(**)	.666(**)	.617(**)	.735(**)	.681(**)
goals and priorities	Sig. (2-tailed)	.000	.000	.000	.000	.000
	N	182	182	182	182	182
Fairness and equity	Correlation Coefficient	.729(**)	.680(**)	.600(**)	.793(**)	.708(**)
	Sig. (2-tailed)	.000	.000	.000	.000	.000
	N	182	182	182	182	182
Adherence to the	Correlation Coefficient	.721(**)	.762(**)	.614(**)	.759(**)	.766(**)
National Financing	Sig. (2-tailed)	.000	.000	.000	.000	.000
policy	N	182	182	182	182	182

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

* Correlation is significant at the 0.05 level (2-tailed).

From Table 4.16 it can be observed that the use of the School's strategic plan in allocation of funds to school operations in Bungoma county had high (ρ = 0.734) positive association with provision of Student's text books, moderate (ρ = 0.684) positive association with the number of teacher's guides, moderate (ρ = 0.633) positive association with teaching resources, high (ρ = 0.737) positive association with Student's exercise books and moderate (ρ = 0.734) positive association with the equipment.

It was also found that the departmental budgets in allocation of funds to school operations in Bungoma county had a high (ρ = 0.832) positive association with provision of Student's text books, high (ρ = 0.721) positive association with provision of teacher's guides, moderate (ρ = 0.619) positive association with provision of teaching resources, high (ρ = 0.736) positive association with provision of Student's exercise books and high (ρ = 0.822) positive association with equipment.

Based on Table 4.16, it was found that the School's priorities in allocation of funds to school operations in Bungoma county had a moderate (ρ = 0.574) positive association with provision of Student's text books, moderate (ρ = 0.645) positive association with provision of teacher's guides, moderate (ρ = 0.530) positive association with provision of teaching resources, moderate (ρ = 0.609) positive association with provision of Student's exercise books and moderate (ρ = 0.564) positive association with equipment.

From Table 4.16, it was established that the school's characteristic in allocation of funds to school operations in Bungoma county had a high (ρ = 0.767) positive association with provision of Student's text books, moderate (ρ = 0.689) positive association with provision of teacher's guides, moderate (ρ = 0.641) positive association with provision of teaching resources, high (ρ = 0.754) positive association with provision of Student's exercise books and high (ρ = 0.838) positive association with equipment.

From the findings of Table 4.16, the type of School in allocation of funds to school operations in Bungoma county had a high (ρ = 0.783) positive association with provision of Student's text books, high (ρ = 0.730) positive association with provision of teacher's guides, moderate (ρ = 0.694) positive association with provision of teaching resources, high (ρ = 0.718) positive association with provision of Student's exercise books and high (ρ = 0.792) positive association with equipment.

From results presented in Table 4.16, the School's unique needs in allocation of funds to school operations in Bungoma county had a high (ρ = 0.808) positive association with provision of Student's text books, high (ρ = 0.724) positive association with provision of teacher's guides, moderate (ρ = 0.646) positive association with provision of teaching resources, high (ρ = 0.748) positive association with provision of Student's exercise books and high (ρ = 0.771) positive association with equipment.

From Table 4.16, the School's staffing needs in allocation of funds to school operations in Bungoma county had a high (ρ = 0.717) positive association with provision of Student's text books, moderate (ρ = 0.654) positive association with provision of teacher's guides, moderate (ρ = 0.589) positive association with provision of teaching resources, high (ρ = 0.709) positive association with provision of Student's exercise books and moderate (ρ = 0.648) positive association with equipment.

According to the findings in Table 4.16, laws and regulations on allocation of funds to school operations in Bungoma county had a high (ρ = 0.815) positive association with provision of Student's text books, high (ρ = 0.763) positive association with provision of teacher's guides, moderate (ρ = 0.680) positive association with provision of teaching resources, high (ρ = 0.776) positive association with provision of Student's exercise books and high (ρ = 0.822) positive association with equipment.

Based on the findings of Table 4.16, the ministry of education goals and priorities on allocation of funds to school operations in Bungoma county had a high (ρ = 0.701) positive association with provision of Student's text books, moderate (ρ = 0.666) positive association with provision of teacher's guides, moderate (ρ = 0.617) positive association with provision of teaching resources, high (ρ = 0.735) positive association with provision of Student's exercise books and moderate (ρ = 0.681) positive association with equipment.

From Table 4.16, fairness and equity in allocation of funds to school operations in Bungoma county had a high (ρ = 0.729) positive association with provision of Student's text books, moderate (ρ = 0.680) positive association with provision of teacher's guides, moderate (ρ = 0.600) positive association with provision of teaching resources, high (ρ = 0.793) positive association with provision of Student's exercise books and high (ρ = 0.708) positive association with equipment.

Finally, the adherence to National Financing policy on allocation of funds to school operations in Bungoma county had a high (ρ = 0.721) positive association with provision of Student's text books, high (ρ = 0.762) positive association with provision of teacher's guides, moderate (ρ = 0.614) positive association with provision of teaching resources, high (ρ = 0.759) positive association with provision of Student's exercise books and high (ρ = 0.766) positive association with equipment.

From the above discussion of the results with regard to the association of determinants of allocation of funds with provision of teaching learning resource, all the 55 possible relations had either moderate or high positive association. Based on the finding that all 55 possible associations were either moderate of high positive associations, the study failed to accept the hypothesis, H_{02}: There is no statistical significant association between

funding practices and adequacy of teaching learning resources in secondary schools in Bungoma County. Since there was statistically significant association between funding practices and adequacy of teaching learning resources in secondary schools in Bungoma, educationists should apply the funding practices in a manner that ensures adequate provision of teaching learning resources. The learning resources of a given school are closely associated with the classroom teaching learning environment of the school and hence the level of curriculum implementation. This contributes to how well a learner masters the concepts being taught.

The findings in section 4.5 can be summarized as given in Table 4.17 considering the agreement to adequate provision of the different physical and teaching learning resources.

Table 4. 17: Ranking of adequacy of physical facilities and teaching learning resources

Serial	Physical facility and teaching learning resource	% of adequate response
1.	Power supply	88.4%
2.	Furniture in classrooms	84.6%
3.	Furniture in the staffroom/offices	80.8%
4.	Teaching resources	80.8%
5.	Number of exercise books	73.1%
6.	Number of teachers guides	73.0%
7.	Number of student textbooks	65.4%
8.	Clean water supply	61.5%
9.	Books' and equipment's' storage facilities	57.7%
10.	science laboratory facilities	50.0%
11.	Number of offices allocated to departments	50.0%
12.	Number of latrines / toilets	48.0%
13.	Library facilities	42.3%
14.	Dining hall facilities	30.8%
15.	Home science / Agriculture room facilities	30.4%
16.	Play fields	28.0%

From Table 4.17, it can be observed that teaching learning materials were fairly provided for. At the same time the physical facilities were not equally provided for in the learning process. Insufficient providence of the physical facilities leads to a strained learning environment and may easily affect educational service provision as students overstretch the physical facilities.

4.6 Relationship between funding and learners academic achievement

The fourth objective of the study sought to investigate the relationship between funding practices on educational resources and learners' academic achievement. Studies

undertaken by scholars in the recent past with regard to the relationship between teaching learning resources and performance found out higher performing schools had higher teaching learning resources than low performing schools and at the same time established that there is a significant difference between resource availability in low performing schools and higher performing schools (Likoko, Mutsotso & Nasongo, 2013; Mbaria, 2006). These resources have to be provided from school finances. Teaching learning resources comprise basically material resources, physical facilities and human resources (DFID, 2007). Availability of teaching learning resources therefore enhances the effectiveness of schools as they are the basic resources that bring about good academic performance among the students. Lyons (2012) asserts that learning constitutes a complex activity that interplays physical facilities, skills of teaching and curriculum demands, a students' motivation, and teaching resources. The human resource such as teachers and support staff, material resources, physical facilities such as laboratories, libraries and classrooms are prerequisite resources for teaching and learning.

When the data was analyzed in terms of the respondents per school category, the findings are as presented in Table 4.18.

Table 4. 18: Response on funds allocation towards support for the teaching learning environment per school category

Category of school		Use of resource persons	Use of field trips / excursions	Use of computers	Provision of teaching learning resources	Provision of the physical facilities	Allocation funds influences KCSE achievement
Special needs	Mean	4.17	4.00	4.00	2.00	2.00	2.00
	N	6	6	6	6	6	6
	Std. Deviation	.408	.632	.632	.000	.000	.000
National school	Mean	4.09	3.82	3.91	2.00	1.82	2.00
	N	11	11	11	11	11	11
	Std. Deviation	.539	.874	.701	.000	.405	.000
Extra county school	Mean	4.00	3.48	3.16	1.88	1.76	1.98
	N	50	50	50	50	50	50
	Std. Deviation	.404	.814	.681	.328	.431	.141
County and sub-county school	Mean	3.43	3.18	2.89	1.73	1.63	1.94
	N	115	115	115	115	115	115
	Std. Deviation	.796	.970	.944	.446	.486	.240

According to Table 4.18, respondents from special needs schools were in agreement to allocation of funds towards support for use of resource persons with a mean score of 4.17, support for use of field trips / excursions at a mean score of 4.00 and support for use of computers at a mean score of 4.00 all of which are in the agreement range. They were however of disagreement response that allocation of funds had influence on provision of teaching learning resources at a mean score of 2.00 and provision of physical facilities also at a mean score of 2.00.

Based on the findings presented in Table 4.18, respondents from National school were in agreement that allocation of funds had influence on the use of resource persons with a

mean score of 4.09, use of field trips / excursions with a mean score of 3.82 and use of computers with a mean score of 3.91. They were however of the disagreement response that allocation of funds had influence on provision of teaching learning resources at a mean score of 2.00 and provision of physical facilities a mean score of 1.82.

Based on findings of Table 4.18, respondents from Extra County schools were in agreement that allocation of funds had influence on the use of resource persons with a mean score of 4.00 and support for use of field trips / excursions with a mean score of 3.48 all of which are in the agreement range. They were neither agreeing nor disagreeing in response with regard to support for use of computers where the mean response value was 3.16 which was in the neutral range. They however disagreed that allocation of funds had influence on provision of teaching learning resources with a mean score of 1.88 and provision of physical facilities at a mean score of 1.76 all of which are in the disagreement range.

It is critical to observe that all respondents from all categories of schools as presented in Table 4.18 disagreed to the response that allocation of funds had influence on KCSE achievement by learners. Respondents from special schools had a mean value of 2.00, national school a mean score of 2.00, Extra County schools a mean score of 1.98 and county and sub-county schools a mean score of 1.94. All the mean values were in the disagree range. This response corresponds with the outcome of the interview with the County Director of Education who pointed out that funding level had no direct relationship with KCSE performance. He alluded to the fact that as much as the government had increased capitation overtime, there was no correspondence in improvement of learner achievement.

The overall response analysis of teacher respondents in line with the statement that allocation of funds leads to support of the teaching learning environment such as provision of resource persons, field trips / excursions, computers, provision of teaching learning resources, provision of the physical resources, and that allocation of funds influences KCSE performance was as presented in Table 4.19.

Table 4. 19: Response on funds allocation towards the teaching learning environment

	Item allocate funds		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Total	Mean	Std. Deviation
1	Use of resource persons	Count	0	18	38	115	11	182	3.654	0.740
		%	0%	9.9%	20.9%	63.2%	6.0%	100%		
2	Use of field trips / excursions	Count	0	49	34	89	10	182	3.330	0.935
		%	0%	26.9%	18.7%	48.9%	5.5%	100%		
3	Use of computers	Count	10	32	84	49	7	182	3.060	0.905
		%	5.5%	17.6%	46.2%	26.9%	3.8%	100%		
4	Provision of teaching learning	Count	37	145	0	0	0	182	1.797	0.404
	resources	%	20.3%	79.7%	0%	0%	0%	100%		
5	Provision of the physical facilities	Count	57	125	0	0	0	182	1.687	0.465
		%	31.3%	68.7%	0%	0%	0%	100%		
6	Allocation finances influences	Count	8	174	0	0	0	182	1.956	0.206
	KCSE achievement	%	4.4%	95.6%	0%	0%	0%	100%		

According to Table 4.19, with regard to adequacy of making use of resource persons in teaching, 6.0% of the respondents strongly agreed to them being adequately utilized, 63.2% agreed, 19.2% neither agreed nor disagreed, 11.5% disagreed and 0% strongly disagreed. In general, therefore only 11.5% disagreed and 69.2% agreed to adequate use of resource persons in the teaching process.

When it came to allocation of funds for field trips/excursions the findings as indicated in Table 4.19, show that, 5.5% of the respondents strongly agreed to them being adequate, 48.9% agreed, 18.7% neither agreed nor disagreed, 26.9% disagreed and 0% strongly disagreed. In general, therefore only 26.9% disagreed and 54.4% agreed that there was frequent use of field trips/excursions in teaching.

According to Table 4.19, with regard to use of computers in teaching and learning, 3.8% of the respondents strongly agreed to them being adequate, 26.9% agreed, 46.2% neither agreed nor disagreed, 17.6% disagreed and 5.5% strongly disagreed. In general, therefore 23.1% disagreed and only 30.7% agreed that the use of computers in teaching and learning was adequate.

The study then went on to ascertaining if the school funds allocation did lead to an increase in the provision of teaching learning facilities. In Table 4.19, a majority of the respondents 145 (79.7%) indicated that allocation of school funds did not contributed to increase in the provision of the teaching learning resources. 37 (20.3%) of the respondents strongly indicated that school funds allocation had not contributed to increase in provision of teaching learning resources. This seems to imply that though allocation of funds is done for acquisition of the teaching learning resource, the actual procure could be missing. The findings here are in agreement with observations made from Table 4.17 findings that there is a significantly low positive association between

allocation of funds and provision of student's textbooks, teacher's guides and teaching learning resources. This is supported by the findings from interviews with bursars who indicated that though allocations are done, most of the time funds are transferred to do other functions which management perceive to be more urgent and critical. Most principals interviewed acknowledged that although budgeting was done, it was more of a routine since funds were not always adequate.

The study sought to establish whether school funds allocation contributes to provision of physical facilities. From Table 4.19, it is clear that most respondents 125 (68.7%) indicated that school funds allocation did not contribute to the provision of adequate physical facilities for educational service provision. 57 (31.3%) of the respondents strongly indicated that school funds allocation did not contribute to the provision of adequate physical facilities.

The study sought to establish the nature of class size by requiring the teacher respondents to give the average class in the school. When responses were organized and analyzed the findings are presented in Table 4.20.

Table 4. 20: Average Number of students per Class stream per school category

Student numbers per class stream	Category of school	Frequency	Percent within the school category
30-50	Special	6	100.00
	National	5	45.45
	Extra County	6	11.76
	County and Sub-County	24	21.05
	Sub-total	**41**	**22.53**
51-65	Special	0	0.00
	National	6	54.55
	Extra County	36	70.59
	County and Sub-County	60	52.63
	Sub-total	**102**	**56.04**
Above 65	Special	0	0.00
	National	0	0.00
	Extra County	9	17.65
	County and Sub-County	30	26.32
	Sub-total	**39**	**21.43**
	Grant Total	**182**	**100**

As gathered from interviews with principals, most of the classrooms in schools were constructed to accommodate a population of about 40 students. However the findings of the study indicated that only 41 (22.53%) of the respondents had their average number of students per class of between 30 to 50 as seen from Table 4.20. 102 (56.04%) of the respondents indicated that their school's average class size was between 51 to 65 while 39 (21.43%) of the respondents indicated an average class size of above 65 students. It can be observed that the average class size in the majority of schools was beyond the recommended average of 40 students. This has negatively impacted on the classroom learning environment that is in agreement to findings of a study by Nderitu *et al* (2017). Smaller class sizes in terms of population leads to more access to learning resources that result in better academic performance and achievement (Crosnoe et al., 2004 & Eamon2005).

From Table 4.20, it is observable that 6 (100%) of the respondents in the category of

special schools indicated that they had a class stream size of between 30 to 50 learners. Of the respondents from National schools based on the findings in Table 4.25, 5 (45.45%) indicated their class stream size of between 30 to 50 learners while 6 (54.55%) indicated their class stream size of between 61 to 65 learners. Of the respondents from extra county schools based on the findings in Table 4.25, 6 (11.76%) indicated their class stream size of between 30 to 50 learners, 36 (70.59%) indicated their class stream size of between 51 to 65 learners, while 9 (17.65%) indicated their class stream size of between 61 to 65 learners. Of the respondents from county and sub-county schools based on the findings in Table 4.25, 24 (21.05%) indicated their class stream size of between 30 to 50 learners, 60 (52.63%) indicated their class stream size of between 51 to 65 learners, while 30 (26.32%) indicated that their class stream size was between 61 to 65 learners. From the findings, it can be observed that special schools respondents indicated that their class size were of between 30 and 50 learners which is the size for which most classrooms were built for. It was only the extra county, county and Sub-county schools that had respondents indicating that the class sizes were over 65 learners with a percentage of 17.65% and 26.32% respectively. The class sizes of special schools and National schools being below 65 learners may be as a result of the support provided by the government. Special schools receive higher funding per child while the National schools received additional funding on being upgraded to national school status.

The study asked teacher respondents to indicate the extent to which they agreed to having a workload of between 25 and 30 lessons per week (considered to be a normal workload) within the schools on a five point Likert scale with 1 being the lowest corresponding to strongly disagree, 2 disagree, 3 neutral, 4 agree and 5 the highest corresponding to strongly agree after coding. The findings are presented on Table 4.21.

Table 4. 21: Number of Lesson for a teacher per week of between 25 and 30

		Frequency	Percent	Cumulative Percent
Valid	Strongly agree	5	2.7	2.7
	Agree	16	8.8	11.5
	Neutral	112	61.5	73.1
	Disagree	40	22.0	95.1
	Strongly Disagree	9	4.9	100.0
	Total	182	100.0	

The findings in Table 4.21 indicate that 5 (2.7%) of the respondents strongly agreed that the teacher's lessons per week were between 25 and 30, 16 (8.8%) of the respondents agreed that the teacher's lessons per week were between 25 and 30, 112 (61.5%) of the respondents neither agreed nor disagreed with regard to the teacher's lessons per week being between 25 and 30, 40 (22.0%) of the respondents disagreed that the teacher's lessons per week were between 25 and 30 and 9 (4.9%) of the respondents strongly disagreed that the teacher's lessons per week were between 25 and 30. According to a World Bank report (1987), students in classes where the student teacher ratio is high, learn less and therefore achieve less while those in schools where the student teacher ratio is low, learn more hence achieve more due to less crowding that results in better interaction between the learners and their teachers.

In order to get a clear understanding on the utilization of resources and learner's achievement at KCSE, the study employed Spearman's correlation. The findings are on Table 4.22. For the purpose of this study, the spearman's rho correlation coefficients testing was done at 0.05 confidence level which automatically takes care of the 0.01 also provided in the tables.

Table 4. 22: Correlation between utilization of selected resources and learners achievement

	Utilized resource in the teaching learning process		Learners' academic achievement
1	Resource persons	Correlation Coefficient	.868(**)
		Sig. (2-tailed)	.000
		N	182
2	Field trips / excursions	Correlation Coefficient	.689(**)
		Sig. (2-tailed)	.010
		N	182
3	Textbooks	Correlation Coefficient	.789(**)
		Sig. (2-tailed)	.000
		N	182
4	Computers	Correlation Coefficient	.627(**)
		Sig. (2-tailed)	.000
		N	182
5	Teaching learning resources	Correlation Coefficient	.889(**)
		Sig. (2-tailed)	.000
		N	182
6	Library facilities	Correlation Coefficient	.648(**)
		Sig. (2-tailed)	.100
		N	182
7	Facilities in the science laboratories	Correlation Coefficient	.854(**)
		Sig. (2-tailed)	.000
		N	182
8	Home science / agriculture room facilities	Correlation Coefficient	.772(**)
		Sig. (2-tailed)	.010
		N	182

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

From Table 4.22 it can be observed that the resource persons utilization in Bungoma County public secondary schools had a high positive association (Rho value of 0.868) with learners' academic achievement. Field trips / excursions in the county's secondary schools had a moderate positive association (Rho value of 0.689) with learners' academic achievement. It is also observable that utilization of textbooks in the county's secondary schools had a high positive association (Rho value of 0.789) with learners' academic achievement. The utilization of Computers in the county's secondary schools

had a moderate positive association (Rho value of 0.627) with learners' academic achievement. Utilization of teaching learning resources in the county's secondary schools had a high positive association (Rho value of 0.889) with learners' academic achievement.

From Table 4.22, it can also be observed that the utilization of library facilities in the county's secondary schools had a moderate positive association (Rho value of 0.648) with learners' academic achievement. The utilization of facilities in the science laboratories in Bungoma County public secondary schools had a high positive association (Rho value of 0.854) with learners' academic achievement. At the same time utilization of home science / agriculture room facilities in the county's secondary schools had high positive association (Rho value of 0.772) with learners' academic achievement.

It is noted that the utilization of resource persons, field trips / excursions, textbooks, Computers, teaching learning resources, library facilities, facilities in the science laboratories and home science / agriculture room facilities had positive association on academic achievement of learners. For them to be utilized they must have been procured. And to procure them, funds must have been allocated towards them. Therefore, though the allocation of funds does not have a direct significant relationship to learners' academic achievement, it has an indirect impact on learners' academic achievement. It is therefore important to ensure utilization of resources procured for teaching learning process in order to influence the learners' academic achievement.

In order to get a better understanding of whether allocation of funds has influence on learner's academic achievement; the study made use of a scatter graph of mean percentage KCSE score and the perceived funding level. The data used to plot the scatter graph on KCSE is found at appendix 12. The corresponding data from the 36 schools

that were involved in the study was grouped according to the category of the schools and plotted. The special school category was labeled starting with S_A, national school with N_C and N_D, extra county school with E_E up to E_O and county and sub county school with C_B up to C_AJ. Each schools average funding over the years was plotted against average percentage KCSE mean score. The letters were used to conceal the identity of schools. Findings are presented on figure 4.3.

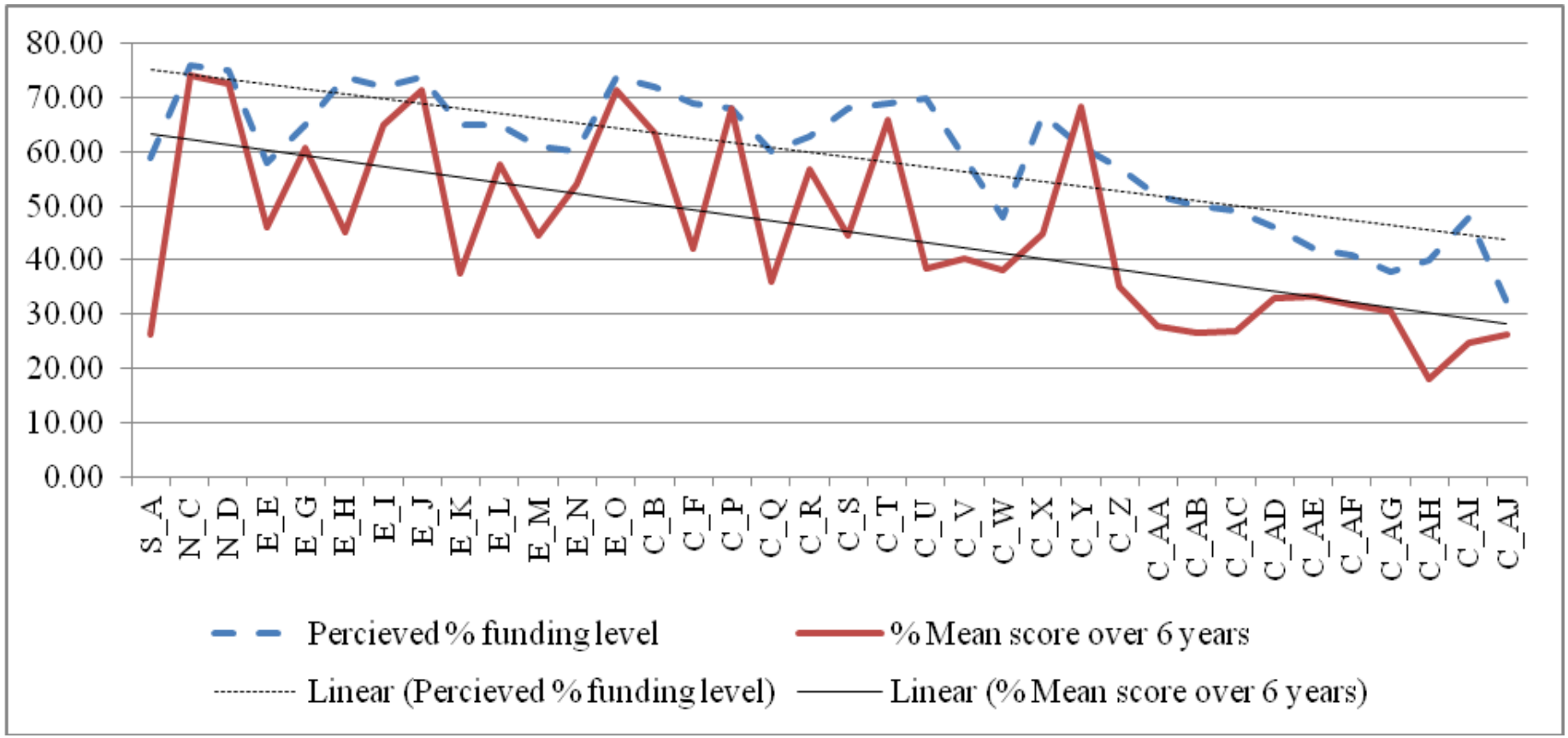

Figure 4. 3: Association of funding level and percentage KCSE mean score

From figure 4.3, it can be observed that schools of the same category assumed to be funded to the same level had very different learner's achievement in terms of the KCSE mean score. From figure 4.3, it can be observed that the schools labeled starting with letter C_ (county and sub county schools) had very different scores over their range hence the curve not being the same. The extra county schools with labels starting with letter E_ also had very different scores over their range. These schools equally have different scores for learner's KCSE achievement. It is the same story with the two National schools that also have different scores for learner's achievement at KCSE yet they are presumed to be having same funding level. From figure 4.3, the lines for perceived percentage funding and mean score are not straight, the trend lines from them are straight and with a clear pattern in terms of their gradient. Both trend lines are straight and tend to be falling downwards as they move from the left to the right. From figure 4.3, it can be observed that special schools and National schools recorded higher perceived funding levels as compared to Extra County and County and Sub County schools with the last recording the lower most perceived funding levels. In general, the KCSE performance tended to have a direct linear relationship with the perceived funding level.

The researcher interviewed the principals of the schools that participated in the study with regard to their response in line with how the level of funding of a given school influenced the academic achievement of learners. Most of them indicated that the level of funding in line with the student population does influence the provision of teaching learning resources as well as providing for the teaching learning environment.

In order to get a clear understanding of the nature of association between educational resources and learner's academic achievement, the study utilized Spearman's correlation. The findings are on Table 4.23.

Table 4. 23: Correlation between educational resources and learners' academic achievement

Educational resources		Learner's Academic achievement
Provision of teaching learning resources	Correlation Coefficient	.738(**)
	Sig. (2-tailed)	.000
	N	182
Provision of the physical facilities	Correlation Coefficient	.680(**)
	Sig. (2-tailed)	.001
	N	182
Staffing and training	Correlation Coefficient	.880(**)
	Sig. (2-tailed)	.000
	N	182

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

From Table 4.23 it can be observed that provision of teaching learning resources in Bungoma County public secondary schools had a high positive association (P = 0.738) with learners' academic achievement. It was also noted that that provision of physical infrastructure in Bungoma County public secondary schools had a moderate positive association (P = 0.680) with learners academic achievement while staffing and training had a high positive association (P = 0.880) with learners academic achievement.

From the findings of Table 4.23 can be observed that higher learners academic achievement may be obtained more by investing in staffing and training then followed by provision of teaching learning resources and lastly in providing physical infrastructure. From the findings on Table 4.23 it can be noted that all educational resources had either moderate or high positive association with learners' academic achievement. Therefore following these findings, the study failed to accept the hypothesis, H_{03}: There is no statistical significant association between funding practices on educational resources

provision and academic achievement in public secondary schools Bungoma County. The study established that there was positive association between staffing and training, provision of teaching learning resources and provision of physical facilities with learners' academic achievement. All this point to the contra of the hypothesis statement there is no statistical significant association between funding practices on educational resources provision and academic achievement in public secondary schools.

Based on coefficients of association of influence on academic achievement amongst educational resources on Table 4.23 where staffing and training (ST) was 0.880, provision of teaching learning resources (TL) at 0.738 and provision of physical facilities (PF) at 0.680, the study recommends sharing of available funds for Bungoma County public secondary schools using the formula of Total funds to be allocated (TF) = 0.38(ST) + 0.32(TL) + 0.30(PF). The ratios were obtained by adding all coefficients then dividing the corresponding coefficient by the sum of the coefficients. For example ST coefficient is obtained by 0.880 / (0.880+0.738+0.680) = 0.38 (2dp). Therefore given the total funds as 6,000,000 available for use in the school, amount to allocate TL,

TL = 032 X TF = 0.32 X 6,000,000 = 1, 920, 000.

CHAPTER FIVE
SUMMARY, CONLUSION AND RECOMMENDATIONS

5.1 Introduction of chapter

This is the final chapter of this thesis. It provides a summary of the thesis, summary of the findings of the study, the conclusions drawn from the findings of the study, the recommendations of the study and finally proposes further research that can be undertaken to extend this study.

5.2 Summary of the study

This study on the overall sought to fill the gap with regard to the funding practices in public secondary schools and their influence on academic achievement in Bungoma County, Kenya. The first chapter dealt with the background to the study. Given the much input in terms of funding public secondary education by the government and parents, the quest of quality becomes paramount. This research therefore investigated the funding practices and their influence on academic achievement in secondary schools in Kenya. It did this under the following objectives:-

i) Establish the funding practices used in public secondary schools in Bungoma County.

ii) To determine the association between funding practices and adequacy of physical infrastructure in secondary schools in Bungoma County.

iii) To determine the association between funding practices and adequacy of teaching learning resources in secondary schools in Bungoma County.

iv) Investigate the relationship between funding practices on educational resources provision and learners' academic achievement.

The chapter also discussed the significance of the study as well as the study limitations. The chapter discussed the theoretical and conceptual frameworks which were used to explain the interrelationships of the variables in the study.

Chapter two covered the literature review on aspects of funding practices towards improved learner achievement in public secondary schools which included; the practices in financial allocation to resources, adequacy of the teaching learning resources as well as physical infrastructure and how provision of resources affects academic achievement of the learners.

Chapter three dealt with the research methodology that was used in conducting the research study. It specifically dealt with the research design, target population, sample size and sampling techniques, research instruments, instrument validity, instrument reliability, data collection procedures, data analysis techniques and ethical considerations. The study adopted mixed design.

Chapter four presented the findings, discussed them and interpreted them. Results obtained from data gathered on analysis were reported using tables and figures, and explanations of the findings were made.

Chapter five presents the summary of the study, conclusions drawn from the findings of the study, recommendations and suggestions for further research.

5.3 Summary of the findings

The findings of the study were summarized along the objectives. The main summary sections dealt with funding practices being used by schools, adequacy of physical infrastructure, teaching learning materials and how funding practices influenced academic achievement.

The subsections that follow provide more details about the study summaries.

5.3.1 Summary of funding practices being used by schools

The first objective sought to establish the funding practices used in the county's secondary schools. The findings with regard to objective one were discussed under sections 4.3 and 4.4. According to the principals of secondary schools in Bungoma County, the main sources of funds were parents followed by the National government grants. The HoDs on the other hand indicated that the main sources of funds were FDSE followed by parents. Respondents from the special needs school and National schools indicated that parents were the main source of funds to the secondary schools in Bungoma County, while those from extra county schools indicated that the main sources funds were parents followed by FDSE and then CDF. The respondents from county and sub-county schools indicated that FDSE was the main source of funds followed by parents. The study on the overall found out that the source of funds for the Bungoma County public secondary schools when ranked had parents at highest percentage with 69.2%, Free Day Secondary Education (57.7%), Constituency Development grants (19.8%), County Government grants (3.8%) and Harambees / friends donations (3.8%). The respondents from schools in Bungoma indicated no funding from NGO /CBO.

The allocation of funds was influenced by the following determinants in the descending order of departmental budgets, staffing needs and type of school taking the top positions. They were then followed by school priorities, mother ministry goals and priorities, the school's strategic plan, school needs, the school's characteristics, laws and regulations and finally the least in the order was fairness and equity. The study also established that though the schools largely adhered to the national financing policy they hardly kept to the budget item allocations when it came to implementation. From interviews with

principals, it was observed that schools experienced challenges managing the resources since the FDSE and parents generally availed the funds to schools late. Some parents had also relaxed on paying schools fees following the government directive that no learner should be send home on grounds of failure to pay fees. This did affect the procurement of teaching learning resources as well as impacting on the learning environment which eventually had influence on the academic achievement.

5.3.2 Summary of physical facilities adequacy

The second objective of the study was to determine the association between funding practices and adequacy of physical facilities in secondary schools in Bungoma County. The findings in respect of this objective were presented, discussed and interpreted in section 4.5.1. The study established that the physical facilities which were well provided for included reliable power supply, furniture in classrooms, furniture in staffroom and reliable clean water. The moderately provided for infrastructure were the numbers of offices allocated to departments and the capacity as well as equipment in the science laboratories. The rest of the infrastructure was provided for at below average level. These included the adequacy of latrines / toilets, the library facilities, the dining hall facilities, capacity and equipment for the home science / agriculture room and finally the play fields. From interviews with principals, it was observed that some of the schools had student population beyond what the physical facilities could support comfortably. Overstretched facilities contribute negatively towards learner's academic achievement.

Spearman's Rho correlation tests performed to find out association between the determinants of funds allocation and provision of resources revealed that strategic plans of schools had a high positive association with provision of home science / agriculture rooms facilities, latrines / toilets, offices allocated to departments, play fields and

availability and reliability of clean water. The departmental budgets of schools had a high positive association with provision of science laboratories facilities, home science / agriculture room facilities, latrines / toilets**,** offices allocated to departments, play fields and clean water. The school characteristics had a high positive association with provision of science laboratory facilities, home science / agriculture room facilities, latrines / toilets**,** offices allocated to departments, play fields and availability and reliability of clean water. The type of school also had a high positive association with provision of offices allocated to departments and availability and reliability of clean water. The school's uniqueness also had a high positive association with provision of science laboratories facilities, home science / agriculture room facilities, latrines / toilets**,** offices allocated to departments, play fields and availability and reliability of clean water.

The study established that the staffing needs of schools had a high positive association with provision of science laboratory facilities, home science / agriculture room facilities, latrines / toilets, offices allocated to departments, and play fields. The laws and regulations only had a high positive association with provision of home science / agriculture room facilities, latrines / toilets, offices allocated to departments, play fields and availability and reliability of clean water. The ministry's goals and priorities had a high positive association with provision of home science / agriculture room facilities, latrines / toilets, offices allocated to departments, play fields and availability and reliability of clean water. Equity and fairness had a high positive association with provision of home science / agriculture room facilities, latrines / toilets, offices allocated to departments, play fields and availability and reliability of clean water. The school priorities and adherence to national financing policy had high association with only the availability and reliability of clean water. However, the school priorities had no single

high association with any physical facility provision since it had only moderate and low associations.

Other than the high association, all other tests were either moderate or low. There was no single test that lacked any association. In all the 121 association tests between determinants of funds allocation and provision of physical facilities there was a significant statistical positive association for secondary schools in Bungoma County. Based on the findings on Table 4.12, the study failed to accept the hypothesis; H_{01}: There is no statistical significant association between funding practices and adequacy of physical infrastructure in secondary schools in Bungoma.

5.3.3 Summary of teaching / learning materials adequacy

The third objective of the study was to determine the association between funding practices and adequacy of teaching learning materials in secondary schools in Bungoma County. The findings of this objective were presented, discussed and interpreted in section 4.5.2.

With regard to provision of text books in particular subject areas, considering the textbook student ratio of only 1:1 and 1:2 which are considered to be effective in supporting the teaching learning process, a number of findings were established. The best provided for subjects included English (97.3%), chemistry (96.2%), Kiswahili (95.1%), biology (95.1%) and mathematics (91.8%). Though the study established that text books appeared to be well provided for, humanities subjects which were not well provided for. At the time of the study the provision for Geography was at 46.2% followed by Christian Religious Education at 39.6% and finally History at 38.5%. It can be observed that the percentage of perceived adequacy is low for the humanity subjects. This was explained to be due the government only having supplied text books in the

compulsory subjects and sciences at the time of the study. The supply of the same in the humanities subjects was to begin on a later date.

After applying Spearman's Rho Correlation on the findings on funding practices and the provision of teaching learning resources, a number of high positive associations were established at a two tailed 0.000 significant levels. The use of the School's strategic plan in allocation of funds to school operations in Bungoma County had a high significant statistical association with provision of teaching resource and Student's exercise books. It was also found that the departmental budgets had a high significant statistical association with provision of Student's text books, teacher's guides, Student's exercise books and equipment. From Table 4.16, it was established that the school's characteristic in allocation of funds for school operations in Bungoma county had a high significant statistical association with provision of Student's text books, Student's exercise books and equipment. In addition, the type of School had a high significant statistical association with provision of Student's text books, teacher's guides, Student's exercise books and storage facilities. It was also established that the school's unique needs had a high significant statistical association with provision of Student's text books, teacher's guides, Student's exercise books and storage facilities. The study established that the school's staffing and training needs had a high significant statistical association with provision of Student's text books and Student's exercise books.

The laws and regulations on allocation of funds had a high significant statistical association with provision of Student's text books, teacher's guides, Student's exercise books and storage facilities. It was also found that the ministry of education goals and priorities on allocation of funds had a high significant statistical association with provision of students' text books and Student's exercise books.

It was established that fairness and equity in allocation of funds had a high significant statistical association with provision of Student's text books, equipment and Student's exercise books. Finally, the adherence to National Financing policy on allocation of funds had a high significant statistical association with provision of Student's text books, teachers' guides, Student's exercise books and storage facilities.

Just like in the case of physical facilities, the school priorities had no single high association with and teaching learning resource provision. Equally, no single determinant of funds allocation had a high association with provision of teaching resources.

Spearman's Rho correlation test on all 55 possible relations between determinants of funds allocation and the teaching learning resources had either moderate or high positive association. Since all 55 possible associations were either moderate or high positive associations, the study failed to accept the hypothesis, H_{02}: There is no statistical significant association between funding practices and adequacy of teaching learning resources in public secondary schools in Bungoma County.

5.3.4 Summary of relationship between funding practices on educational resources and learners academic achievement

The fourth objective of the study was to investigate the relationship between funding practices on provision of educational resources and learners academic achievement whose findings were presented, discussed and interpreted in section 4.6.

The study established that provision of teaching learning resources had a high association with learner's academic achievement. It was also established staffing and training needs had a high association with learner's academic achievement and finally that provision of physical facilities had a moderate association with learner's academic

achievement. Since all the three educational resources had either moderate or high association with learners academic achievement the study failed to accept the hypothesis, H_{03}: There is no statistical significant association between funding practices on educational resources provision and academic achievement in public secondary schools Bungoma County. The correlation of the types of schools established that there was a trend of national schools which are better provided for in terms of physical facilities, teaching learning resources and staffing and training needs having higher learners academic achievement than the Extra County, County and Sub-County secondary in general for secondary schools in Bungoma County.

Based on strength of the coefficients of association of educational resources influence on academic achievement where staffing and training was denoted by ST, provision of teaching learning resources by TL and provision of physical facilities by PF, the study recommended the sharing of available funds within a given public secondary schools using the formula Total funds to be allocated (TF) = 0.38(ST) + 0.32(TL) + 0.30(PF).

The study also established that utilization of educational resources led to learners academic achievement.

5.4 Conclusion

The study established the funding practices used in the county's public secondary schools. The study found out that schools mainly received their financial resources from parents and Free Day Secondary Education. Interview with school bursars revealed that the schools, however, hardly kept to the budget for item allocations when it came to its implementation. The allocation of funds was influenced by departmental budgets, staffing needs, school priorities, mother ministry goals and priorities, the school's strategic plan, the school's characteristics and laws and regulations with all having high

association level on a number of teaching learning resources and provision of physical facilities. However the school priorities did not high influence on any of the aspects of teaching learning resources and provision of physical facilities.

The well provided for physical facilities included power supply, furniture in the classrooms, furniture in the staffroom and clean water while the rest were either moderately or lowly provided for in the order of science laboratories, offices allocated to departments, toilets / latrines, library facilities, play grounds, capacity and equipment for home science /Agriculture and dining hall facilities. According to Okongo et al (2015) physical conditions and organization of the school can either facilitated or inhibit construction of the culture of success that results in academic achievement by learners. Lack of physical resources would render the schooling experiences ineffective (Bizimana & Orodho, 2014) hence resulting in poor learners academic achievement. It was established that the utilization of educational resources in the teaching learning process had moderate and high association with on learner's academic achievement.

The textbooks were generally adequately provided for in the compulsory subjects (English, Kiswahili, Mathematics) and Science subjects (Biology, Chemistry, Physics) while least provided for were in the humanity subjects (Geography, History, Christian Religious Education). The perceived inadequacy for the humanity subjects was explained to be due the government at the time of study having only supplied text books in the compulsory subjects and the sciences. The least provided for in terms of teaching learning materials was the storage facilities for books and equipment.

The study failed to accept the hypothesis; H_{01}: There is no statistical significant association between funding practices and adequacy of physical infrastructure in public secondary schools in Bungoma. Therefore, there is a significant association between

funding practices and adequate provision of physical infrastructure in public secondary schools in Bungoma County. The study also failed to accept the hypothesis, H_{02}: There is no statistical significant association between funding practices and adequacy of teaching learning resources in secondary schools in Bungoma County. This therefore implies that there is a statistical significant association between funding practices and adequacy of teaching learning resources in secondary schools in Bungoma County. The study also failed to accept the hypothesis, H_{03}: There is no statistical significant association between funding practices on educational resources provision and academic achievement in public secondary schools Bungoma County hence there is a statistical significant association between funding practices on educational resources provision and academic achievement in public secondary schools Bungoma County.

The study proposed the apportioning of available funds available using Total funds to be allocated (TF) = 0.38(ST) + 0.32(TL) + 0.30(PF).

5.5 Recommendations from the study

The study makes the following recommendations:-

(i) Since the school priorities had no single high association with physical facilities and teaching learning resource provision, the schools need to consider dropping it as a determinant of funds allocation.

(ii) The government should maintain the system whereby it supplies text books directly to the schools, however, in accordance to the needs of each school.

(iii) The public secondary schools need to ensure appropriate allocation of funds towards adequate provision of physical facilities and utilise them to achieve higher academic achievement.

(iv) The public secondary schools need to ensure appropriate allocation of funds towards adequate provision of teaching learning resources and utilise them to achieve higher academic achievement.

(v) The public secondary schools need to ensure appropriate allocation of funds towards adequate provision of staffing and training and utilize them to achieve higher academic achievement.

(vi) The government should consider a model of funding that apportions available funds using the formula Total funds to be allocated (TF) = 0.38(ST) + 0.32(TL) + 0.30(PF).

5.6 Suggestions for further research

The study suggests that:

(i) Similar studies be undertaken in other regions to establish if the situation is similar across the country;

(ii) This study concentrated on establishing the association between funding practices and academic achievements. It therefore recommends that other studies be undertaken to establish the impact of funding practice on academic achievement.

(iii) This study identified that the main source of funding in public secondary schools were parents and FDSE. It recommends that other studies be undertaken to establish the implications of the modes and timings of payment of the same.

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APPENDICES

Appendix 1: Introductory letter

Ms. Caroline N. Simiyu, ECI/H/04/13

P.O. Box 231 – 50205,

Webuye

25th February, 2018

Dear Sir / Madam

REF: RESEARCH ON FUNDING PRACTICES IN PUBLIC SECONDARY SCHOOLS IN BUNGOMA COUNTY AND ITS INFLUENCE ON ACADEMIC ACHIEVEMENT

The researcher is a doctorate student in curriculum and instruction technology at Masinde Muliro University of Science and Technology and seeks your responses to the instruments presented. The response you shall give shall be kept very confidential and will only be used for the purpose of research. Your participation in this study is highly appreciated.

Your honest responses will be very important since the Ministry of Education and other stakeholders will use the research findings to establish the real situation with regard to the influence of the funding practice and academic achievement of learners. Your identity will remain confidential and will not be disclosed to any other third party unless with your consent.

Yours faithfully,

Carolyne Nabwoba Simiyu

Reg. No. ECI/H/04/13

Department of Curriculum and Instruction

Masinde Muliro University of Science and Technology

Appendix 2: Interview Schedule for County Director of Education

Instruction

I would wish to get your views on funding and quality education in your county. The information given will be used purely for this study.

1. Professional experience
2. What are the KCSE enrolment trends in your county 2013?
3. What are your views on funding of education in secondary schools?
4. Which are the main funding sources in public secondary in you county?
5. What is the general trend of performance since, the introduction of 'Free Day Secondary Education?
6. Is there a relationship between funding and quality education?
7. In which ways does your office facilitated funding of secondary education?
8. What entails quality education?
9. What is the state of physical facilities in public secondary schools in the county?

Appendix 3: Interview Schedule for School Principals

1. Professional experience
2. What has been the KCSE enrolment of your school since 2013?
3. What is your view on funding secondary education in Kenya?
4. Which are the main funding challenges you encounter as a school?
5. What has been the KCSE performance index since 2013?
6. Do you have a school policy on fee payment?
7. What is the attitude of parents and other stakeholders towards funding of secondary education?
8. Who would you say is not doing his or her part in financing secondary education?
9. In your response what constitutes quality education?
10. How have the financial resources been utilized to promote performance in your school?
11. What do you base on when drawing a budget for your school?
12. How do you identify and mobilize financial resources for your school?
13. In your own response what is the relationship between funding and quality education?

Appendix 4: Questionnaire for principals and HoDs

This questionnaire is designed for the purpose of investigating the impact of funding practices and learner academic achievement. Kindly respond to the questions posed to the best of your knowledge and as honestly as possible.

The questionnaire consists of two types of questions. Structured questions that will require you to write in the space provided and closed ended questions that will require you to tick (√) where appropriate.

1. Gender Male ☐ Female ☐
2. Qualification: Diploma☐ BED☐ PGDE☐ MED☐ PhD☐ Others ☐

   If others state which one _____
3. How many years of experience do you have in the current position _____
4. How many teacher does the school have in service from

   Teachers Service Commission _____

   Board of Management of the School _____

   Volunteer teacher _____
5. What is the average number of students in a class within a stream in your school?

   ……
6. Indicate KCSE mean score for following years as well as in your opinion the percentage perceived level of funding of the school and schools overall average students population per class

Year	Mean score	% Perceived level of funding	Average number of learners per class in the school
2013			
2014			
2015			
2016			
2017			
2018			

7. Select by ticking the option that best selects your opinion with regard to the statements given where SA means Strongly Agree, A means Agree, N means Neutral, D means Disagree and SD means Strongly Disagree.

	Statement	**Scale**				
		+ve		**N**		**-ve**
1	**Funding practices**					
(a)	**The main source of funding in the school are:**	**SA**	**A**	**N**	**D**	**SD**
	Free Day Secondary Education programme (FDSE)					
	None Governmental / Community based Organisation					
	National Government grants					
	CDF					
	County Government grants					
	Parents					
	Harambees and Friends					
(b)	**Determinants of funds allocation to educational resources provision**					
	The following factors influences the allocation of funds to educational resources	**SA**	**A**	**N**	**D**	**SD**
	The school's strategic plan					
	The departmental budgets					
	The school's priorities					
	The school's characteristics					
	The type of school					
	The school's unique needs					
	The staffing needs of the school					
	The laws and regulations on allocation of funds					
	The ministry of education goals and priorities					
	Fairness and equity in sharing of funds					
	Adherence to the National Financial Policy					
c	**Funds allocated**					
	Free Day Secondary Education programme are adequate	**SA**	**A**	**N**	**D**	**SD**
	Funds received from parents are adequate					
	FDSE funds are released timely					

2	**Teaching, learning and physical resources**					
a	**physical resources**					
	The following physical resource are adequate:	**SA**	**A**	**N**	**D**	**SD**
	Furniture in the staffroom/offices					
	Furniture in the classrooms					
	Library facilities					
	Science laboratory facilities					
	Home science / agriculture room facilities					
	The latrines / toilets					
	Offices allocated to departments					
	Dining hall facilities					
	Play fields					
	Availability and reliability of clean water					
	Power availability and reliability					
b	**Teaching learning resources**					
	The following learning resource are adequate:	**SA**	**A**	**N**	**D**	**SD**
	Number of textbooks					
	Number of teachers guides					
	Teaching resources (manila papers, charts, models, etc)					
	Students exercise books					
	Equipment					
3	**Allocated funds to provision of teaching learning resources influences learner achievement**					
	The allocated funds have contributed to	**SA**	**A**	**N**	**D**	**SD**
	Provision of teaching learning resources					
	Use of resources persons in the teaching learning process					
	Use of field trips / excursions					
	Use of computers in the teaching learning process					
	Provision of the physical facilities of the school					
	Teachers workload being between 25 to 30 lesson per week					
	KCSE learner achievement					

4	**Indicate the level of frequency of use of the resource in the teaching learning process**					
	The resource indicated is frequently utilised	**SA**	**A**	**N**	**D**	**SD**
	Resource persons					
	Field trips / excursions					
	Textbooks					
	Computers					
	Teaching learning resources					
	Library facilities					
	Facilities in the science laboratories					
	Home science / agriculture room facilities					

8. For each subject given, tick in the box that best describes how a text book is shared amongst the students in the class within the given subject

		Tick the box that best describes the Text book: Student ratio in the given subjects:										
		1:1	1:2	1:3	1:4	1:5	1:6	1:7	1:8	1:9	1:10	Higher (state)
	English											
	Kiswahili											
	Mathematics											
	Biology											
	Chemistry											
	Geography											
	History											
	CRE											

Appendix 5: Interview Schedule for the School Bursar

1. What is your role in matters of school finances?
2. Which are the sources of income in your school?
3. In your own opinion are the funds adequate?
4. Does the school have arrears owed by parents?
5. From your own observation do you stick the budget plan?

Appendix 6: Document Analysis guide

1. Results for KCSE since 2013 in terms of school mean to 2018
2. KCSE enrolment trends from 2013 to 2018
3. Policy guidelines on funding
4. Evidence of any other funding from private stakeholders

Appendix 7: MMUST SGS Authorization letter

MASINDE MULIRO UNIVERSITY OF SCIENCE AND TECHNOLOGY
(MMUST)

Tel: 0702597360/61
: 0733120020/22
E-mail: deansgs@mmust.ac.ke
Website: www.mmust.ac.ke

P.O Box 190
50100 Kakamega
KENYA

Directorate of Postgraduate Studies

Ref: MMU/COR: 509079

22nd February, 2018

Carolyne Nabwoba Simiyu
ECI/H/04/13
P.O. Box 190-50100
KAKAMEGA

Dear Ms. Simiyu,

RE: APPROVAL OF PROPOSAL

I am pleased to inform you that the Directorate of Postgraduate Studies has considered and approved your Ph.D proposal entitled: ***"Financing Practices in Public Secondary Schools and Their Impact on Learners Achievement in Kenya"*** and appointed the following as you supervisors:

1. Prof. A.M. Simiyu - Department of Curriculum and Instructional Technology
2. Prof. E. Abenga - Department of Curriculum and Instructional Technology

You are required to submit through your supervisor(s) progress reports every three months to the Director of Postgraduate Studies. Such reports should be copied to the following: Chairman, School of Education Graduate Studies Committee and Chairman, Department of Curriculum and Instructional Technology. Kindly adhere to research ethics consideration in conducting research.

It is the policy and regulations of the University that you observe a deadline of three years from the date of registration to complete your Ph.D thesis. Do not hesitate to consult this office in case of any problem encountered in the course of your work.

We wish you the best in your research and hope the study will make original contribution to knowledge.

Yours Sincerely,

DEAN
SCHOOL OF GRADUATE STUDIES
MASINDE MULIRO UNIVERSITY
OF SCIENCE & TECHNOLOGY

Prof. John Obiri Sign:.....

DIRECTOR DIRECTORATE OF POSTGRADUATE STUDIES

Appendix 8: Ministry of Education Authorization letter

REPUBLIC OF KENYA

MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY
State Department of Education – Bungoma County

When Replying please quote
e-mail: bungomacde@gmail.com

Ref No: BCE/DE/19/VOL.1/143

County Director of Education
P.O. Box 1620-50200
BUNGOMA

Date: 20th September, 2018

TO WHOM IT MAY CONCERN

RE: AUTHORITY TO CARRY OUT RESEARCH – CAROLYNE NABWOBA SIMIYU
REF: NACOSTI/P/18/39628/22915

The bearer of this letter Carolyne Nabwoba Simiyu of Masinde Muliro University of Science and Technology has been authorized to carry out research on ***"Financing practices in public secondary schools and their impact on learners achievement in Kenya"*** for a period ending ***8th June 2019.***

Kindly accord her necessary assistance.

JACOB ONYIEGO
COUNTY DIRECTOR OF EDUCATION
BUNGOMA COUNTY

Appendix 9: Office of the President Authorization letter

REPUBLIC OF KENYA

OFFICE OF THE PRESIDENT
MINISTRY OF INTERIOR AND COORDINATION OF NATIONAL GOVERNMENT

Telephone: 055- 30326
FAX: 055-30326
E-mail: ccbungoma@yahoo.com
When replying please Quote

REF: ADM.15/13/VOL.II/120

Office of the County Commissioner
P.O. Box 550 - 50200
BUNGOMA

20th August, 2018

All Deputy County Commissions
BUNGOMA COUNTY

RE: RESEARCH AUTHORIZATION - CAROLYNE NABWOBA SIMIYU

The above referred has been authorised by the National Commission for Science, Technology and Innovation to carry out a research on "*Financing practices in public secondary schools and their impact on learners achievement in Kenya".*

Carolyne will be carrying out the said research in all the Sub Counties of Bungoma County for a period ending 8th June, 2019.

This is therefore to introduce her and ask for your cooperation and support as she undertakes the research.

Anne N. Wilson
For County Commissioner
BUNGOMA

Appendix 10: NACOSTI permission letter

NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

Telephone:+254-20-2213471,
2241349,3310571,2219420
Fax:+254-20-318245,318249
Email: dg@nacosti.go.ke
Website : www.nacosti.go.ke
When replying please quote

NACOSTI, Upper Kabete
Off Waiyaki Way
P.O. Box 30623-00100
NAIROBI-KENYA

Ref: No. **NACOSTI/P/18/39628/22915**

Date: **12th June, 2018**

Carolyne Nabwoba Simiyu
Masinde Muliro University of Science
And Technology
P.O. Box 190-50100
KAKAMEGA.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on ***"Financing practices in public secondary schools and their impact on learners achievement in Kenya,"*** I am pleased to inform you that you have been authorized to undertake research in **Bungoma County** for the period ending **8th June, 2019.**

You are advised to report to **the County Commissioner and the County Director of Education, Bungoma County** before embarking on the research project.

Kindly note that, as an applicant who has been licensed under the Science, Technology and Innovation Act, 2013 to conduct research in Kenya, you shall deposit **a copy** of the final research report to the Commission within **one year** of completion. The soft copy of the same should be submitted through the Online Research Information System.

DR. STEPHEN K. KIBIRU, PhD.
FOR: DIRECTOR-GENERAL/CEO

Copy to:

The County Commissioner
Bungoma County.

The County Director of Education
Bungoma County.

Appendix 11: NACOSTI Research permit

CONDITIONS

1. The License is valid for the proposed research, research site specified period.
2. Both the Licence and any rights thereunder are non-transferable.
3. Upon request of the Commission, the Licensee shall submit a progress report.
4. The Licensee shall report to the County Director of Education and County Governor in the area of research before commencement of the research.
5. Excavation, filming and collection of specimens are subject to further permissions from relevant Government agencies.
6. This Licence does not give authority to transfer research materials.
7. The Licensee shall submit two (2) hard copies and upload a soft copy of their final report.
8. The Commission reserves the right to modify the conditions of this Licence including its cancellation without prior notice.

REPUBLIC OF KENYA

National Commission for Science, Technology and Innovation

RESEARCH CLEARANCE PERMIT

Serial No.A 18893

CONDITIONS: see back page

THIS IS TO CERTIFY THAT:
MS. CAROLYNE NABWOBA SIMIYU
of MASINDE MURILO UNIVERSITY OF SCIENCE AND TECHNOLOGY, 0-50200 Bungoma,has been permitted to conduct research in *Bungoma County*

on the topic: *FINANCING PRACTICES IN PUBLIC SECONDARY SCHOOLS AND THEIR IMPACT ON LEARNERS ACHIEVEMENT IN KENYA*

for the period ending:
8th June,2019

Permit No : NACOSTI/P/18/39628/22915
Date Of Issue : 12th June,2018
Fee Recieved :Ksh 2000

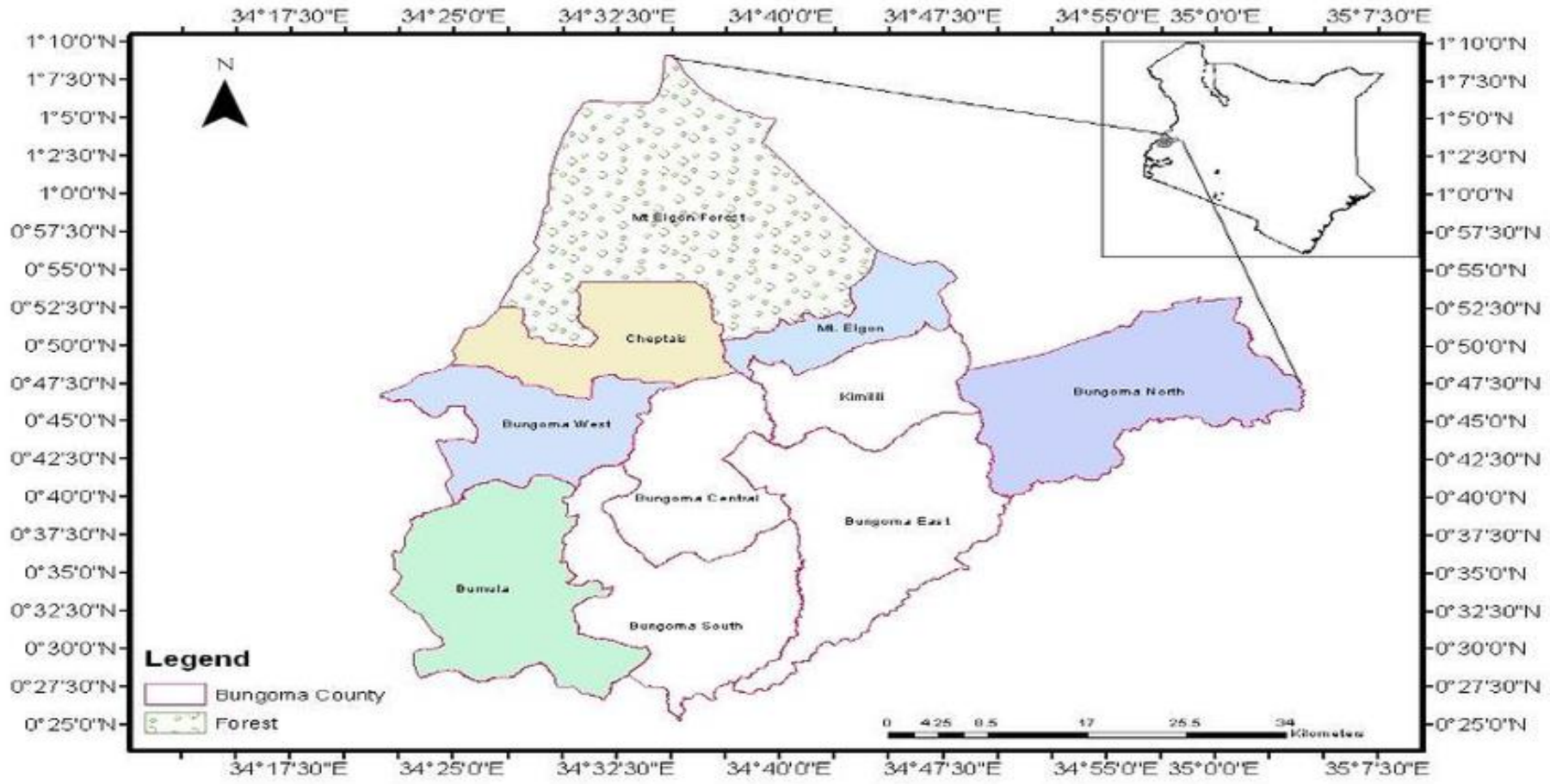
.....
Applicant's Signature

.....
Director General
National Commission for Science, Technology & Innovation

Appendix 12: KCSE data

School	KCSE score in the year						Average Mean	Average Mean %
	2013	2014	2015	2016	2017	2018		
S_A	3.24	3.24	3.36	3.48	3.48	3.12	3.32	27.67
NC	8.52	8.76	9.48	9.24	8.64	9.00	8.94	74.50
ND	8.76	8.52	9.00	9.12	8.40	8.52	8.72	72.67
EE	5.76	6.00	5.52	5.64	6.12	5.64	5.78	48.17
EG	5.76	6.36	6.24	6.48	6.24	5.88	6.16	51.33
EH	5.52	6.00	6.12	5.28	5.04	5.64	5.60	46.67
EI	7.20	7.68	8.28	8.52	7.80	8.16	7.94	66.17
EJ	8.28	8.88	8.76	8.64	8.04	8.28	8.48	70.67
EK	4.08	4.32	4.92	5.04	4.68	4.56	4.60	38.33
EL	6.48	6.84	7.20	7.44	7.20	6.72	6.98	58.17
EM	5.64	5.28	4.80	5.16	5.52	5.76	5.36	44.67
EN	6.96	6.48	6.12	6.36	6.24	6.36	6.42	53.50
EO	9.12	9.36	8.88	8.16	7.92	7.92	8.56	71.33
CB	7.20	7.56	8.04	7.32	7.20	7.68	7.50	62.50
CF	4.32	4.08	4.56	6.60	4.92	5.40	4.98	41.50
CP	7.20	8.28	8.88	9.00	8.04	7.80	8.20	68.33
CQ	4.32	4.32	4.20	4.56	4.44	4.68	4.42	36.83
CR	6.48	6.60	7.20	6.72	6.48	6.72	6.70	55.83
CS	6.24	5.76	5.64	5.16	5.04	4.80	5.44	45.33
CT	8.88	8.76	9.00	7.92	7.44	7.20	8.20	68.33
CU	4.80	4.92	4.32	4.56	4.44	4.80	4.64	38.67
CV	4.56	4.68	4.68	5.04	5.28	5.04	4.88	40.67
CW	3.84	4.68	5.04	4.32	4.92	4.44	4.54	37.83
CX	5.88	5.16	5.04	4.80	5.52	5.64	5.34	44.50
CY	8.76	8.40	8.52	8.04	8.16	7.92	8.30	69.17
CZ	4.20	4.32	4.08	4.44	4.32	4.44	4.30	35.83
CAA	2.64	2.88	2.76	3.72	3.84	4.32	3.36	28.00
CAB	3.60	3.72	3.36	3.00	2.88	3.00	3.26	27.17
CAC	3.00	3.12	3.24	3.48	3.60	3.84	3.38	28.17
CAD	3.72	4.56	4.20	4.68	3.60	3.24	4.00	33.33
CAE	3.84	4.08	3.96	4.32	4.20	4.20	4.10	34.17
CAF	4.32	4.08	4.32	3.72	3.60	3.24	3.88	32.33
CAG	3.12	3.00	4.20	4.44	4.08	3.60	3.74	31.17
CAH	1.68	1.80	2.88	3.48	1.92	2.04	2.30	19.17
CAI	3.00	3.36	3.24	3.48	2.64	2.52	3.04	25.33
CAJ	3.60	3.00	3.84	3.72	3.00	2.88	3.34	27.83

Appendix 13: Bungoma County map



Appendix 14: Published Papers from the Thesis

1. Simiyu C. N., Abenga E. and Simiyu A. M. (2020). Implications of funding practices on adequacy of physical facilities and learners' academic achievement in Public secondary schools. *Journal of Education and Practice*. 11 (23):34-43 DOI:10.7176/JEP/11-23-05 ISSN 2222-1735 (paper) ISSN 2222-288X (online)
2. Simiyu C. N., Abenga E. and Simiyu A. M. (2020). Implications of funding practices on adequacy of teaching learning materials and learners' academic achievement in public secondary schools in Kenya. International Journal of Education and Research 8 (8): 1-14. ISSN 2411-5681